

Mobile Applications at US Geological Survey

Directory of mobile applications by the US Geological Survey

Application Name	Description	Supporting Documents	Intended Audience	Screen Shots	Download Links
iPlover	<p>iPlover was developed by the U.S. Geological Survey (USGS) Woods Hole Coastal and Marine Science Center and the USGS Center for Integrated Data Analytics. It is used by trained and vetted personnel to record information about habitats on coastal beaches and the environment surrounding them. iPlover uses the sensors on iPhone and Android devices to simplify and facilitate consistent data collection and data management. The app is intended for use by the USGS and its collaborators and will not function without an approved login. For more information, contact iplover_help@usgs.gov</p> <p>Features:</p> <ul style="list-style-type: none"> • Collect data from the field, online or offline. • Synchronize data with central server to share across your group. • Edit data on the device before and after synchronizing. • See an overview map of data from your group. 	iPlover Release Checklist	<p>Limited access</p> <p>The app is intended for use by the USGS and its collaborators and will not function without an approved login.</p>	<p>Login Page</p> <p>Home Screen</p> <p>Map Sites Page</p>	<p>★ iPhone: iPlover on iTunes</p> <p>★ Android: Plover2.5.apk</p> <p>Android Installation Instructions</p>
CO2Calc	<p>CO2calc is a user-friendly, stand-alone application for the calculation of water carbonate system parameters, developed by the U.S. Geological Survey, Florida Shelf Ecosystems Response to Climate Change Project in response to its Ocean Acidification Task. The application is intended as a follow-on to CO2SYS, originally developed by Lewis and Wallace (1998) and later modified for Microsoft Excel by Denis Pierrot (Pierrot and others, 2006). While CO2calc expands on the functionality of CO2SYS, much of the code of the latter program was adopted with minimal changes to ensure back-compatibility. CO2calc offers several improvements on CO2SYS, including: An improved graphical user interface for data entry and results</p> <ul style="list-style-type: none"> ▪ Additional calculations of air-sea CO2 fluxes (for surface water calculations) ▪ The ability to tag data with sample name, comments, date, time, and latitude/longitude ▪ The ability to use the system time and date and latitude/longitude (automatic retrieval of latitude and longitude available on iPhone 3, 3GS) ▪ An option to save and email sample information, data input, and calculated results as a comma-separated value (CSV) file for use with Microsoft Excel, ArcGIS, or other applications <p>For questions about the original CO2SYS, the user is referred to the CO2SYS documentation at http://cdiac.ornl.gov/oceans/co2rprt.html#aboutco2sys. For specific information regarding the Excel VBA code of Pierrot and others (2006), contact dpierrot@rsmas.miami.edu or denis.pierrot@noaa.gov.</p> <p>More details http://pubs.usgs.gov/of/2010/1280/</p>		Public access	<p>Home Screen</p> <p>Sample Info Screen</p> <p>Input Screen</p> <p>Results Screen</p>	<p>★ iPhone: CO2calc on iTunes</p>
ScienceCache	<ul style="list-style-type: none"> • Patterned off current GeoCaching apps • Pls create routes where people (citizen scientists, students, volunteers, field crews) go out and collect data and send that data back to the Pls • Uses Cordova photo & gps modules • Need to cache map data so that people don't need connection to the internet; cache map tiles needed along with waypoints • CouchDB is used to house routes & visits and acts as the connection between the Mobile App to the Web Editor App • CouchDB, a NoSQL/JSON database, gives us all of the flexibility and connections needed to work with either the Mobile or Web App • PouchDB (installed on the phone) and CouchDB (the backend database) use the same method for revisions; if someone downloads a route they can see if there is a new version of the routes for folks 	ScienceCache Release Checklist	Public access		
NAS Sighting	<p>The Nonindigenous Aquatic Species (NAS) Program (https://nas.er.usgs.gov) is one of the largest repositories for spatially enabled occurrence data on non-native aquatic species with over 1,100 species and 430,000 sightings represented. Through the years, many field observations have been provided from citizen scientists using the "Report a Sighting" web interface (https://nas.er.usgs.gov/SightingReport.aspx). In an effort to expand the audience and allow data entry to occur at the point of observation, a new mobile application has been developed for Apple iOS and Google Android devices. Current, accurate observational data is important to informing the decision making process. By utilizing the latest in mobile data acquisition technology, the Wetland and Aquatic Research Center (WARC) Advanced Application Team (AAT) provides technical capacity to the NAS program helping them accomplish their goals.</p>	NAS Sighting Release Checklist	Public access	<p>Data Entry Form</p> <p>GPS / Cellular Data Usage Warning</p> <p>Observation Location</p>	<p>★ iPhone: NAS Sighting (link coming soon)</p> <p>★ Android: NAS Sighting apk and instructions from NAS page</p>