

ZACHARY DILLARD & ZACHARY LOUGHMAN, Department of Biological Sciences, West Liberty University, West Liberty, WV, 26074. Big Sandy Crayfish (*Cambarus callainus*) Habitat Affinity in Proximity to Bridges and Assessed via Radio Telemetry

*Cambarus callainus* (Big Sandy Crayfish) is a federally threatened species endemic to the coalfields of Kentucky, Virginia, and West Virginia. Existing datasets involving this species reflect broad/seasonal natural history trends, but conservation managers are still in need of a fine-scale, high resolution understanding of daily microhabitat utilization and movement patterns. The WVDOT has identified multiple locations within *C. callainus* range where in-stream bridge infrastructure requires complete reconstruction in a timely manner. Construction projects occurring within waterways supporting *C. callainus* could represent a threat to the crayfish community, but the extent of such effects is currently unknown. To identify potential disruptions to *C. callainus* populations we aim to determine the extent of site fidelity, peak and minimum activity periods, and preferred microhabitat utilization assessed by radiotracking *C. callainus* during and after active construction. Collected data will be interpreted to determine further conservation and management practices necessary for protection of *C. callainus*. Findings will allow organizations such as the WVDOT to move forward with necessary infrastructure projects while mitigating further anthropogenic impact to this vulnerable species.