The federal Species at Risk Act requires the identification of critical habitat for some 260 nationally extirpated, endangered, and threatened species during the recovery planning process. Critical habitat is defined in SARA as the habitat necessary for survival or recovery of the species. Operational guidance for the identification of critical habitat is required to help standardize this mandatory task. Practical guidelines should promote consistency and transparency in the process and yield results that are evidence-based. From an ecological perspective, areas proposed as critical habitat should encompass what is believed to be both necessary and sufficient for population viability. The draft identification process comprises two general stages: (1) characterizing the species habitat requirements based on life history, habitat features, and functional relationships between them; and (2) defining and locating the amount and spatial arrangement of habitat required for population viability. Application of this approach for the identification of critical habitat will be illustrated by way of an heuristic case study.