

## CALLING PHENOLOGY

Male frogs and toads, like male songbirds, advertise their presence to females by singing or “calling”. Also like songbirds, each species has a distinctive call. Wisconsin frogs call during one or more of three general breeding periods: early spring (early season breeders), late spring (mid-season breeders), and summer (late season breeders). Wisconsin anurans typically call for 4 to 8 weeks; however, the wood frog is considered a short-term breeder and usually completes its breeding activity within two weeks. The onset and duration of frog calling is determined by local air and water temperatures and may vary considerably from year to year (the extended length of the survey periods accounts for these annual variations). Although air and water temperatures are considered more important than calendar dates for anuran breeding, WFTS surveys must be conducted within the three designated survey periods to be considered valid and to ensure consistency in statistical analyses. The anuran breeding phenology calendar (Figure 1) was determined for Portage County in central Wisconsin. Northern Wisconsin anurans may call a bit later and those in southern Wisconsin may call a bit earlier than the ranges presented in the calendar.

Calling times are closely related to the types of water in which anurans breed. The early season breeders typically use temporary bodies of water for breeding: a slough adjacent to a lake, a pothole that dries up by mid-July, or a roadside ditch. The tadpoles of these species metamorphose rapidly in these warmer, shallower bodies of water. You may often hear spring peepers or other early season breeders calling from what appears to be the shore of a lake but it is likely that they are often in a nearby body of water where the water has warmed more quickly than the lake. Late season breeders, such as the green frog, mink frog, and bullfrog breed only in permanent bodies of water. The tadpoles of these species overwinter and metamorphose the following year.

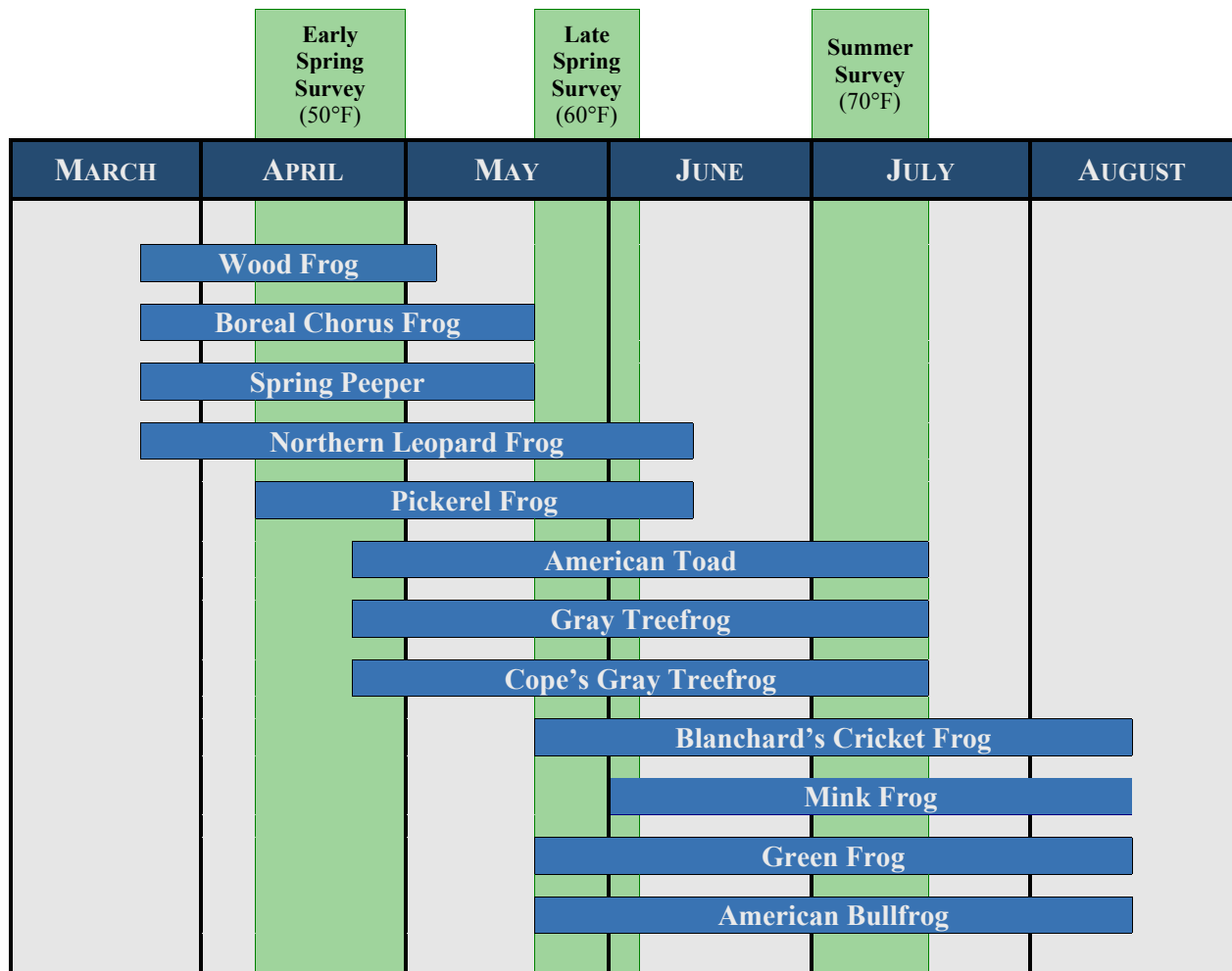


Figure 1. Breeding phenology of Wisconsin anurans with WFTS survey periods and required minimum water temperatures.\*