Appendix C: User Guide for ArcGIS Collector

The NH Tidal Protocol is comprised of both field and desktop analyses. Field data for the Resilient Tidal Crossings Project was collected using the ESRI ArcGIS "Collector Classic (v.19.0.2)" App which interfaces directly with ArcGIS Online (AGOL). All seven (7) tables found in the Tidal Crossing geodatabase are accessible in Collector, but only four (4) of these are used for entering collected data in the field (the other three are for desktop assessments). The four field data collection tables are: Site Assessment, Structure Condition, Longitudinal Profile, and Tide Gate. Refer to Appendix B: Data Dictionary Tables for full list of tables and their attributes.

The Tidal Protocol was originally designed and formatted to collect field data using an Excel based paper form. As a result, the aforementioned database tables are not described in the Tidal Protocol (Steckler, 2017); however, they were designed for Protocol compatibility. The Structure Condition table contains fields pertaining to the crossing type and general condition. The Site Assessment table contains information about the assessment itself (such as time and place) as well as the natural community assessment and cross-section elevation data. The Longitudinal Profile table is where data is entered for each individual point on the Longitudinal Profile. The Tide Gate table is only used when a tide gate is present at the site.

Data collected with the App is uploaded wirelessly at the end of each day and is immediately accessible on AGOL. UNH Technology Transfer (T^2) tailored the Collector App to contain the necessary data collection tables, each with their specific assessment parameters, and created the associated private web map feature service (refer to Section 3.1). The web map, which is viewable both in Collector and in AGOL, contains a point layer of all 134 Tidal Crossings and each point can be selected to view and edit that site's data. All 7 tables are viewable for each point and are auto-populated with data in AGOL whenever data is uploaded from Collector.

Getting Started

1 Log into ArcCollector using your ArcGIS Online login information.

2) Open the SADES Tidal Crossing Map

For Wireless Data Collection:

- If collecting data while connected to the internet, simply select your Map in the "All Maps" section.

For Offline Data Collection (preferred):

- If collecting data offline you will need to download an offline map WHILE STILL CONNECTED TO THE INTERNET:
    - Select the download icon in the bottom right hand corner of the map option (cloud with downward pointing arrow)

- Download a new topographic basemap
- Select 'Work Area' on basemap
    - Zoom in on the area you want to work in. This can include one or many site locations. YOUR WORK AREA MUST INCLUDE ALL SITES YOU INTEND TO VISIT THAT DAY.
- Once you select a work area, Select "Map Detail" at the bottom of the screen. Zoom in or out to choose the clarity of the map while it is offline. The higher the map resolution the larger the file size, which slows down the app. To maximize efficiency, select a resolution that does need exceed a file size of 5 MB. Estimated file size is shown on the bottom of the screen.
- Select "Download" in top right corner.
- The map is now downloaded to the device. Select "On Device" at the top of the screen and select the newly downloaded map.

Note: In order to download a new offline map with a different work area than your current map you will need to delete the existing one. Select the Menu icon in the top-center of the screen (box with upward pointing arrow), select "Manage" from the drop down menu then select "Remove" under the existing map. You can then create a new map by repeating step 2.
** Downloaded Maps can be used multiple times. If reusing a downloaded map, make sure to upload collected data at the end of each day. You must be connected to the internet to upload data.*

3) Select the site you are going to assess on the map by tapping on it. When you select a site, all seven tables will appear. **Once again, for field purposes, you only need to use four of these tables for data entry: <u>Site Assessment, Structure Condition, Longitudinal Profile, and Tide Gate.</u>**

4) To begin collecting data in one of these tables, Select "New" underneath the table name.

- To reopen the newly created table at a later time, select "View" and choose the existing table.
- Existing tables can be edited by selecting the table, selecting the symbol in the top right hand corner of the table (box with upward facing arrow), and selecting edit in the drop down menu.

5) Once the new table is created, you can individually select each field in the table and enter in the appropriate data. When you have finished entering data in a table, select "Submit" in the top right corner. DO NOT SELECT CANCEL IN THE TOP LEFT CORNER as this will discard the data you have collected in this session.

**The Site Assessment and Structure Condition tables have many fields. The Longitudinal Profile table only has 5 fields and will need to be submitted at each profile shot location. The Tide Gate table has a small number of fields to be filled out only if a tide gate is present at the site.*

6) UPLOADING DATA Once all the necessary data is entered into Collector, return to the office and enable the wireless internet connection to upload them to ArcGIS Online. If you collected data while connected to the internet, the data will have automatically uploaded to ArcGIS every time you selected 'submit'. If you downloaded an offline map, you will need to go back to the "Maps" page and select the map download button again (it will now show a cloud with up and down pointing arrows and a number in red). This will upload all collected data to ArcGIS Online.

Best Practices

NHCP developed a set of standard practices for the field crew that has proven to be the most effective way to conduct assessments:

1) Arrive on site about an hour before low tide whenever possible to give yourself enough time.

2) In a two-person crew, have one person record data and the other person run the rod.

3) Make a work plan prior to leaving the office.

4) If you need to download a new site map, be sure to do so in the office while you still have access to the internet.

5) Ipad or mobile data collection device should be in "Airplane Mode" and not connected to the internet to conserve battery in the field. Bring a charger to charge device while driving.

6) Download a copy of the Tidal Protocol on the device to be used as a reference in the field. This comes in handy often as the ArcCollector App does not have specific instructions on how to collect and enter data.