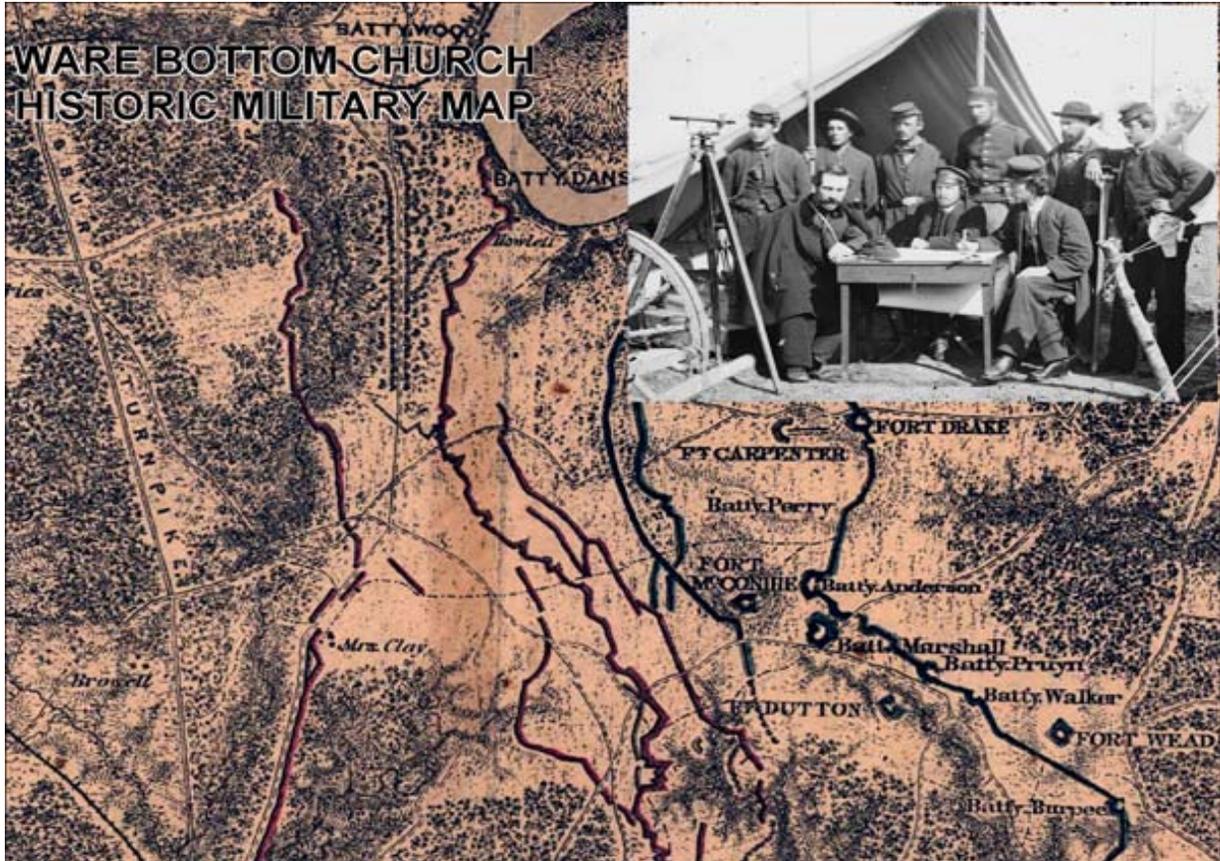


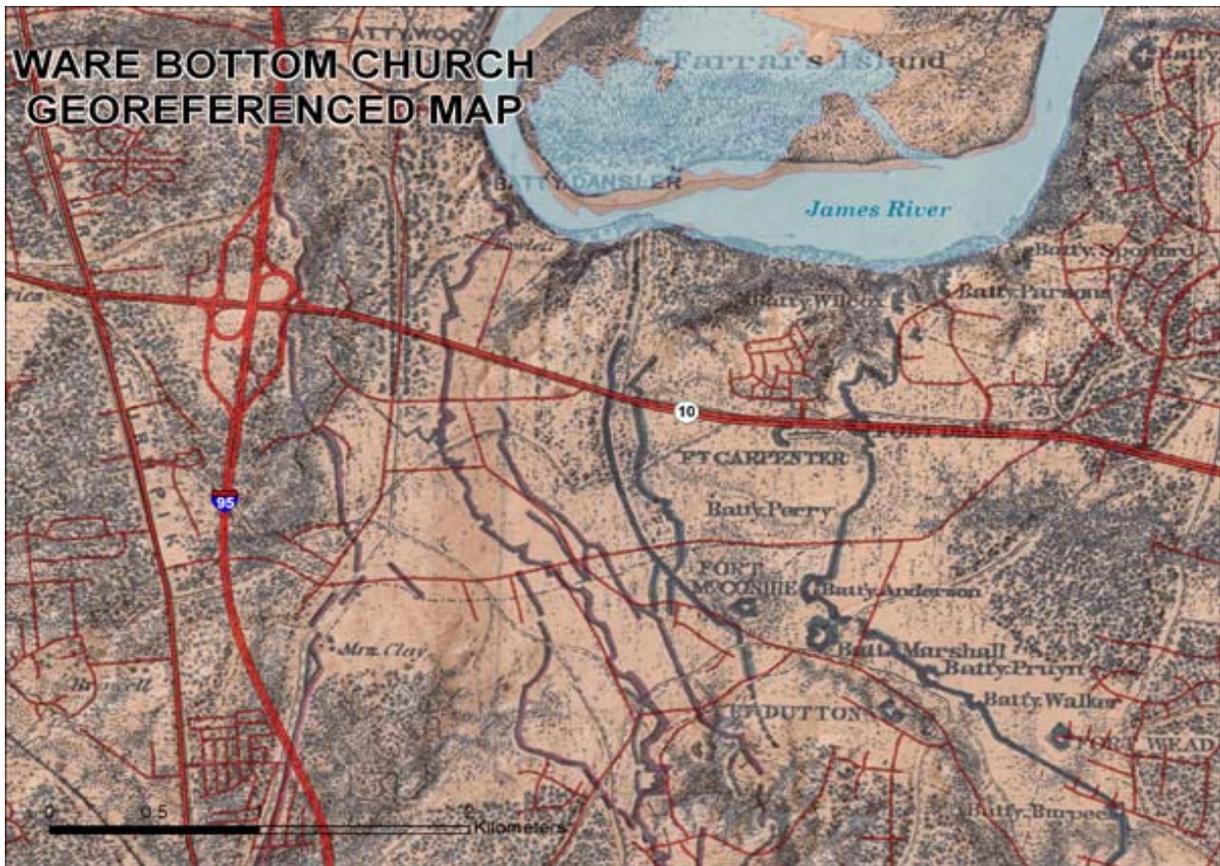
Historic Analysis of a Battlefield: Ware Bottom Church

Nearly 10,000 soldiers of the National and Confederate armies clashed on May 20, 1864, around rustic Ware Bottom Church in Chesterfield County, Virginia. Before the day was done, 1,400 dead and wounded men from fourteen American states lay sprawled and bleeding upon the ground. This climactic battlefield of the Bermuda Hundred Campaign was overshadowed by larger events of the time and lapsed into relative obscurity. Today, the battleground itself has all but disappeared.



Historic Military Map

Topographical engineers were the eyes of the armies during the American Civil War. Using simple, but effective, tools and techniques, they scouted the territory, recorded measurements, and produced and reproduced thousands of maps to guide military operations. Scales and skills varied, but many of these maps contained surprisingly accurate depictions of the terrain, roads and railroads, farms, fields, woodlots, and fortifications.



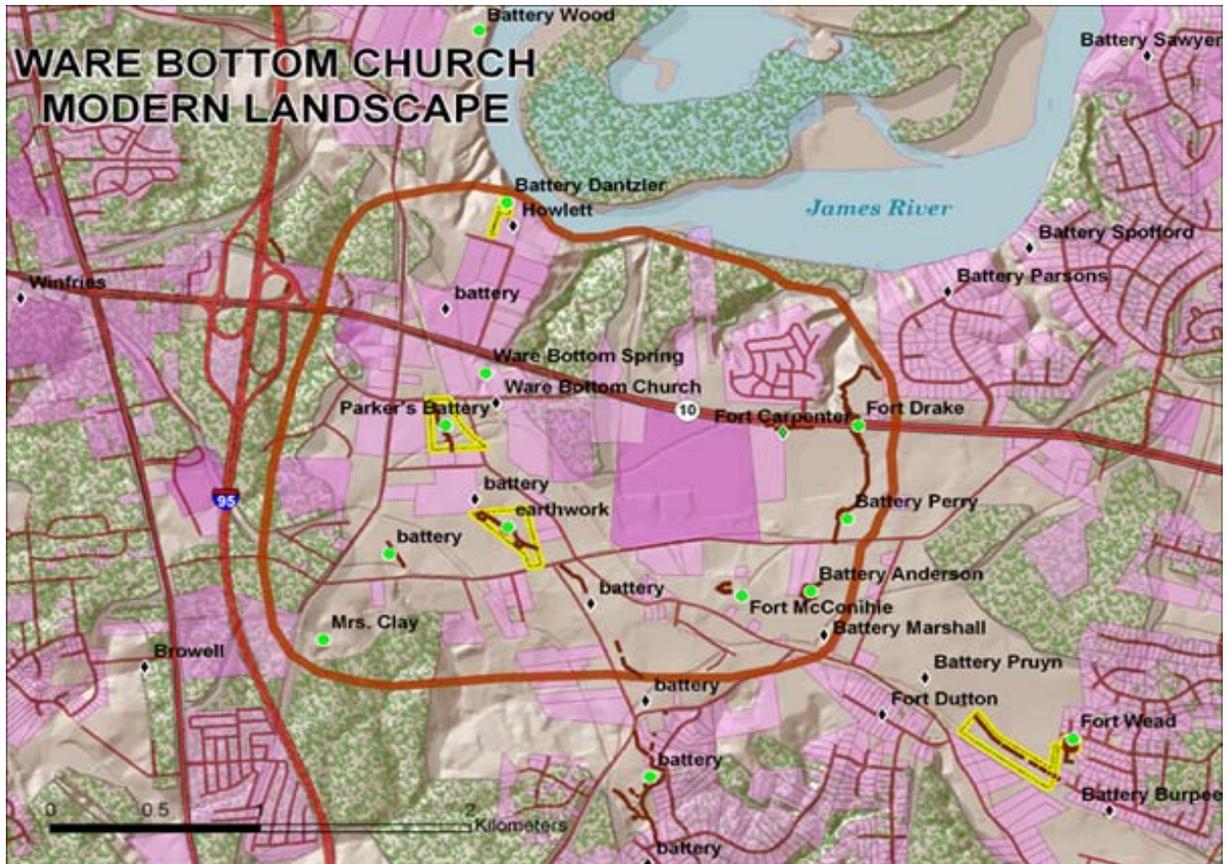
Georeferenced Map

A historic map can be a valuable tool for finding and documenting cultural resources in the field. By plugging real-world coordinates into the digital image using the ArcGIS georeferencing tool, a historic map can be overlain in GIS with modern data layers. To rectify this map of the area around Ware Bottom Church, we used road intersections, points along the railroad, and the locations of known structure sites and fortifications collected with global positioning systems.



Historic Landscape

Map features were then digitized onscreen, creating separate layers for structures, roads, woodlots, and fortifications. Overlaying these features with modern topography, rivers and streams, allows us to visualize the historic landscape. Features on this map are symbolized according to their current condition. Standing structures are depicted with a green dot. Structures that no longer survive are shown with a black diamond. The original historic fortifications are shown with a solid brown line.



Modern Landscape

A final step is to compare modern land use with the historic. Chesterfield County is one of the fastest growing counties in Virginia, and Ware Bottom Church battlefield has not fared well. Parcels that have been built upon for commercial, industrial, and residential purposes are shaded in purple. Only those fortifications that survive are shown. The few small areas that have been set aside as parkland to commemorate the sacrifices of those soldiers 142 years ago are bounded in yellow. Surveyors can return to the field to search for other survivals, focusing on ground that remains undisturbed. Preservationists are looking to save some of the fragmented parcels that have yet to succumb to encroaching development.