

## STATUS OF LENTIC BREEDING AMPHIBIANS AND AQUATIC REPTILES IN MONTANA

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We developed a statewide inventory and monitoring scheme for lentic breeding amphibians and aquatic reptiles in Montana. We stratified sampling by 11 ecoregions and surveyed 6741 potential lentic sites on public lands between 2000 and 2008 within 429 randomly selected 12-digit hydrologic-unit-code watersheds. Surveys and associated incidental observations have resulted in over 11,400 species occurrence records to date. Watershed and site breeding rates of 10 amphibian species and occupancy rates of four aquatic reptile species support previously noted declines of the Western Toad (*Bufo boreas*)

and Northern Leopard Frog (*Rana pipiens*) in western Montana. We used classification trees to examine patterns in rates resulting from different groupings of major habitat features that are able to be affected with management actions. Seven of the 10 amphibian species and the Common Gartersnake (*T. sirtalis*) were detected at significantly fewer sites when fish were detected. Presence of emergent vegetation was positively associated with the proportion of sites where breeding or occupancy was detected for all but one of the amphibian and reptile species examined and appeared to partially mitigate the presence of fish. Resource managers could enhance habitats for wetland herpetofauna by (1) creating new lentic sites on the landscape either directly or through the reintroduction and protection of beaver, (2) creating emergent vegetation at portions of existing sites that currently lack it via rotational fencing to temporarily exclude grazing, and (3) eliminating some introduced fish populations. All observations and survey locations, including digital photographs of sites surveyed are available at: <http://hhp.nris.state.mt.us/Tracker>.