



WEATHERGEEK PRO 2.3

IPAD/IPHONE/IPOD TOUCH USER'S GUIDE

TABLE OF CONTENTS

Introduction	2
In-App Purchases.....	2
Getting Started	3
To View Model Images.....	3
Main Navigation Menu	3
Global.....	3
Regional	4
Analysis Menu	6
MOS Menu (U.S. Stations Only).....	7
Information Menu.....	7
To Change Parameters and Runtime.....	8
Using the Menu Bar	8
Settings (Gear).....	8
Region (Map) (Requires an In-App Purchase).....	8
Time Step (Clock).....	10
Play Button	10
Share (Facebook) Button	10
Using iOS Gestures for Common Tasks	11
Zooming and Panning Images.....	11
Changing Parameters.....	11
Top Information Bar.....	12
Viewing Images in Landscape Mode.....	12
Frequently Asked Questions (FAQ).....	12
1.) Where can I get the forecast for my area on this app?	12
2.) Is there a way to advance each model ahead in time without animating it?	12
3.) Why can't I advance the time step forward or backward while zoomed in?	12
3.) Can you add (name the model, data type, etc.)?	13
4.) Why do you charge with in-app purchases for certain features of the app now when I know I can get this data free if I look on the Internet?	13
5.) I also have an Android device. Why have you not updated the Android version yet?.....	13
6.) Why is the valid local time and date of the image off by one day?.....	13
7.) When I go to view the HRRR model why does it tell me "Currently Unavailable"?	13
8.) If I bought In-App purchases on one device and I have the app installed on another, do I need to buy the In-App purchases again for my new device?.....	14
9.) Demo Video	14



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INTRODUCTION

WeatherGeek Pro is an application made for WeatherGeeks by WeatherGeeks! We were the first to bring numerical weather model data to your mobile devices and tablets. And with WeatherGeek Pro 2 for iOS, we've taken geek to a whole new level! Expanded data sets. More models. More choices. Best of all, you have the ability to share this information with a tap of your finger on popular social networking platforms. WeatherGeek Pro is all about getting you the information you need to make critical forecast decisions quickly, easily, and while on the go!

IN-APP PURCHASES

Many new features and models have been added to WeatherGeek Pro 2 free of charge with your upgrade from version 1.x. However, there are other features available a la carte via an in-app purchase. This way, you only purchase what features you need.

The in-app purchases in WeatherGeek Pro 2 include the Global and Tropical Region Map Interface, the HRRR (High Resolution Rapid Refresh) Model Interface, the Skew-T Chart Interface, the ECMWF Model Interface and the HPC Map Interface. *Menu selections for in-app purchases will be greyed out until the purchase is completed.*



IMAGE SHARING MADE EASY!

When you come across an image you would like to share, simply tap the "Share" (Facebook) button. A new dialog box will open allowing you to type a description of the image and choose which service to share with. If this is your first time sharing, tap the settings button and then enter your info.

GETTING STARTED

When you first start the app, you will see the app logo and version number on the splash screen. After this, a navigational tutorial will be displayed. This tutorial explains how to navigate between maps and how to zoom. More on that later. If you don't want this tutorial screen to show again, simply tap the checkbox next to "show again" to clear the check and close this screen by tapping the 'x' in the upper left hand corner. If you would like to display this screen again, leave the checkmark next to "show again" and tap the 'x' to close this box. The default model (GFS) will then be displayed along with the default parameter "03 hour precipitation."

TO VIEW MODEL IMAGES

Main Navigation Menu

For WeatherGeek Pro 2, the navigation menus have been redesigned to better sort the vast array of model data available. Simply use the tab bar at the bottom of the screen to select between **Global** or **Regional** models, **Analysis** data, **MOS** data, or the **Information** Screen. Tapping on your selection will bring up the corresponding list of models or data.

GLOBAL

Models under this menu are "global" in their grid domain. This means you have the option of selecting regions other than North America. *However, to gain access to data for regions other than North America (including Tropical Regions), an in-app purchase is required.*

Global Models

GFS – Global Forecast System.

The GFS is a global spectral data assimilation and forecast model system. GFS forecasts are produced every six hours at 00, 06, 12 and 18 UTC. The GFS graphics are based on 70 km grid (T190) and are available at three hour increments out to 384 hours.



GEFS-MNSPRD – Global Ensemble Forecast System Mean Spread.

GEFS-SPAG – Global Ensemble Forecast System Spaghetti Plots.

The GEFS is a GFS-based modeling system run with 20 ensemble members per cycle plus one control at T126. GEFS forecasts are produced up to 28 levels every six hours at 00Z, 06Z, 12Z, and 18Z. All runs are shown out to 384 hrs at 6-hour intervals. Data is interpolated to 1°x1° resolution from 0 to 384 forecast hours.

NAEFS – North American Ensemble Forecast System.

The North American Ensemble Forecast System is a global weather modeling system run jointly by the Meteorological Service of Canada (MSC) and the U.S. National Weather Service (NWS) to provide numerical weather prediction (NWP) probabilistic products to weather forecasters in both countries for a forecast period that runs out 16 days. The NAEFS combines the Canadian global forecast model ensemble and the NWS Global NAEFS forecasts are produced every six hours at 00, 06, 12 and 18 UTC. (Note: For 06 and 18 UTC graphical products are produced by NWS GEFS input only). The NAEFS graphics are based on 70 km grid (T190) bias-corrected and are available at six hour increments out to 384 hours.

ECMWF (Euro) – European Center for Medium Range Weather Forecasting (Requires In-App Purchase).

The ECMWF Model is a global spectral data assimilation and forecast model system. ECMWF forecasts are produced every 12 hours at 00 and 12 UTC. ECMWF forecasts are produced using 91 levels and are based on a 16 km grid (T1279). Graphics are available in 24 hour increments out to 240 hours.

WW3 – Wave Watch 3.

WW3-ENP – Wave Watch 3 Eastern North Pacific

WW3-WNA – Wave Watch 3 Western Atlantic.

WW3 is a third generation wave model developed at NCEP. WW3 forecasts are produced every six hours at 00, 06, 12 and 18 UTC. The WW3 graphics are based model fields of 1.00 x 1.250 to 50 x 50 and are available at six hour increments out to 87 hours.



POLAR – Polar Ice Drift.

The Polar and Great Lakes Ice Group works on sea ice analysis from satellite, sea ice modeling, and ice-atmosphere-ocean coupling. Automated analyses have been used by the NWS global atmospheric models for their sea ice conditions since February 1998. POLAR forecasts are produced once daily at 00 UTC. The POLAR graphics are available at 24 hour increments out to 384 hours. The analysis provides a daily, 0.5 degree resolution in latitude and longitude, condition for the models.



REGIONAL

Models under this menu are regional in scope, covering North America or the United States. These models tend to be of higher resolution than the global models.

Regional Models

NAM – North American Mesoscale Model.

The NAM model is a regional mesoscale data assimilation and forecast model system based on the WRF common modeling infrastructure,

currently running at 12 km resolution and 60 layers. NAM forecasts are produced every six hours at 00, 06, 12 and 18 UTC. The NAM graphics are available at three hour increments out to 84 hours. The NAM has non-hydrostatic dynamics and a full suite of physical parameterizations and a land surface model.

SREF – Short Range Ensemble Forecast System.

The SREF system is a set of model runs called “ensemble members” using either a single model with different initial conditions or different models with the same initial conditions. SREF forecasts are produced every six hours at 03, 09, 15 and 21 UTC. The SREF graphics are available at three hour increments out to 87 hours across the North American region.

HRW-NNM – High Resolution Window Weather Research and Forecasting (WRF) model version of the non-hydrostatic, hybrid vertical coordinate mesoscale model (NNM) (Forecasting).

HRW-ARW – High Resolution Window Weather Research and Forecasting (WRF) Advanced Research model (Research).

WRF forecasts are produced every six hours at 00, 06, 12 and 18 UTC. The WRF graphics are available at three hour increments out to 48 hours. WRF is a next-generation mesoscale numerical weather prediction system designed to serve both operational forecasting (HRW-NNM) and atmospheric research (HRW-ARW) needs. WeatherGeek Pro displays the HRW-NNM and HRW-ARW models broken down by the regions:

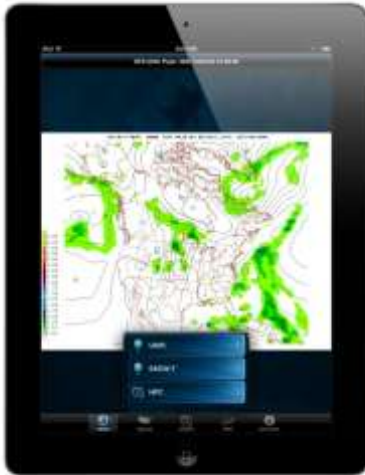
- HRW-NNM (ARW)-EUS for the region of Eastern US available at 00 and 12 UTC
- NRW-NNM (ARW)-WUS for the region of Western US available at 06 UTC
- HRW-NNM (ARW)-AK for the region of Alaska available at 18 UTC

RAP – Rapid Refresh Model.

The *Rapid Refresh (RAP)* is the next-generation version of the 1-h cycle system, and replaced the operational RUC at NCEP at 12z on 1 May 2012. The NCEP Rapid Refresh uses a RAP-configuration of the WRF model, with ARW core (v3.2.1+) with generally RUC-like physics (Grell-G3 convection, Thompson/NCAR microphysics, RRTM longwave radiation, Goddard shortwave radiation, MYJ turbulent mixing, RUC-Smirnova land-surface model). The RAP was developed to serve users needing *frequently updated* short-range weather forecasts, including those in the US *aviation* community and US *severe weather* forecasting community.

HRRR – High Resolution Rapid Refresh (Requires In-App Purchase; U.S. Only).

The HRRR is an experimental 3-km hourly updated nest inside of the 13km Rapid Refresh (using the 13km RAP as parent model). The HRRR is *fully dependent* on the hourly-updating RAP running at ESRL (Earth Systems Research Laboratory), being initialized from RAP-ESRL analyses. Since this model is experimental, its output frequently is unavailable. **Purchase of this option in WeatherGeek Pro does not guarantee the data will be available, but only provides an interface to view the data when it is available.**



ANALYSIS MENU

This menu provides datasets to access current and future meteorological data.

UAIR – Upper Air Maps.

Provides a selection of levels (1000 to 100 mb) and observations of station data within North America, South America, Africa, Canada, Alaska, and the Western North Atlantic.

SKEW-T – Weather Balloon Data (Requires an In-App Purchase; Continental U.S. Stations Only).

Provides Graphical Skew-T charts for stations in the continental United States.

HPC – Images from the Hydrometeorological Prediction Center (Requires an In-App Purchase; U.S. Only).

Provides an interface for products developed at the Hydrometeorological Prediction Center (HPC) for the United States. These products include current and future surface maps (out to seven days), Quantified Precipitation Forecast Maps (QPF), Excessive Rain, Excessive Snow, Excessive Ice, River Flood and Low Track Maps.



MOS MENU (U.S. STATIONS ONLY)

This menu allows you to select MOS (Model Output Statistics) Data for the United States.

MOS – Model Output Statistics (U.S. Only)

Type the station code in the box in the upper left hand corner of the screen and tap on the station. MOS data tables will be displayed below. The app will remember the last 5 stations selected in the drop down menu. To display the stations in memory, clear the text dialog box.



INFORMATION MENU

This menu provides many useful features, including model and HRRR status, User and Model Guides, developer contact methods and other information.

About

Displays the app splash screen showing the current version of the app.

User Guide

Displays this user guide.

Share App with a Friend

Allows you to share a link to this app's webpage on Twitter, Facebook, or Email. Thanks for telling your friends about us!

Contact Us

Allows you to contact us if you have any questions or suggestions via Facebook, Twitter or Email. We absolutely love to hear from our users!

Model Status

Displays the current model status of the NCEP suite of model guidance. If a model is having problems or the output is running behind schedule, you can see what is going on here.

HRRR Status

Displays the current status of the HRRR model. **Note: Since this model is experimental, its output can frequently go down. Purchase of the HRRR model in-app purchase does not purchase the data from this model nor guarantee its availability. It simply purchases an interface to access the data when it is available. If "Currently Unavailable" displays when viewing HRRR data, it is recommended you check here to see the actual latest run available.**

Model Guide

Displays information on the types of models and datasets available in WeatherGeek Pro.

Terms of Use

Displays the Terms of Use you agree to when using WeatherGeek Pro. **Please note, when you purchase this app, you are not purchasing data. Hurricane Baby, LLC is not a data provider, nor do we guarantee the datasets WeatherGeek Pro accesses will be available at any given time. What we do provide is a specialized interface for quickly and easily viewing meteorological data on mobile devices. Any change to the format or availability of these data sources will result in their unavailability on this application. We will always make a reasonable effort to ensure the interface to these datasets is current and in good working order.**

Restore

Allows you to restore your completed in-app purchases to your device with a single tap. This is useful if you need to delete and reinstall the app or if you want to install the app on other devices.

TO CHANGE PARAMETERS AND RUNTIME

Using the Menu Bar

Tap on the image which is displayed and a new menu bar will appear. When your device is in vertical orientation, this menu bar will stay displayed until you rotate your device into horizontal orientation. When in horizontal mode, this menu bar will disappear after a few seconds. Simply tap the map to bring it back up.



SETTINGS (GEAR)

Tap on the **Settings (Gear)** button. This will bring up a “picker” menu. On the left you can select the desired **Parameter** (dataset). On the right you select your desired model **Runtime**. **Note: When starting the app and selecting a model for the first time, the latest model runtime available is automatically selected.** Tap OK. The first image will load.

REGION (MAP) (REQUIRES AN IN-APP PURCHASE)

Tap on the **Region (Map)** button. This brings up a “picker” menu. From here you can select which map region you prefer to view.

Global Regions

With an in-app purchase, you can access the following regions around the world for viewing model data under the “Global” menu.

There are also tropical regions available which come in particularly handy during tropical cyclone season. The following is a list of regions available for the global models.

- North America
- South America
- Africa
- North Pacific
- East Pacific
- Western Atlantic
- Atlantic
- Europe
- Asia
- South Pacific



HRRR Regions

With your in-app purchase of the HRRR Interface, you automatically gain access to all US regions of the model even if you did not purchase the “Regions” option for the Global Models. The following is a list of the regions available for the HRRR model.



- US – Continental U.S.
- NW – Northwestern U.S.
- NC – North Central U.S.
- NE – Northeastern U.S.
- SW – Southwestern U.S.
- SC – South Central U.S.
- SE – Southeastern U.S.
- Great Lakes – U.S. Great Lakes Region

UAIR (Upper Air) Regions

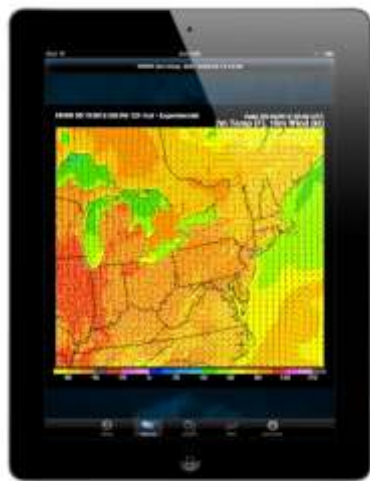
With your in-app purchase of the “Global Regions” option, you also gain access to regions for upper air data display. The following is a list of the regions available Upper Air Maps.

- North America
- South America
- Africa
- Canada
- Alaska
- Western Atlantic



TIME STEP (CLOCK)

Tap the Time Step (Clock) button. This brings up a “picker” menu which allows you to jump directly to any available time step for the model you are viewing.



PLAY BUTTON

Tapping this button allows images to be animated. Please allow time for all images to load. Once every image in your desired model run loads, playback will be smooth. *You can adjust the speed of the loop in iOS Settings under the WeatherGeek app icon. Tap on Slideshow Speed Control. The loop speed can be adjusted in increments of 0.1 seconds up to 1 second and in increments of 0.5 seconds from 1 second to 3 seconds.*

SHARE (FACEBOOK) BUTTON

Tapping this button allows you to share the currently displayed image along with a text description on Facebook, Twitter or by Email.

Setting up Sharing

To share model images, tap on the image you wish to share. A menu button will appear. Tap on the **Share (Facebook)** button. A text entry box will appear. Tap the **Settings** button in the upper right hand corner. Then tap on each service you wish to set up to share with and follow the on screen directions for each (**Facebook, Twitter and Email**). Once a service is setup, the button will appear colorized. If the service is not setup, or if the particular service is turned off, the button for that service will appear greyed out. *Note: Settings for Twitter will be controlled by your Twitter settings within iOS. If you have multiple Twitter accounts, the first Twitter account listed will be used by default when sharing via Twitter on WeatherGeek Pro.*



To Share an Image

In the text entry box, enter your descriptive text for the image. Select the services you wish to share with and tap **Done** when complete.

Sharing with Twitter

To share with Twitter, make sure the **Twitter** button is highlighted on the text entry box and tap **Send**. When successful, a message will display letting you know the message has been sent to Twitter.

Sharing with Facebook

If you want to share the image on Facebook, tap the **Facebook** button on the text entry box. *If you have the Facebook application installed on your device, another box will open to allow you to choose to share on your wall or on the wall of any **fan pages** you administer. Tap the button for the pages you want to share with and a check will appear. Tap **Done**. Make sure the Facebook button is colored by tapping it again if needed. Type any descriptive text you would like to add for the image and tap **Send**. *Note: On occasion, after hitting the **Send** button, a box will appear prompting you to login to Facebook. If this happens, you have likely been logged out of Facebook. Close the box which pops up and follow the instructions above to setup your Facebook account for sharing again.**

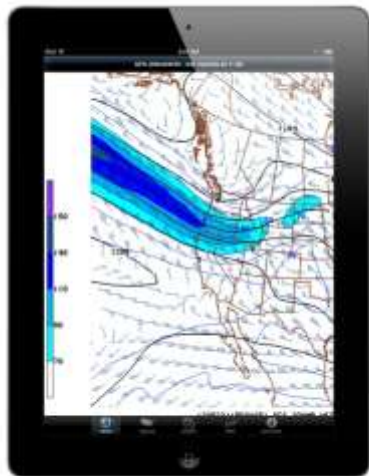
Sharing with Email

If you would like to share the image via email, make sure the **Email** button is colored on the text entry box and tap **Send**. A new window will pop up with your descriptive text and a link to the image. Tap **Send** and your message will be sent via your default email account.

USING IOS GESTURES FOR COMMON TASKS

Zooming and Panning Images

Spread your finger and thumb outward on an image in order to zoom in on that image. Push your finger in thumb together on the image in a **Pinching** motion in order to zoom out on an image. Images can be zoomed while the image is in animation mode and will hold the zoom during the animation. To **pan** a zoomed image, touch the image and move your finger.



Changing Parameters

In addition to using the menu bar to change parameters and time steps, the “**swipe gesture**” can also be used. **Swipe** your finger right to left on an image to advance an image forward one time period. **Swipe** your finger left to right on an image to go backwards one time period. You can also **swipe** your finger from the top to the bottom of the image to advance up one parameter and **swipe** from bottom to top of the image to go down one parameter. **Note: Due to limitations with iOS, the Swipe Gesture cannot be used when images are zoomed. Please return the image to its original scale before attempting to navigate using the Swipe Gesture.**

TOP INFORMATION BAR

The bar across the top of the screen provides useful information about the images you are displaying depending on the data type selected. Some of the information includes **Model Name**, **Parameter**, **Model Runtime** and the **Valid Date and Time** of the Image (in 24 hour time format).

VIEWING IMAGES IN LANDSCAPE MODE

Simply **Rotate** your device horizontally and the image will reorient itself into landscape mode. Zooming and image animation will also work when the image is in this mode. To return to portrait mode, simply reorient your device in the vertical and the image will reorient itself. **Note: Zooms will not hold when switching from portrait mode to landscape mode or vice versa.**



Use care when viewing images which are zoomed in. Any change in the viewing angle of your device can result in the image returning to its original size and the zoom being cancelled.

FREQUENTLY ASKED QUESTIONS (FAQ)

1.) Where can I get the forecast for my area on this app?

WeatherGeek Pro doesn't exactly give you a forecast. At least not in the traditional sense. This is an app designed for the people who make the forecast. That includes meteorologists, weather enthusiasts, meteorology students and others who have a deep interest in how the atmosphere behaves and the methods used to forecast and study it.

2.) Is there a way to advance each model ahead in time without animating it?

Yes! Make sure the image is not zoomed then simply use the “**swipe**” gesture to swipe left or right to advance the model forward or backward one time step. You can also swipe up or down to change the parameter or level of the atmosphere you are viewing.

3.) Why can't I advance the time step forward or backward while zoomed in?

Due to limitations with iOS, you must make sure the image is not zoomed and is at its original size before using the “swipe” gesture. After a little practice, you can easily advance images, zoom in on areas of interest and return them to their original size before advancing to the next image. In fact, after using the app for a while, this becomes second nature.

3.) Can you add (name the model, data type, etc.)?

We are constantly looking for ideas to improve WeatherGeek Pro. Please feel free to send us your ideas. Future enhancements will include even more data types and models as well as enhanced features. All of the ideas added to WeatherGeek Pro 2 came from our users and 100% of profits from version 1 were reinvested into the product to produce version 2. We are committed to letting our users drive development of this app and we are committed to continuously improving it.

4.) Why do you charge with in-app purchases for certain features of the app now when I know I can get this data free if I look on the Internet?

ALL of the data provided on WeatherGeek Pro 2 can be found elsewhere on the Internet. However, the data and the websites are not in a friendly format for mobile devices. This makes it cumbersome to access it. When you make an in-app purchase in WeatherGeek Pro to obtain access to a data interface, you are not purchasing data. You are purchasing a specialized mobile interface to access this data. This interface makes it quick and easy to view the information you need on a mobile device. The development costs for each interface are significant, so we must make the cost up somewhere. With WeatherGeek Pro, you get access to 15 data interfaces for free. The others are an option if you wish to purchase them.

5.) I also have an Android device. Why have you not updated the Android version yet?

We hope to provide an update to the Android version in the near future. However, development with the Android OS is much more difficult than development with iOS. This is due to the many devices and versions of Android out there. In fact, the development process can sometimes take twice as long. In short, we want to bring Android up to the same feature set as WeatherGeek Pro 2 for iOS. But it will take some time.

6.) Why is the valid local time and date of the image off by one day?

The app polls the current date and time when it first opens or when you open it from the quick launch bar. If you leave the app open overnight and the date changes (i.e., the time passes midnight and it becomes the next day), the valid date of the images will be off. To fix this, simply double tap your device's function to place WeatherGeek Pro into the quick launch bar. Open WeatherGeek Pro again and it will launch from the quick launch bar and refresh the current time and date.

7.) When I go to view the HRRR model why does it tell me "Currently Unavailable"?

The HRRR model is an experimental model ran at NOAA's Earth System Research Laboratory (ESRL). Since it is experimental, its output frequently goes down. If the app displays "Currently Unavailable", be sure to check out the "HRRR Status" page on the Information Tab. This will let you know what HRRR runs have completed and which have not. WeatherGeek Pro will attempt to select the latest run available of the HRRR *based on the average finish times of each run*. This is why it is important to check the status page to see which is really the latest available run. On occasion, HRRR model images

will not be available for an entire 24 hour period. This seems to happen on weekends more often than during the week. When you purchase the HRRR Interface on WeatherGeek Pro, you are not purchasing the data; you are simply purchasing an interface to the data. Hurricane Baby, LLC is not a data provider and has no control over what data is available at any given moment.

8.) If I bought In-App purchases on one device and I have the app installed on another, do I need to buy the In-App purchases again for my new device?

No. Simply tap on the **Information** menu and tap **Restore**. Enter your App Store username and password and all of your purchases will be automatically transferred to your new device.

9.) Demo Video

Tap the image below to launch the demo video for WeatherGeek Pro 2.

