

# iOS Application JKalstromWeatherUnderground

## *Description*

This application allows you to monitor and alarm current temperature weather stations on the Weather Underground (wunderground.com) network, which has about 40 personal weather stations (available for \$150-200) in the Santa Barbara area. Monitoring temperature can let you know when outdoor activity is best, such as cycling home from work before it gets too cold.

The API is limited to 10 queries per minute per API key and each station's temperature requires a query. The application throttles usage to prevent overage, so you may notice limited data is available. But once you set alarms they will have priority while the application is suspended.

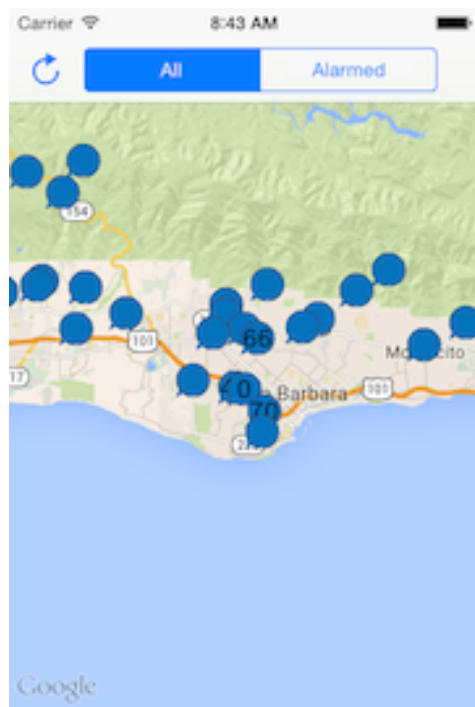
In order to use the application you will need to obtain API keys from Google and Weather Underground. See the "Settings" section for instructions.

## *Home Screen*

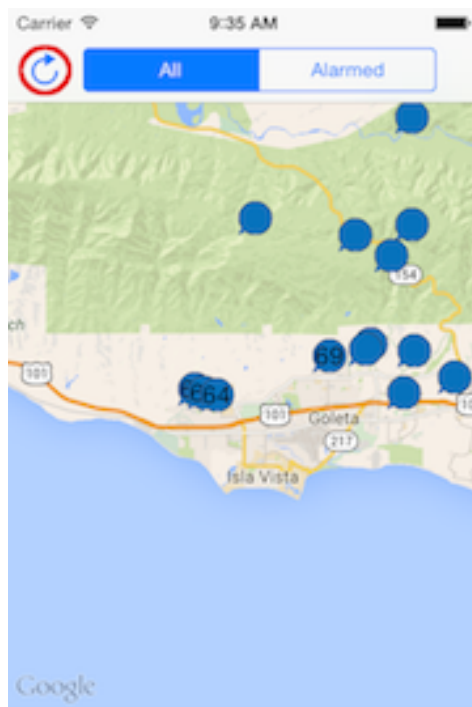
When the application starts you should see the map centered on your current geographic location, as determined by your internet address. Weather stations in your area appear as blue circles.

The map is a Google map. You may move to a different location by dragging, zoom in or out by pinching. When you want to retrieve weather stations for a new area, press the refresh button (circular arrow) in the upper left.

The Weather Underground server limits requests to 10 per minute. Since each station's temperature requires a request, the application only populates the four nearest stations initially. If the refresh button is pressed, four more temperatures are retrieved.



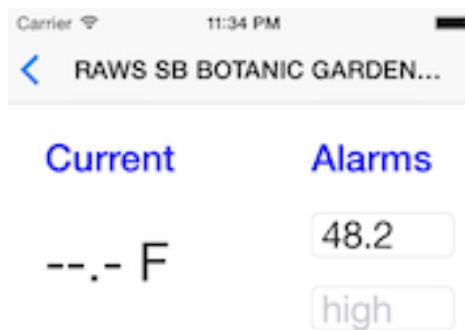
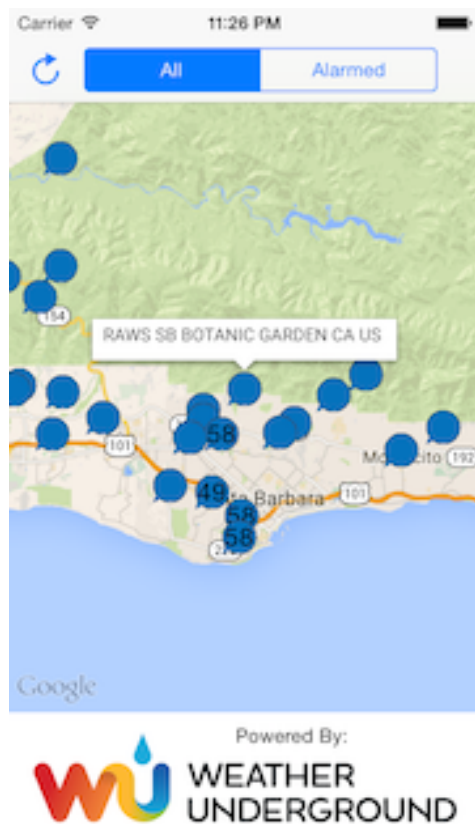
Powered By:  
**wu** WEATHER  
UNDERGROUND



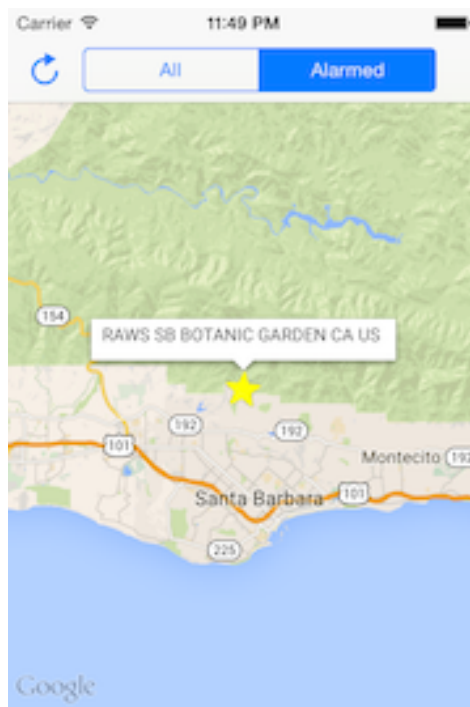
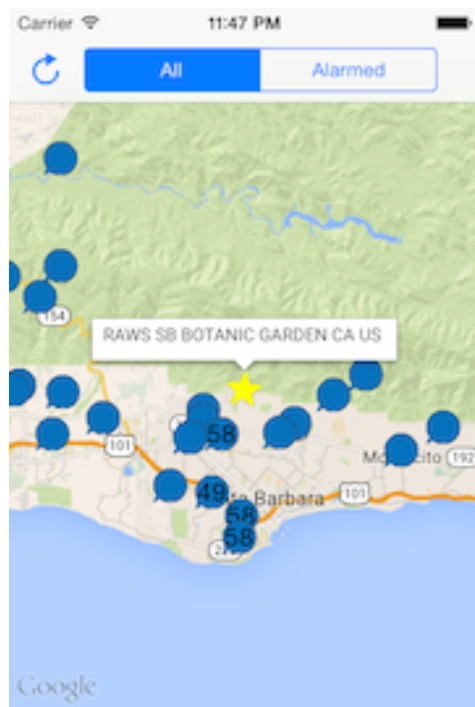
Powered By:  
**wu** WEATHER  
UNDERGROUND

### *Station Information and Alarms*

When you click on a station, a white annotation box will appear with a description of the neighborhood that the station is in. If you click on this annotation, the station detail screen will appear, where you may enter alarms. Here I've just entered an alarm when the temperature goes below 48.2 degrees.



When you return to the map, you'll notice that the icon for the station has changed from a circle to a star, to indicate that the station has an alarm set. Click the "Alarmed" half of the segment controller to see only these stations.

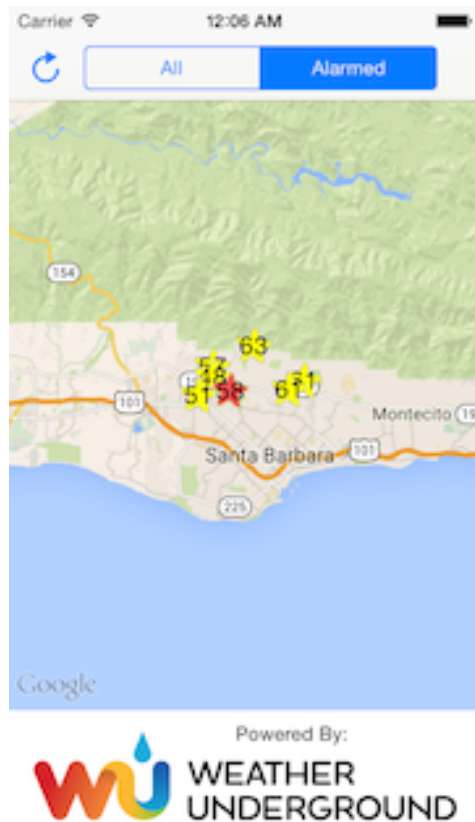


### *Alarm Activation*

When a station's temperature goes out of range, the icon will change from yellow to red. (Here I've set a number of alarms so I could get one to trigger without waiting a long time.)

If you put the application into the background, the alarmed stations will continued to be monitored periodically. Increase the "Background App Refresh" interval (see "Settings" section) in order to reduce network usage.

; the default is 20 minutes, though the operating system may choose to perform this update much less frequently.



## Settings

The app requires some configuration before it will run. After installation, go to the Settings application, scroll down near the bottom until you see "JKalstromWeatherUnderground". Click on it and you'll see the API KEYS and BACKGROUND APP sections.

To get a Google maps API key, go to <https://console.developers.google.com/project> (create a google account if necessary). Click "Create Project" and enter a name, click the legal agreement checkbox, then Create. Select "API & auth", then "APIs". Disable (click green "On") APIs that are already on. Then find "Google Maps SDK for iOS" and enable it.

