

Mississippi Amphibian Monitoring Program Protocol

Sampling periods

There are three seasonal sampling periods designed to cover the calling periods of all species. These sampling periods vary slightly depending on whether your route is located in the northern or southern part of the state. Each sampling window is 30 - 45 days long with a 2-week interval between sampling periods. Our sampling windows are as follows:

Region	1 st	2 nd	3 rd
Northern MS (north of 33°N):	Feb. 20 – Mar. 31	Apr. 15 – May 15	June 1 – July 1
Southern MS (south of 33°N):	Jan. 23 – Feb. 28	Apr. 1 – May 6	June 1 – July 1

Surveys should be conducted on the first available night when conditions are right (see below for survey conditions).

Nightly sampling conditions

A survey should begin 30 minutes or more after sunset and be completed no later than 1 a.m. Appropriate sampling conditions are based on wind, sky, and air temperature conditions. Wind should be at level 3 or less and surveys should not be conducted during heavy rainfall or during a thunderstorm. (Frogs frequently call less when it's windy and heavy rains/thunderstorms may prevent you from hearing the frogs.)

The air temperature criteria are the minimum allowable temperatures, varying for each sampling period. If you begin a survey and the temperature falls below the minimum required at more than 2 stops, abort the survey and redo it on a different night. (The entire survey must be run in a single night in order to submit data.) Those temperatures are as follows:

	Minimum Temperature
First period	5.6 °C (42 °F)
Second period	10 °C (50 °F)
Third period	12.8 °C (55 °F)

In general, humid nights and nights following a period of rain are the best nights to survey frogs.

Data collection

Stops are conducted in numerical order, in one night by one observer. Because survey ability varies between observers, it is encouraged (though not required) that the same observer conducts all surveys of a route in a given year. If friends accompany you on a survey and would like to collect data also, they should fill out a separate datasheet and should not contribute to your observations. This allows each survey conducted to be of

equal effort. All datasheets should be returned to the state coordinator as soon as possible. Please keep a copy in case it is lost in the mail.

Many of the wetlands we are surveying are located on private property. Please remain at the roadside during the survey and don't venture out to the wetland. If the wetland is located on public land that is accessible, feel free to return once you have completed the survey. However, the surveys themselves should be conducted from the roadside and not from the bank of the wetland.

Below is the basic protocol for conducting a survey.

1. Prior to starting your survey, fill out the front of the datasheet (route information and observer information).
2. When you arrive at your first survey point, record the time and check the appropriate boxes for sky and wind codes.
3. Walk a short distance from your vehicle (along the road) then listen for 5 minutes. After the 5 minute survey period is over, record the species heard and a calling index value for each species. Record the time you started listening, the number of cars that passed during the listening period, the temperature, whether or not moonlight was visible, and the noise index value.
4. Proceed to your next stop and repeat step 3 until you have completed all 10 stops.
5. After you finish your survey at site 10, record the time and check the appropriate boxes for sky and wind codes at the top of the sheet under "Finish". Double-check your datasheet to be certain that all data are in the appropriate row and column.

Amphibian Calling Index

- 1 – Individuals can be counted; there is space between calls
- 2 – Calls of individuals can be distinguished but there is some overlapping of calls
- 3 – Full chorus, calls are constant, continuous and overlapping

Note: Frequently individuals will stop and start calling during the listening period. Record the maximum calling index heard during the listening period. (i.e. if the frogs were chorusing at one point during the listening period, record it as a "3", even if they were silent by the end.)

Beauford Wind Codes

- 0 – Calm (< 1 mph) smoke rises vertically
- 1 – Light Air (1 – 3 mph) smoke drifts, weather vane inactive
- 2 – Light Breeze (4 – 7 mph) leaves rustle, can feel wind on face
- 3 – Gentle Breeze (8 – 12 mph) leaves and twigs move around, small flags extend
- 4* - Moderate Breeze (13 – 18 mph) moves thin branches, raises loose papers

* Do not conduct a survey at level 4 or greater.

Sky Codes

- 0 – Few clouds
- 1 – Partly cloudy (scattered) or variable sky
- 2 – Cloudy or overcast
- 4 – Fog or smoke
- 5 – Drizzle or light rain (not affecting hearing ability)
- 7 – Snow
- 8 – Showers (is affecting hearing ability) – *Do not conduct survey*

Noise Index

- 0 – No appreciable effect (e.g. owl calling)
- 1 – Slightly affecting sampling (e.g. distant traffic, dog barking, one car passing)
- 2 – Moderately affecting sampling (e.g. nearby traffic, 2 – 5 cars passing)
- 3 – Seriously affecting sampling (e.g. continuous traffic nearby, 6 – 10 cars passing)
- 4 – Profoundly affecting sampling (e.g. continuous traffic passing, construction noise)

If there is a major noise disturbance nearby, lasting one minute or longer, you may break the listening period to avoid sampling during the excessive noise. If such a time-out is taken, please note it on the datasheet. After the disturbance ends, resume the listening period and finish up with the remaining time.

Safety First!!

Your safety is important. Please do not put yourself in any dangerous situations. If you feel that one of the stops or routes is unsafe, please contact the State Coordinator immediately.

Data submission

Data should be entered online at the NAAMP volunteer access site (www.pwrc.usgs.gov/NAAMP/Data/index.cfm) Please send the State Coordinator your datasheets as soon as possible after completing a survey. This allows the coordinator to review the datasheet and contact you for clarification (if necessary) while the information is still fresh in your mind. If you hear a frog you are unable to identify or that you think should not be found along your route, please make a recording and submit it to the coordinator as well. All datasheets should be sent to:

Kathy Shelton
MDWFP
211 Critz St N
Wiggins MS 39577

Feel free to email, krshelton64@gmail.com or call 601-528-5705 for information or help.