Digital Love: Finding (Often Imperfect) Solutions to Digital Project Documentation and Management

Sarah E. Price, Howard Cyr, Raven Christopher, and Alex Beebe

Introduction

While we are well into the digital age, archaeology has lagged in adopting purely digital recording techniques, for many reasons. It takes time, effort, know-how, and money to set up and implement technologies to collect and manage various data sets. Fortunately, for the sanity of all involved, this was possible for the 15 Phase III mitigations undertaken for the MRB Project.

Emlid RTK system and tablets in operation in the field

Digital Documentation Needs

- ✓ Standardized - Multiple companies and constant staff additions meant data collection needed to be as simple and standardized as possible for consistency without heavy investment in individual training.

- ✓ Flexible - Ability to modify or change as project dictated.

- ✓ Fast Implementation - Only had a few weeks to set up the entire system.

- ✓ Free or Low-Cost Software - Buying 20 tablets was relatively expensive and wanted to keep overall costs low.

- ✓ NO backend data entry – Ability for field, lab, GIS, and outside consultants to access data instantly.

Tablets

- ▪ Samsung Galaxy Active Tab Pro: Military grade, unlocked and Wi-Fi enabled, removable and replaceable battery.
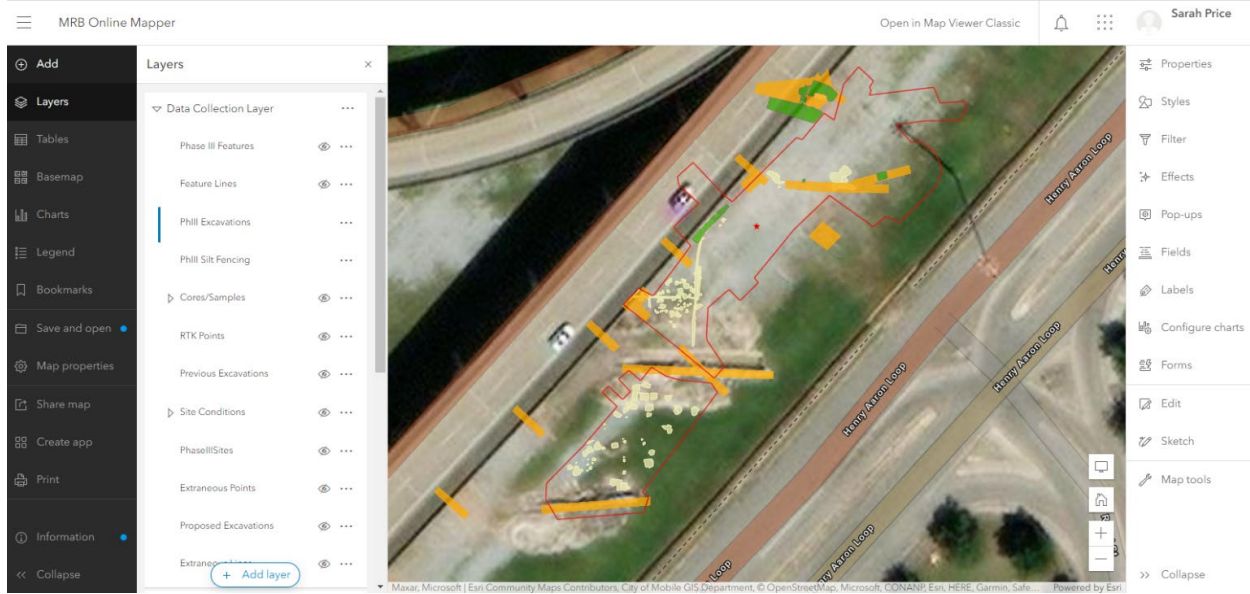
- MDM Plan: Using a designated email address and Google account for all tablets. Workflows available for data collection, upload, and backups. Installed suite of apps on each tablet so everyone has identical toolbox.

Forms and Logs

ArcGIS and AGOL

While geospatial data is being processed on the backend, the field workers benefit from the use of ESRI Field Maps. Daily updates are made to the MRB mapper and available to anyone with a device. We are able to view all past and current data, georeferenced maps, new aerials, as well as pulling the data down for staking out in the field. We can also perform basic spatial analyses from any computer with an internet connection.

The Good and Bad:

- Excel Forms & Macros do not work on tablet app.

- Logging photos is laborious—need app that imports data.

- Field Maps currently only collects in Lat/Long Dec. Deg.

- Photogrammetry apps take too long to process for scale drawings.

- ✓ Tablets are pretty amazing, battery life, durability, quality of output.

- ✓ No. Data. Entry. No muddy, sweaty, wrinkled paper!

- ✓ All software used is free or widely used already.