COMPASS

Cetacean Observation and Marine Protected Animal Survey Software

Mobile Data Collection App v1.2 (05.02.2019)

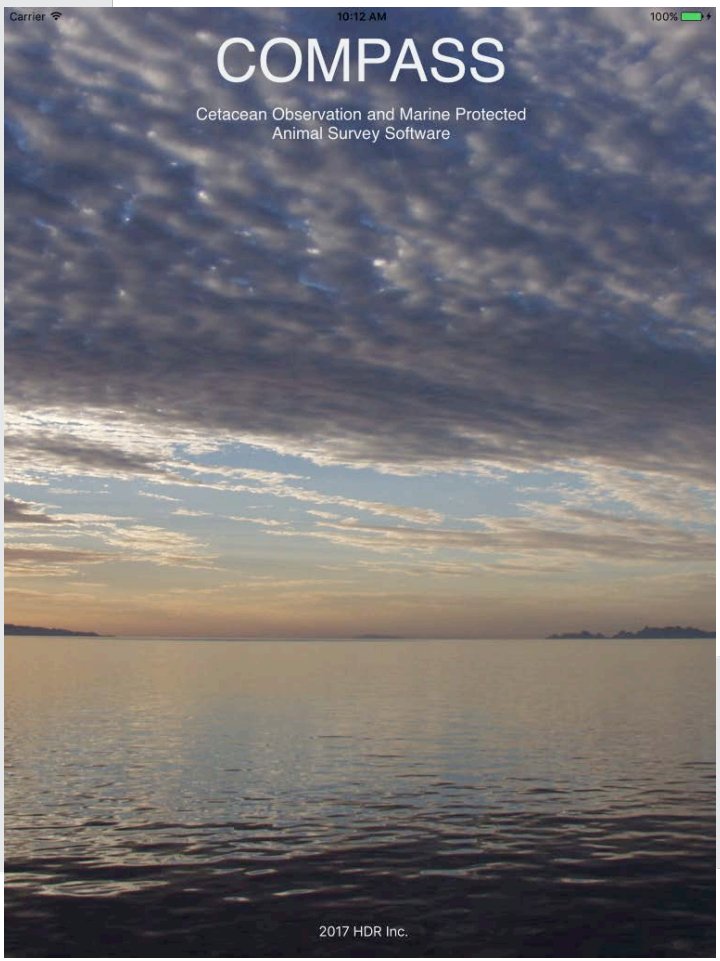


Table of Contents

Background **2**

Installation & Update **2**

Downloading the App 2

Enable the app 3

Loading Baselayers and Basemaps 3

Updating the App 3

App Operation **4**

App Layout 4

Side Menu *4*

Map View *7*

Effort *9*

Environment *10*

Observation *11*

Other Sightings *15*

Troubleshooting **16**

Map Display 16

Bluetooth 16

App Stability 16

Data Sync 17

Data Sync Best Practice *17*

Data Management **17**

Basemap Creation 17

Baselayer Creation 18

Daily Backup 19

Database Retrieval 19

Auto Archiving 19

Managing Multiple iPads on a Survey 20

Background

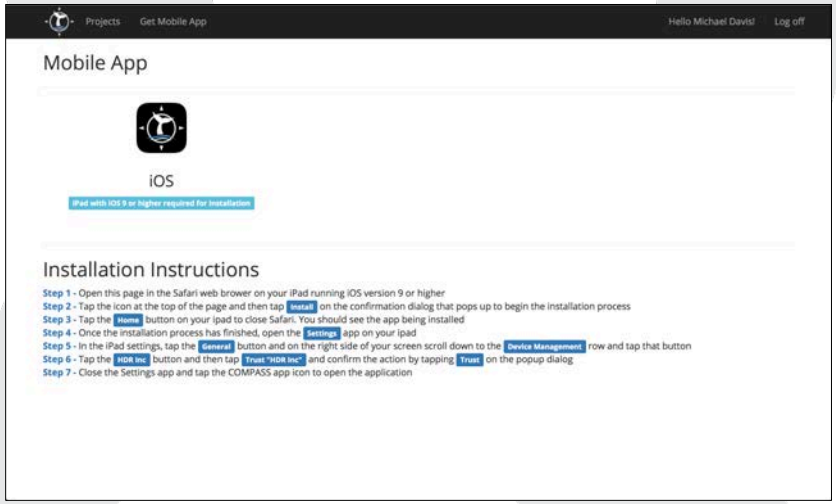
The United States (U.S.) Navy identified the need for development of a survey data-collection system that fully meets U.S. Navy Marine Species Monitoring (MSM) data standards. The objectives were to streamline data-collection procedures, minimize manual data-management requirements, and increase the standardization and repeatability of data-collection efforts. In response to this need, HDR developed a survey toolkit called COMPASS (Cetacean Observation and Marine Protected Animal Survey Software). COMPASS is designed to be an integrated survey data-collection and data-management system to facilitate work conducted during MSM surveys. HDR's survey toolkit integrates current mobile and web technologies to allow efficient real-time collection, processing, reporting, and delivery of marine species data.

COMPASS includes a mobile platform for data collection in the field; a web portal to design, plan, and execute surveys and access data products; and a server-hosted database management system for quality control (QC), team collaboration, and preliminary data processing/reporting. The surveys conducted within the MSM program include a variety of data-collection scenarios and technologies. This preliminary version of the COMPASS system addresses the needs for the most common survey types: shore-based (theodolite), vessel-based, and aerial-based. The data-collection routines for each survey type are designed to maintain consistency with the U.S. Navy's Data Standard (developed by Naval Facilities Engineering Command Atlantic and HDR, Inc.), which specifies field names, aliases, data types, measurement units, and descriptions for data that are collected in the field. Each data-collection scenario will use some subset of fields specified in the Data Standard.

Installation & Update

Downloading the App

1. On the iPad, open Safari (web browser).
2. Navigate to the COMPASS web portal: https://compass.hdrgateway.com
3. Login using provided credentials, or create an account.
4. Once logged in go to the "Get Mobile App" page.
5. Tap the COMPASS app icon. *Note: if you see a message referencing iOS system software version you will need to update your iPad to a newer version of iOS before installing.
6. Answer "Install" when asked if you want to install the app.



The app will now download and install on the iPad home screen. Depending on how many apps are installed, the app may install on the second page of the home screen. Swipe left to see additional home screen pages.

Enable the app

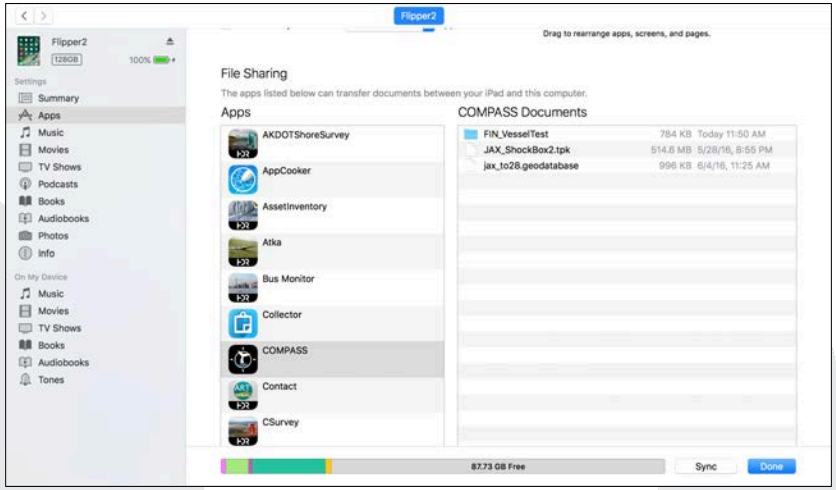
iOS 9 and newer requires an additional security requirement to allow enterprise apps to run. To enable *COMPASS,* do the following:

1. Open the **Settings** App
2. Tap the **General** item
3. Scroll down to **Device Management**, and tap it
4. Find the entry for **HDR Inc**, and tap it
5. Tap **Trust**

Loading Baselayers and Basemaps

Once installed, baselayers (non-editable vector layers) and basemaps (raster tile caches) can be loaded into the app by doing the following:

1. Plug iPad into a computer with iTunes installed.
2. Once the iPad drivers are installed and the device appears in iTunes, click the device icon.
3. Select “Apps” from the side menu in the “Settings” section
4. Scroll down to the “File Sharing” section and find the COMPASS app.
5. Click the app icon and a list of files will appear in the “COMPASS Documents” window.
6. Add basemap (.tpk) files by dragging them into this window.
7. Add baselayer (.geodatabase) files by dragging it into this window.
8. Once all copy processes have completed, eject the iPad and unplug it from the computer.
9. If the app is already running on the iPad it may be necessary to force-quit it (double tap home button, swipe app up off top of screen) and re-launch it by tapping the app icon.
10. Baselayers and Basemaps will now be available in the Layers tab.



The “COMPASS Documents” window also contains the geodatabase files for collection of field data. These will be stored in a folder with the name of the project. These should not be altered or moved unless instructed to do so by technical support staff.

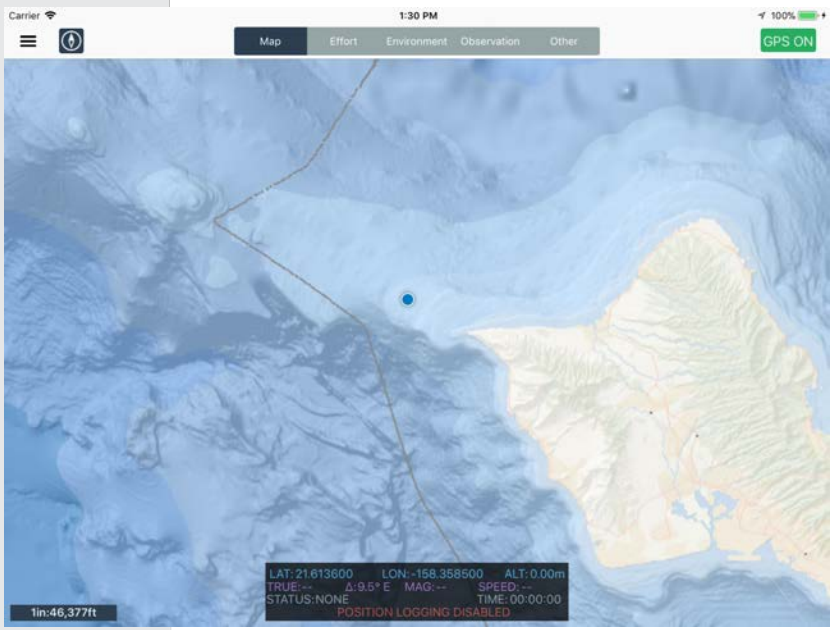
Updating the App

Updates may be provided periodically to provide additional functionality or to fix reported issues. If asked to update the app, follow the exact same procedure listed in the “Downloading the App” section. The updated version of the app will be installed over the existing version and all settings and data will remain in place. Once the app has finished updating it can be re-opened from the iPad home screen.

App Operation

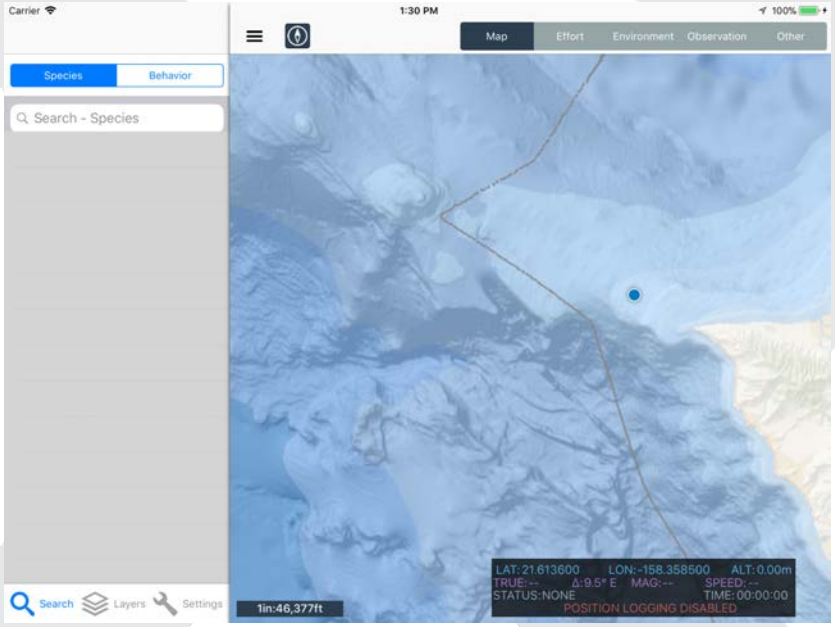
App Layout

The *COMPASS* data collection app uses a simplified layout consisting of a main map view displaying spatial data over aerial imagery or other basemaps as well as several tabs across the top of the screen containing different types of data that can be collected. The app also includes a side-menu to access ancillary app functions and settings.



Side Menu

The side menu provides access to ancillary features of the app not directly related to field data collection. This menu appears in the upper left corner of the screen as a series of 3 horizontal bars. A red badge with a white number may appear over the side menu if the device currently has collected data that has not been synchronized to the host server. This number represents the number of new or edited features in the local device database. Tapping the menu icon will open the side menu.



Search Tab

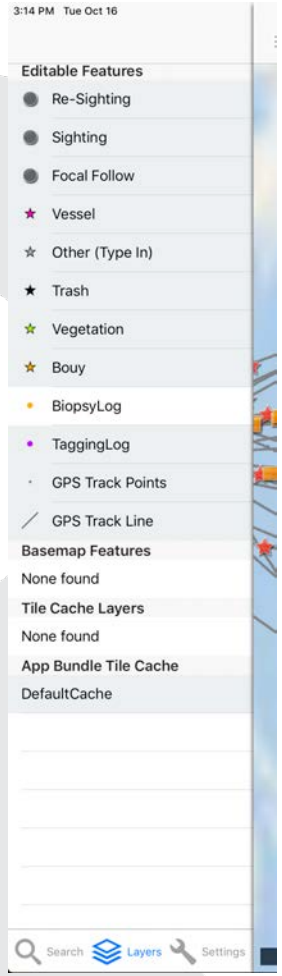
The search tab helps locate records quickly by searching the entire database of records. Collected observations can be searched by the value entered into the name field.

A search will return a table of results. Tapping on of the items in the results table will zoom the map to that feature and highlight it in yellow.

Tapping the small “x” in the search field or tapping Cancel will clear the search results and remove any highlight.

Layer Tab

The Layer controls the visibility of various layers in the app. Layers will be displayed in one of four categories in the layer table; Editable Features, Basemap Features, Tile Cache Layers, and App Bundle Tile Cache.



Editable Features

Editable Features include the layers available for data collection. Tap these layers to toggle visibility

Basemap Features

Basemap Features include all the non-editable vector layers included in the app. Tap these layers to toggle visibility

Tile Cache Layers

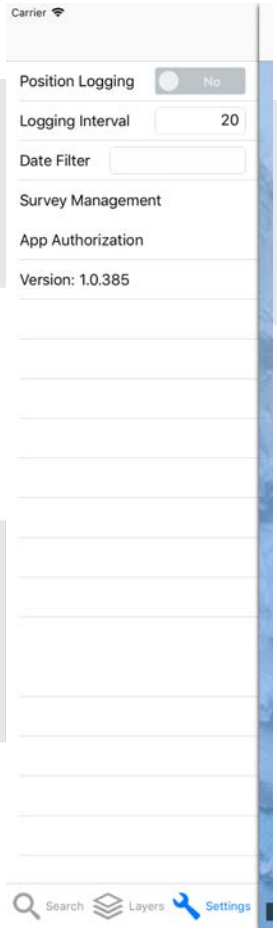
Layers in this section include the TPK files loaded onto the iPad via iTunes (see above). TPK files may be loaded to provide a specific basemap for a project or geographic area. All valid TPK files loaded into the App’s file sharing window will appear in this section of the menu. Only one tile cache can be displayed at a time. Selecting an item from this section will activate it and turn off the previously selected tile cache.

App Bundle Tile Cache

This section contains the default global tile cache included with the app.

Settings Tab

The settings tab contains ancillary app functions.



Position Logging

This switch toggles position logging on or off. Position logging records the location of the iPad at a set interval, creating a series of track points as well as a track line documenting the current effort status.

Logging Interval

This defines the interval in seconds between track log points. The default interval for aerial surveys is 20 seconds, and the default for vessel surveys is 60 seconds. You may override this default with you own preferred logging interval, however be aware that a smaller interval will result in a larger dataset and negatively impact device battery life.

Date Filter

The date filter is used to limit the data displayed in the map and the list views. Tapping the field will bring up a data chooser. Tapping the "X" symbol on the right edge of the field will clear the date filter.

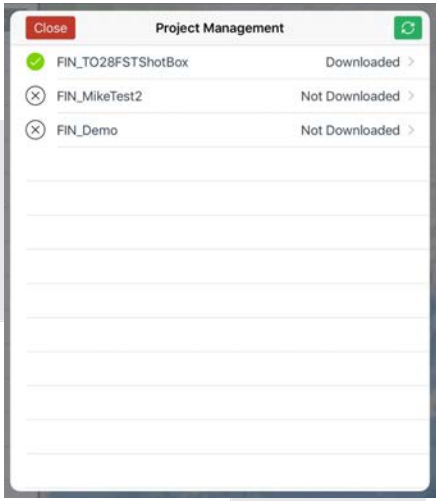
Survey Management

This row provides access to the Survey Management window. This window is used to control and configure surveys on the iPad, as well as sync data with the database.

App Authorization

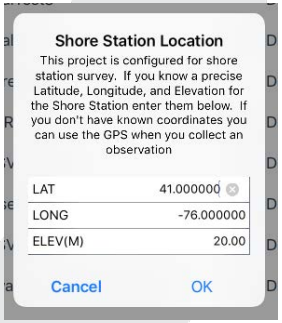
This item opens the App Authorization window, used to authorize the app for use and log in to *COMPASS*.

Survey Management Window



The Survey Management Window displays the surveys currently available for download and use in *COMPASS*. Information in this view is updated from a master project database and can be updated by clicking the green sync button in the upper right corner.

Surveys downloaded and ready for use on the devices are indicated by the "Downloaded" label. A downloaded project can be activated by tapping the white circle on the left edge of the table next to the project name. The current active project is indicated by a green checkmark.



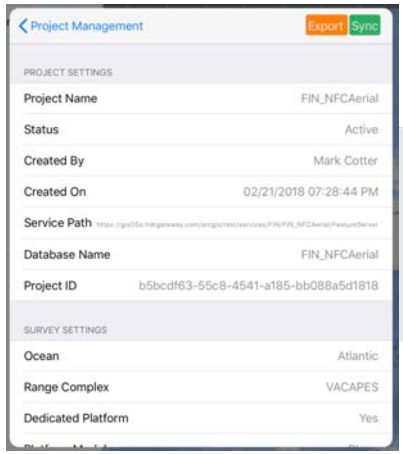
Shore Survey: Station Location Pop-up

When selecting a shore survey as the active project a pop-up window will appear giving you the opportunity to enter specific coordinates and elevation values for your shore station location. You can also access this window by tapping the "Platform Position" row in the Position Calculation window when collecting observation data.

Survey Detail View

Tapping a project in the Project Management Window will show detailed information in the Project Detail View. This view provides information on the project and also facilitates download and sync of project data.

A project that has not yet been downloaded to the device will display a green "**Download**" button in the upper right corner.



Once downloaded to the device, the Project Detail Window will display a green "**Sync**" button in the upper right corner. Tapping this button will transmit collected data to HDR servers.

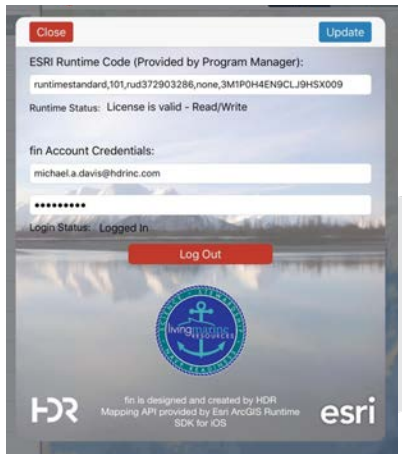
The Project Detail View will also display an orange "Export" button. This button can be tapped at any time to create a CSV export of all data in the survey database. These exports will be stored in a folder in the Documents directory of the Compass app and are accessible via the iOS Files app

Authorization View

The Authorization View is used to authorize the app for use, and to log into the COMPASS system. Account credentials can be entered and verified by tapping the "Update" button.

ESRI Runtime Code

This code authorized the Esri Runtime SDK for use. The Runtime SDK provides mapping and geospatial data management capabilities used by COMPASS to record data and display maps.



The Runtime code will be downloaded directly from the *COMPASS* server and verified automatically.

COMPASS Account Credentials

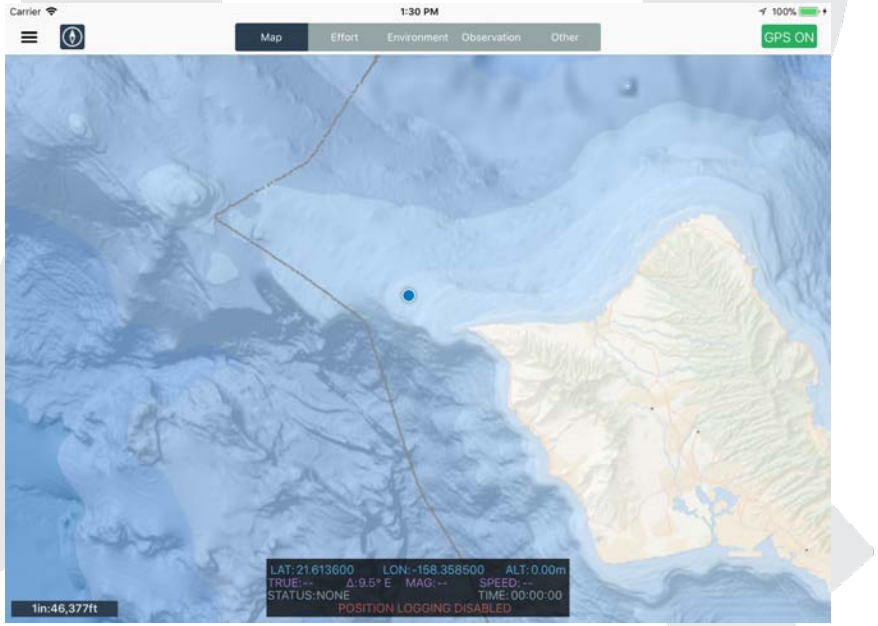
Entering your user credentials for the *COMPASS* system into these fields will allow the iPad to contact the web portal and determine which surveys you are authorized to use. Without credentials, no surveys will be available on the device and data cannot be collected.

Once your credentials have been verified you will see a red "Log Out" button on the screen. Logging out will disable access to projects.

Authorization Errors

You may occasionally experience errors when authenticating your account with the COMPASS server. If this occurs, please note the error message received and report it to COMPASS technical support.

Map View



The map view is the main spatial interface for the app. It displays editable layers, vector baselayers, as well as a base tile cache. The display of these layers can be controlled in the Layers tab of the side menu.

The dialogue box at the bottom of the map view shows basic GPS data regarding position, course, and speed. The "status" display is a timer for your current effort status – which can be helpful for time on/off effort or conducting different types of effort (e.g. focal follows).

Navigation

Map navigation is via a drag-to-pan or pinch-to-zoom action. Double-tapping the screen will zoom in one level, and single-tapping the screen with two fingers at the same time will zoom out one level.

Location Display

Tapping the GPS button in the upper right corner of the app will toggle location display. This activates the internal iPad GPS or, if connected to an external GPS receiver, activates the connection to the external GPS and activates the data quality status display.

The GPS button will display with a green color when connected to the internal iPad GPS and a blue color when connected to an external receiver.

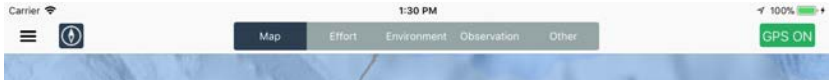
Map Orientation

When the GPS is activated, tapping the compass button next to the side menu in the upper left corner of the app will toggle the map view between map mode and navigation mode. When in map mode the map is oriented "North Up". Switching to navigation mode changes the map to orient to the current direction of travel.

Scale Bar

A scale bar is provided in the lower left corner of the map display. This scale bar provides real-time scale information as the map is panned or zoomed. The bar is configured to be 1-inch long on iPad displays and displays the equivalent map distance as measured on the ground.

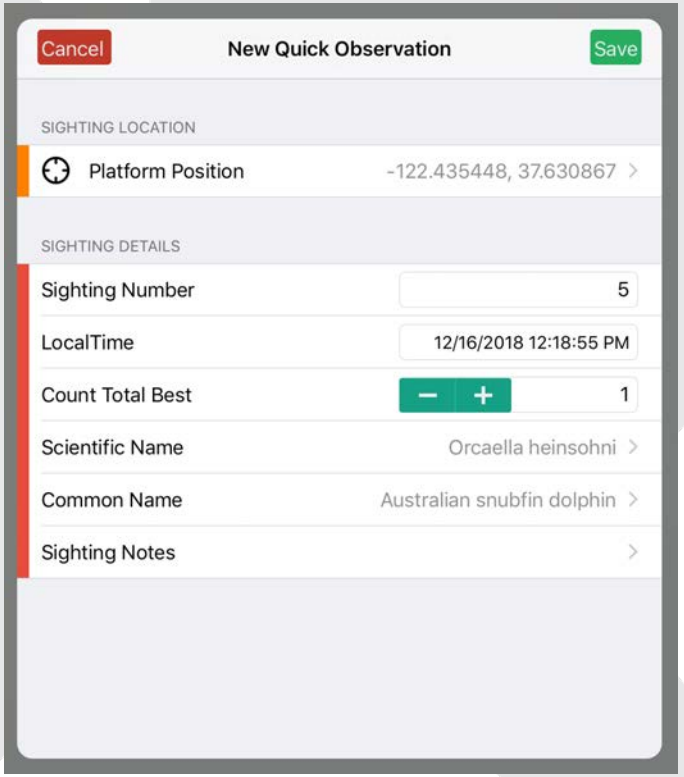
Quick Collect Shortcuts



While in the map view you can quickly collect a new Effort, Environment, Observation, or Other record by pressing the corresponding segment button for 2+ seconds. Doing this will trigger a pop-up window with a blank entry for the selected record type.

Quick Collect Observations

When adding Observations through the Quick Collect shortcut an abbreviated version of the observation form will be presented.



This form displays the location of the sighting with no offset from the platform. It also will default to a count of one, and will maintain sticky values for species separate from the main Observation collection form. These observations will show up in the main Observation List and will be numbered in sequence for the sighting number count.

Effort

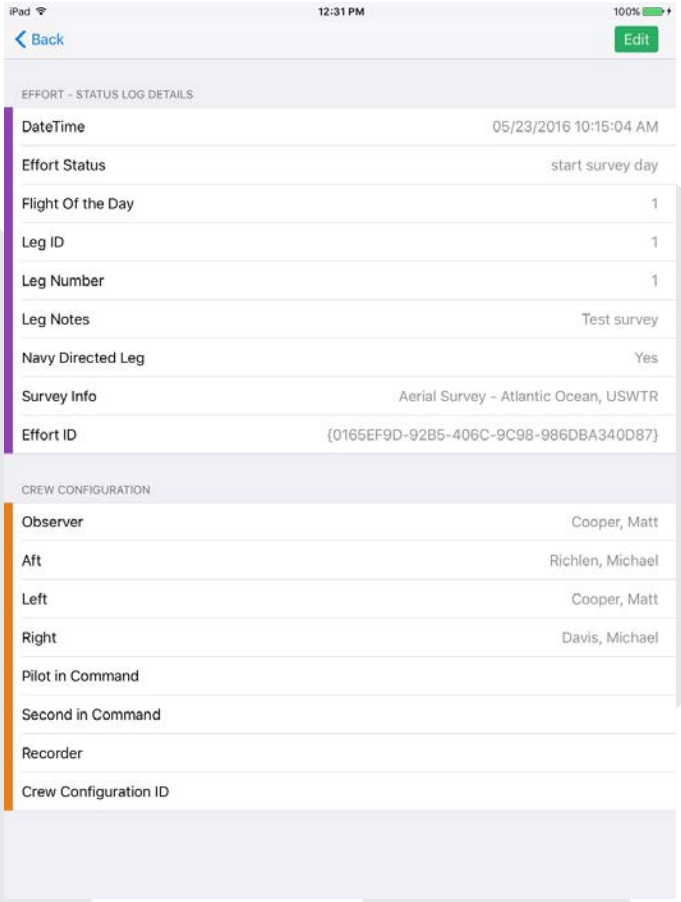
Effort List View

The Effort tab provides a list of collected effort log entries documenting the type of survey occurring and the crew configuration. This list is sorted in descending order by date, with the newest records on the top of the list.

To collect a new effort record, click the "+" button in the upper right corner.

To access details for an existing effort log entry, tap the record.

Effort Details



The Effort Detail View displays information about the survey status, as well as the crew configuration. Tap "Edit" to make changes to the form, and remember to tap "Save" when done! If you do not wish to save edits, you can tap the "Cancel" button.

Sticky Values

The Effort Detail form will retain several "sticky" values that are remembered by the app and automatically populated for new records. For Effort records this includes:

- Effort Status
- Crew Names in the configuration section

These sticky values are updated every time a record is saved, and will be reset when changing surveys.

Crew Names

Crew names are drawn from the authorized users added to the project as well as names added to the “Other Users” section of the survey configuration section of the Compass web portal. These users will show up in the pick list, but do not have access to survey data or resources in the Compass web portal. If additional authorized users or “Other Users” are added to the survey in the Compass web portal they will show up after the next data sync.

Environment

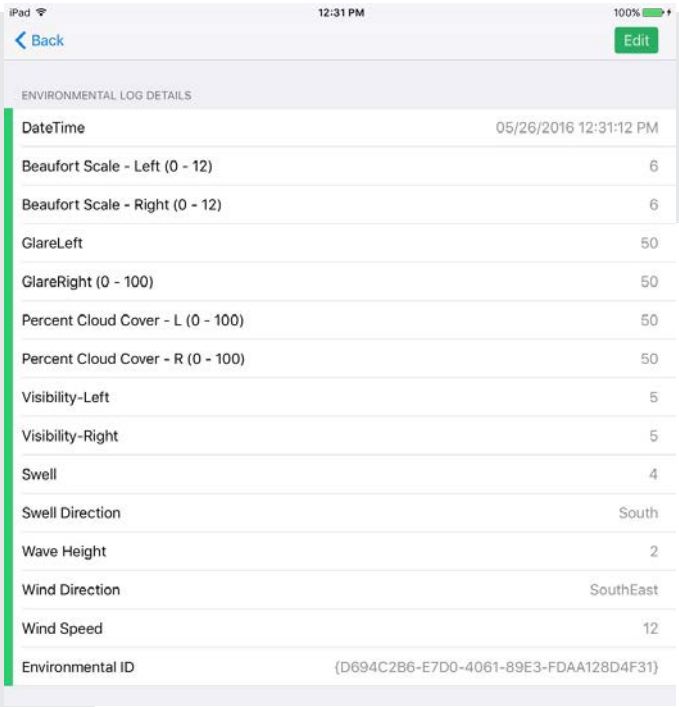
Environment List View

The Environment tab provides a list of collected environmental observation log entries documenting the information on the current weather conditions and sea state. This list is sorted in descending order by date, with the newest records on the top of the list.

To collect a new environment record, click the “+” button in the upper right corner.

To access details for an existing environment log entry, tap the record.

Environment Details



The Environment Detail View displays information about weather and sea state conditions. Tap "Edit" to make changes to the form, and remember to tap "Save" when done! If you do not wish to save edits, you can tap the "Cancel" button.

Note: while not all surveys have a "left" and "right" observer, the MSM Data Standard was created to cover all possible data collection scenarios. If only one environmental record is needed you can select left or right when creating a survey in the web portal but do not need to have both for mobile data collection.

Sticky Values

The Environment Detail form will retain several "sticky" values that are remembered by the app and automatically populated for new records. For Environmental records this includes:

- Beaufort State (Left & Right)
- Glare (Left & Right)
- Percent Cloud Cover (Left & Right)
- Visibility (Left & Right)
- Swell Direction
- Wind Direction
- Wind Speed
- Wave Height

These sticky values are updated every time a record is saved, and will be reset when changing surveys.

Observation

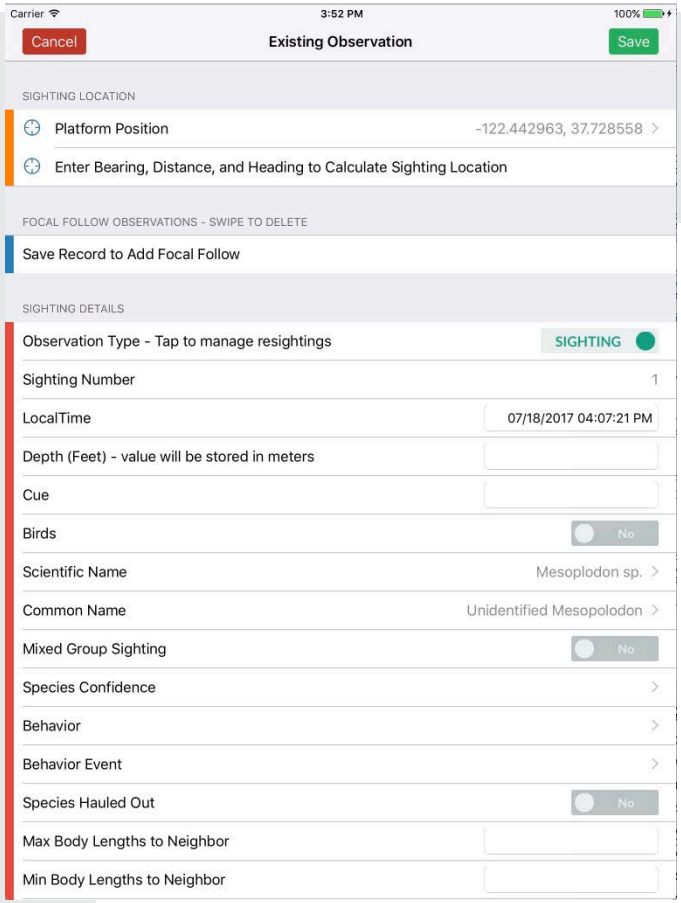
Observation List View

The Observation tab provides a list of collected marine mammal observation log entries. This list is sorted in descending order by date, with the newest records on the top of the list.

To collect a new observation record, click the "+" button in the upper right corner.

To access details for an existing observation log entry, tap the record.

Observation Details



The Observation Detail View displays information about the sighting/observation Tap “Edit” to make changes to the form, and remember to tap “Save” when done! If you do not wish to save edits you can tap the “Cancel” button.

Sticky Values

The Observation Detail form will retain several “sticky” values that are remembered by the app and automatically populated for new records. For Observation records this includes:

- Species Common Name
- Species Scientific Name

These sticky values are updated every time a record is saved, and will be reset when changing surveys.

Position Calculation Pop-Up

When collecting a new observation, the app will automatically determine the observer location and open the Position Calculation pop up window. This window allows the observer to enter the required distance measurements to determine the location of the observation.

Platform Position

This section displays the location of the observation platform as determined by the iPad GPS. This will also include the elevation and heading if the position data is of a high enough quality. If not, these field may be blank, or populated with a value of -1. In this instance the observer will need to manually enter these values using other instruments such as a compass or altimeter. If no value is entered the animal position will not be calculated.

Observation Data

The instrument and measurements used to locate the observation are entered in this section. The type of instrument can be chosen from a pick list and the angle measurement entered, along with a bearing to the observation.

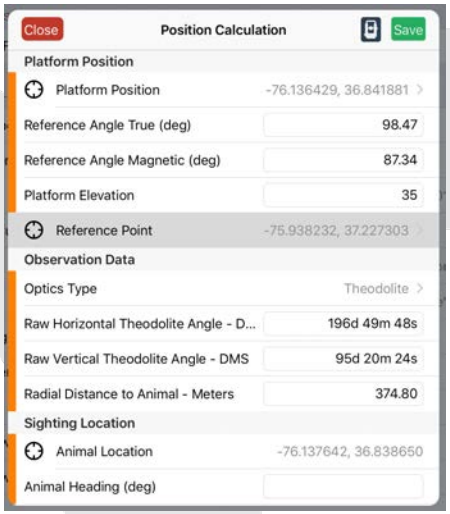
Once all this information is entered, the distance to the observation will be calculated when the observer hits "Save". When this is done the app will automatically use the bearing and distance to calculate the observation and generate a spatial point at that location. If an error is made in data entry this form can be revisited later at any time, and the entered data edited. Each time the data is saved, the location of the observation point will be recalculated. Additionally, adjusting the bearing and distance from the original observation will force the observation position to be re-calculated.

Sticky Values

The Position Calculation form will retain several "sticky" values that are remembered by the app and automatically populated for new records this includes:

- Optics Type

If surveying in shore station mode there are additional sticky values including:



- Platform Position (Platform Latitude, Platform Longitude)
- Platform Elevation
- Reference Point

These sticky values are updated every time a record is saved, and will be reset when changing surveys.

Required Fields

Depending on the type of instrument used for the observation, specific fields are required to successfully perform an offset calculation. These fields are:

- Laser, Estimate
  - Platform Lat/Long
  - Platform Elevation
  - Platform Heading
  - Bearing
  - Distance
- Big Eyes, Clinometer, Fujinon 7x50
  - Platform Lat/Long
  - Platform Elevation
  - Platform Heading
  - Bearing
  - Vertical Angle
- Theodolite
  - Platform Lat/Long
  - Platform Elevation
  - Vertical Angle

- Horizontal Angle

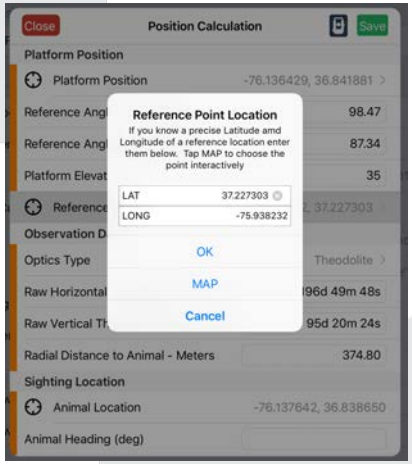
Theodolite

Observations can be collected using an attached theodolite. COMPASS currently supports Sokkia DT5 series Theodolites using the L2-DB9V thunderbolt to serial converter cable from Redpark Product Development (www.redpark.com).

When collecting data in a project configured for shore or vessel survey the Position Calculation pop-up window will display an additional button in the title bar. Tapping this button will send a message to the theodolite triggering a response. The response message will then be parsed into the Vertical and Horizontal Angle fields.

Theodolite Reference Point

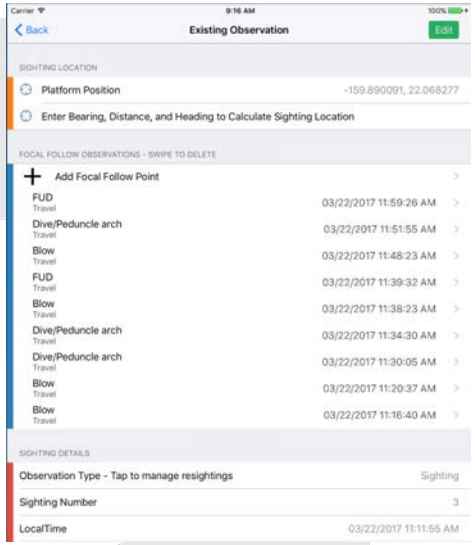
COMPASS supports the entry of a reference location for theodolite offset measurements. This location can be entered via a Latitude/Longitude of a known location, or by tapping a location on the map.



To modify the reference angle settings tap the “Reference Angle” row while editing data in the Position Calculation view. Enter a Lat/Long into the fields, or tap “MAP” to interactively choose the reference point on a map.

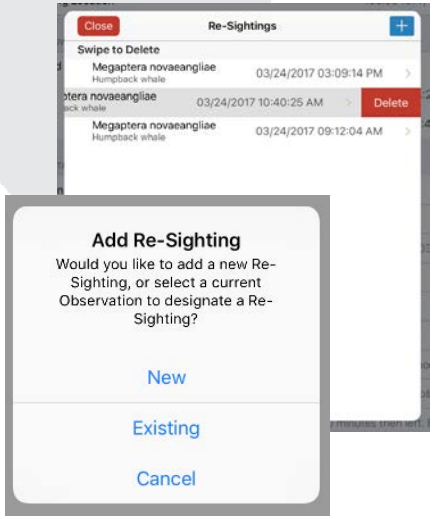
Focal Follow

The Observation Detail form includes a section to record Focal Follow entries. Once a new Observation record is saved, the observer can add focal follow records by tapping the “Add Focal Follow” row in the table. Tapping this row will open a new Focal Follow form functionally similar to the Observation Detail form. Once the position of the Focal Follow observation is calculated and appropriate attributes recorded in the form, the focal follow records will display in the Observation Detail form in descending order by date, with the newest observation at the top.



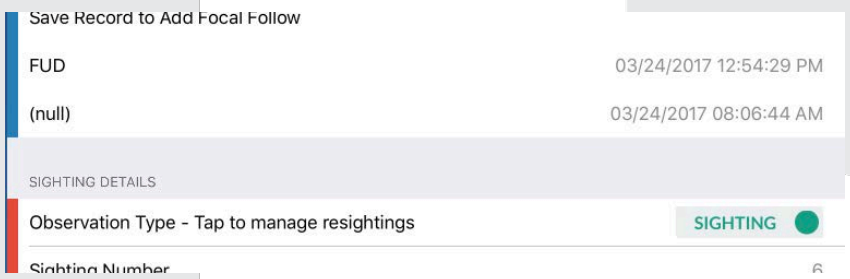
Re-Sightings

Below the Focal Follow section is the Sighting Details section. The first row in this section specifies the observation type. An observation can be toggled between “Sighting” and “Re-Sighting” by changing the toggle in this row. Tapping this row will open the Re-Sighting manager allowing you to add and delete re-sighting records.



Tapping the “+” button will prompt you to add a new Re-Sighting or choose an existing Sighting record from that day to re-assign as a Re-Sighting.

Existing sightings can also be re-classified as Re-Sightings by toggling the switch from “Sighting” to “Re-Sighting”. Doing this will open a window prompting you to choose the parent sighting from the previously collected observations for that day.



Similarly, a Re-Sighting can be switched to a Sighting by toggling the switch. Doing so will remove the record from the list of associated Re-Sightings and assign it a daily sighting number.

Other Sightings

This type of sighting may include vessels, debris/trash, vegetation, or any other item the crew would like to document.

Sightings are captured in a similar manner to Observations, as described above. The sighting location and vessel position will be documented along with the date and time, sighting type, and notes.

Troubleshooting

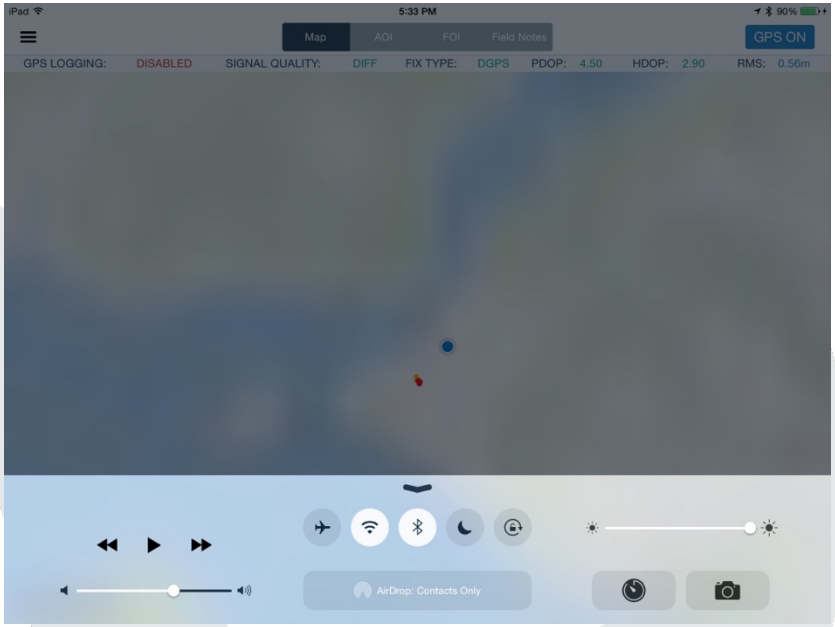
Map Display

When surveying or collecting field data you may occasionally run into a situation where the map is not displaying the data you expect to see. In these instances be sure to check the following:

- Make sure the correct project is active in the Survey Management window.
- Make sure the Date Filter is set to the correct day in the Settings Menu
- Make sure the layers are set to visible in the Layers Tab of the side menu.

Bluetooth

External high-precision GPS devices connect to the iPad via Bluetooth. While these connections have proven to be reliable, Bluetooth can experience interference from other devices that operate in the 2.4Ghz spectrum. If you are experiencing trouble with the connection to the external GPS, try the following:



Swipe up from the bottom of the screen to display the quick-access toolbar. Find the Bluetooth symbol (center top) and tap it once to turn Bluetooth off, then once more to turn Bluetooth back on. This will force external devices to reconnect.

App Stability

Compass is still under active development and as such may crash or shut down from time to time. In addition iOS, the operating system on the iPad, may close down the app unexpectedly to free up resources and conserve battery life. Compass is designed to account for these shut-downs by storing data in a non-volatile state (database) and preserving the state of the app.

If Compass shuts down unexpectedly immediately re-open the app and it should return to the state it was in when the shutdown occurred. This will include re-starting location tracking. In addition if the shutdown was due to a bug in the system a report will be sent to the developers with debugging information the next time a network connection is available.

Data Sync

Data collected on the device needs to be synchronized to the host server periodically to archive it, and to make it available for other users to review and Quality Check. The app will indicate that new or edited data is stored on the device by displaying a red badge on the icon for the side menu (upper left corner of the map view screen). This red badge indicates the number of non-sync'd new features or edits present on the device.

The sync process can take 2-5 minutes to run under normal circumstances. If you experience long sync times it may be due to a slow network connection. If you experience trouble when trying to sync or get an error message, please check the following:

1. Make sure the iPad is connected to a Wi-Fi network. This can be checked in the Settings app.
2. Make sure the iPad can access the internet. Do this by opening Safari (web browser) on the iPad and visiting http://www.google.com or https://apps.hdrgateway.com. If you can connect to these sites, the app should be able to reach the HDR server.
3. Toggle Wi-Fi off and back on by opening the quick-access toolbar (see Bluetooth troubleshooting) and tapping the Wi-Fi icon once to turn it off, and again to turn it back on.
4. If you encounter an error message related to authentication it may be necessary to re-enter your credentials in the Authorization View and tap "Update", then return to the Project Details and try the sync again. (see page 7)
5. If the above steps fail to fix the issue, it may mean there is a network issue somewhere between the wireless access point and the HDR server. It may be necessary to back data up locally and delay sync until network connectivity can be restored. See the backup section under Data Management for details.

**Note: Data sync in ArcGIS Server works in a "last-in-wins" manner, meaning the most recent sync or commit will overwrite existing data in the database. Specifically, if information about a sighting, observation, etc. is edited on the mobile device and sync'd after edits or changes have been made to data in the web portal it may cause those changes to be written over.*

To mitigate the risk of inadvertently writing over data edits it is best-practice to only edit data via the web portal once it has been checked in from the mobile app. In cases where data edits must be performed on the mobile device it is important to coordinate with the rest of the survey team.

If data is inadvertently synced over changes or edits it is possible to restore the lost data from the database archive, however this will require contacting COMPASS technical support to accomplish.

Data Sync Best Practice

Managing data between the mobile device and web portal is most successful if you follow these guidelines:

- When collecting data or editing existing data on a mobile device sync the survey at the **beginning** and **end** of the session.
- Stick to editing collected data via either the mobile device **or** the web portal (not both) during a single session.

Data Management

Basemap Creation

COMPASS supports adding user-created basemaps (.tpk files) to provide background imagery and contextual information. Once loaded, users can switch between basemaps at any time by choosing one in the Layers tab.

Esri provides comprehensive instructions on creating a Tile Package (.tpk) in ArcMap here: http://desktop.arcgis.com/en/arcmap/10.3/map/working-with-arcmap/about-tile-packages.htm3

The basic steps to create a tile package for your project include:

- Create an ArcMap document containing the layers you want to include. This can include both raster and vector layers, but vector layers included in a tile cache cannot be individually controlled or identified. The ArcMap document should follow these guidelines:
    - Web map services and other online data sources cannot be included in the map document*
    - The map projection must be set to Web Mercator (Auxiliary Sphere)
    - Remember that this map will display at multiple zoom levels. Set your zoom levels in ArcMap to ArcGIS Online/Bing Maps/Google Maps
    - View your map document at each of the zoom levels you want to include and make sure the styling and labeling are working the way you want them to.
- Export a .TPK using the Create ArcGIS Runtime Content tool under File -> Share As

**There are options available if you need to include an on-line imagery or data source in your tile cache. Contact the COMPASS support team if you require this for your project.*

Baselayer Creation

COMPASS supports adding user-created non-editable vector layers to provide additional context to surveys. Examples may include survey area boundaries, hazard areas, buoy locations, etc. Baselayers will be loaded into COMPASS and can be individually turned off/on in the Layers tab.

Esri provides comprehensive instructions on creating an ArcGIS Runtime Geodatabse here: http://desktop.arcgis.com/en/arcmap/10.3/map/working-with-arcmap/creating-arcgis-runtime-content.htm

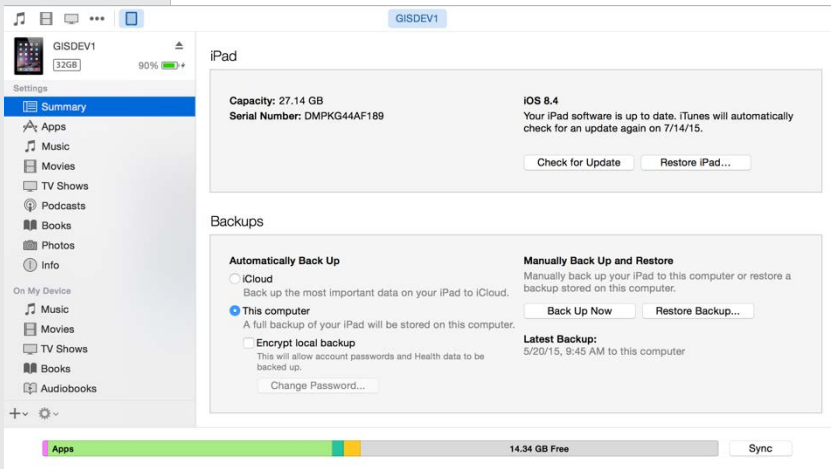
The basic steps to add custom map layers include:

- Create an **ArcMap document** containing the layers you want to include. The ArcMap document must meet these requirements:
    - All source data must exist in the **same folder** (shapefiles) or geodatabse (feature classes)
    - All source data must be in the **same projection**
    - One map layer per source dataset (can't have multiple map layers pointing at the same feature class)
    - **Do not** include a background layer (imagery, street map, etc.). Only vector layers. On the device the background will be provided by tile cache files.
    - Keep your layer styling and labeling **simple**. The app will do the best it can to mimic the styles you use in your map, but the app doesn't support complex symbology very well.
    - Specify a **primary display field**. This is the field the app will display when you tap one of your baselayer features.
    - Set the projection of your ArcMap document to **Web Mercator (Auxiliary Sphere)**
- Enable runtime export tools (**Customize -> ArcMap Options -> Sharing ->Enable Runtime Tools**)
- Export a baselayer geodatabase (.geodatabase) using the **Create ArcGIS Runtime Content** tool under **File -> Share As**

Daily Backup

It is important to back up the iPad daily after field data collection is complete. It is generally recommended you back up your iPad BEFORE sync'ing data to the server each night. Doing this is easy following the steps below:

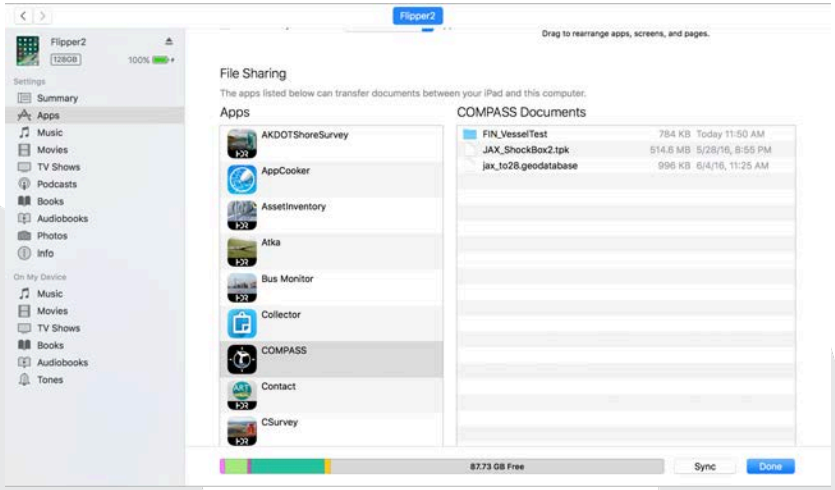
1. Connect the iPad to a computer with iTunes installed
2. Select the iPad when it appears in the iTunes side menu
3. Click the Summary tab
4. Find and click the "Back up Now" button



iTunes will archive the entire contents of the iPad to a backup file. In case of a lost or damaged iPad, the backup can be restored to another device and all collected information retrieved.

Database Retrieval

If you experience difficulty syncing data from the app, or other issues prevent normal operation of the data collection app, we may ask you to retrieve the database of collected field data from the device for archive and diagnosis. In this circumstance, retrieve a copy of the database from the device by doing the following:



1. Connect the iPad to a computer with iTunes installed
2. Select the iPad when it appears in the iTunes side menu
3. Select "Apps" from the side menu in the "Settings" section
4. Scroll down to the "File Sharing" section and find the COMPASS app
5. Click the app icon and a list of files will appear in the "COMPASS Documents" window
6. Find the folder with the same name as your project
7. Choose this folder and select the "Save To" button
8. Save the files to a central location on the computer
9. If requested, zip these files in this folder into a single archive and email them to the provided address

Auto Archiving

While you are collecting data with the Position Logging option turned and the GPS active the app will automatically archive your local database every 5-10 minutes. These archive files will be stored in the folder for the active survey. If needed they can be accessed via iTunes or the iOS Files app.

Managing Multiple iPads on a Survey

Compass is currently configured to support using a single iPad to record data for a survey. While our future plans include enabling simultaneous use of multiple iPads on surveys, please do not do so at this time.

If you wish to use multiple iPads for redundant data collection it is important to remember to only sync the data from one iPad at the end of the survey day. After verifying the sync completed successfully, archive the data on the second device and download a new copy of the database for that project. This will ensure that duplicate data is not logged for the survey that might affect reporting and effort calculations.

In the event of a hardware failure or other event it may be necessary to rely on data from a backup or secondary device to “fill a hole” in the data collected by the primary iPad. In this case it is best to contact Compass support staff so we can assist you in checking in your survey data.