

Crayfish Surveys

CEC provides specialized services to assist our clients with requirements related to threatened and endangered crayfish. CEC's crayfish surveyors have been approved by the U.S. Fish & Wildlife Service (USFWS) to conduct surveys for the Guyandotte River Crayfish, Big Sandy Crayfish, and Nashville Crayfish.



CLIENT NEEDS

Clients whose projects fall within the specific watersheds that contain listed crayfish may be required to perform presence/absence surveys, biological assessments, and relocations, particularly if the project activities will physically alter streams or affect water quality from sediment or industrial discharges.

Mining, oil and natural gas exploration, transportation, utilities, pipelines, manufacturing, and land development projects may need surveys depending on the project location and extent of possible impacts.

The Guyandotte River Crayfish (*Cambarus veteranus*) and Big Sandy Crayfish (*Cambarus callainus*) are located primarily in the coalfields of West Virginia, Kentucky, and Virginia, while the Nashville Crayfish (*Orconectes shoupi*) is restricted to the Mill Creek Drainage in Williamson and Davidson Counties south of Nashville. In addition to these federally listed species, surveys may also be required for state-listed or federal-candidate species in these and other states.

CEC'S SERVICES

CEC prepares project-specific sampling plans and performs crayfish surveys using USFWS-approved sampling protocols and scientific data collection techniques. Results are presented in clear and concise technical reports aimed at obtaining timely approvals from regulatory agencies. Where necessary, CEC assists clients in evaluating and developing project alternatives and mitigation options to avoid or offset species impacts and meet client objectives. CEC's crayfish surveyors have the state and federal collection permits required to perform these surveys and can advise clients on feasible mitigation options.

PERSONNEL EXPERIENCE

CEC maintains an excellent rapport with both the USFWS and state agencies while serving as advocates for our clients. CEC has extensive experience working with the federally listed crayfish species including the Guyandotte River Crayfish, the Big Sandy Crayfish, and the Nashville Crayfish. In addition to federally listed species experience, CEC personnel have conducted crayfish surveys across the United States including Alabama, Arkansas, Georgia, Kentucky, Maryland, Missouri, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, Virginia, and West Virginia. Several CEC biologists are considered leaders in the field of crayfish biology and have published numerous papers on the ecology, life history, conservation, and distribution of the animals.

CRAYFISH-RELATED SERVICES

- T&E Crayfish Surveys
- Distribution Surveys
- Federal and State Agency Consultation
- Radio Telemetry and Tracking
- Habitat Mitigation
- Habitat Restoration
- Benthic Macroinvertebrate Surveys
- Benthic Macroinvertebrate Identification