

Citrus Notes



Chris Oswalt
UF/IFAS Citrus
Extension Agent
for
Polk &
Hillsborough
Counties

IMPORTANT DATES

DECEMBER 12, 2019

DECEMBER OJ BREAK & CUPS FIELD DAY

Lake Alfred, FL

JANUARY 14, 2020

JANUARY OJ BREAK

Lake Alfred, FL

JANUARY 15, 2020

CERTIFIED PILE BURNER PROGRAM

Lake Alfred, FL

CONTACT INFO

POLK COUNTY EXTENSION SERVICE

PO Box 9005, Drawer HS03
Bartow, FL 33831
(863) 519-1052
Email: wcoswalt@ufl.edu

HILLSBOROUGH COUNTY EXTENSION SERVICE

5339 County Road 579
Seffner, FL 33584
(813) 744-5519
Ext. 541231

Thinking “inside the box”

Citrus Nutrition Sampling



For those participating in the citrus nutrition management program, this

is a reminder to please submit your leaf (L1) and soil (S1) sample. Once we receive the results, the UF/IFAS Extension Citrus Nutrition Team reviews these and sends you a customized recommendation for the next quarter. If you have any questions about the program, please email citrusnutrition@ifas.ufl.edu, or you can give me a call.

December OJ Break and CUPS Field Day

We have a unique opportunity to go inside one of the oldest Citrus Under Protective Screen (CUPS) structures in Florida. Attached is a program flyer, note that due to physical limitations, we have had to limit the number of registrations for that program. If you wish to participate, please register as soon as possible to assure yourself a spot. The registration information is in the flyer.



Speakers include Dr. Arnold Schumann, Dr. Tim Ebert, Laura Waldo, and I am making a short presentation on young citrus tree cold protection. Gaylon

Pfeiffer and BASF are sponsoring our program. Please register by Tuesday, December 10, 2019, to reserve your spot.

January OJ Break

Mark your calendars for our January OJ Break, scheduled for the UF/IFAS Citrus Research and Education Center in Lake Alfred on Tuesday, January 14, 2020. Program details forthcoming in the January issue of Citrus Notes. Florida Forest Service



Certified Pile Burner Program

The Florida Forest Service Certified Pile Burner Program to be held at the UF/IFAS Citrus Research and Education BHG Citrus Hall on Wednesday, January 15, 2020. Specific program information and registration information is at the end of this issue of the newsletter.

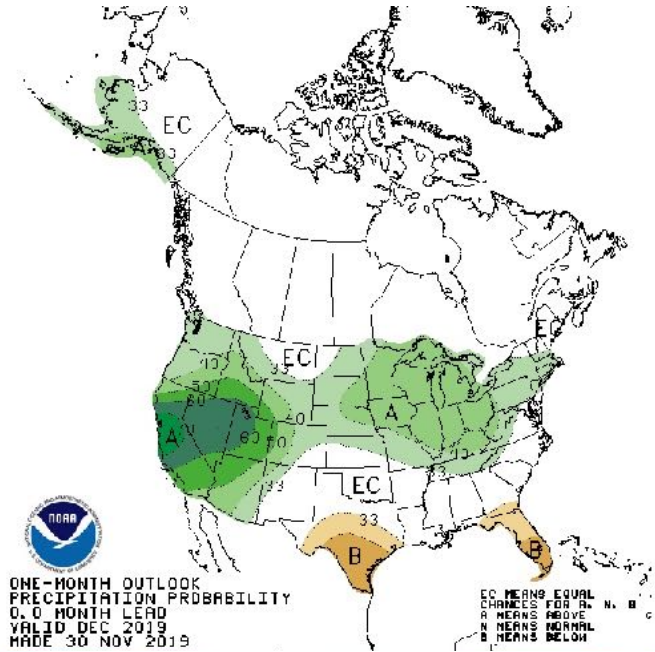
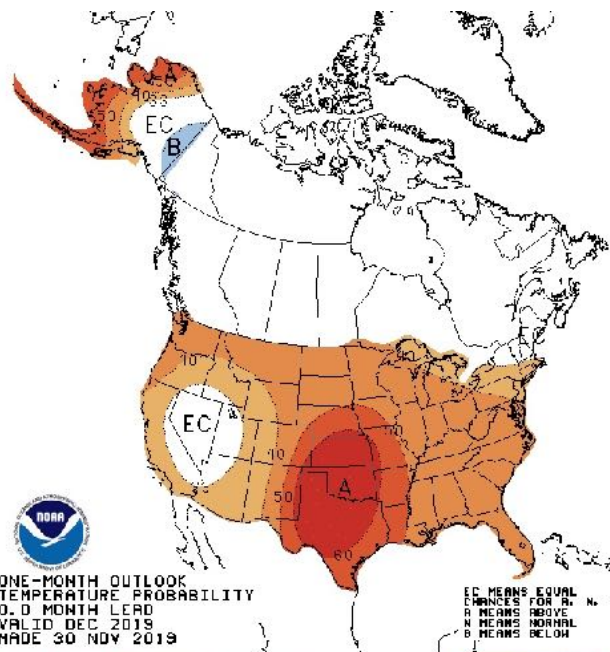
UF | IFAS Extension
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The Foundation for the Gator Nation

An Equal Opportunity Institution

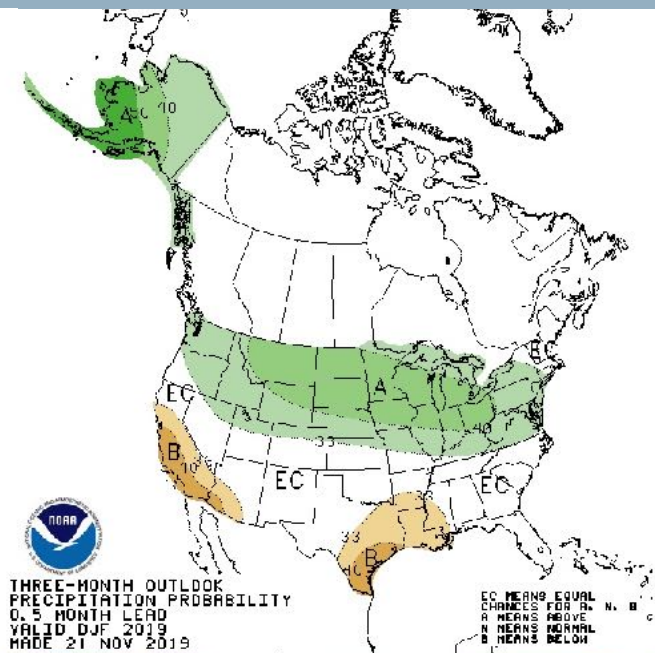
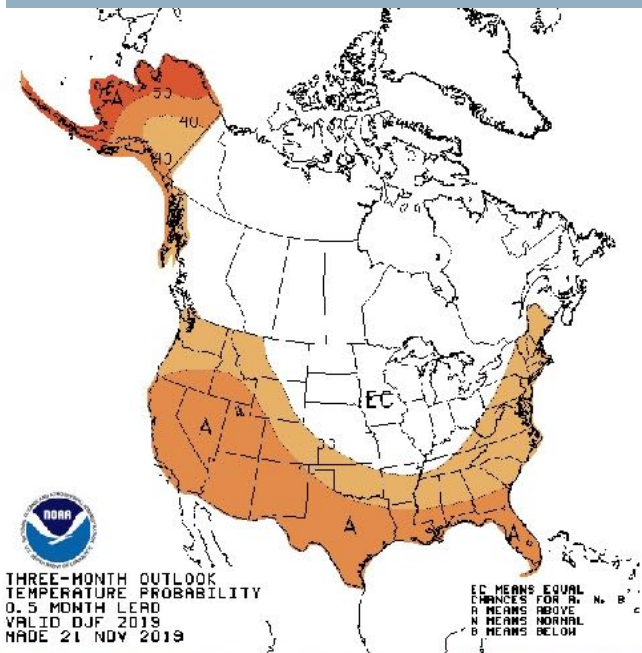
WEATHER OUTLOOK

MONTHLY OUTLOOK FOR DECEMBER 2019 - TEMPERATURE AND PRECIPITATION



WEATHER OUTLOOK

MONTHLY OUTLOOK FOR DEC/JAN/FEB 2019-20 - TEMPERATURE AND PRECIPITATION



2019-20 Winter Weather Watch

I am including one last time information regarding registering for this winter's edition of the Winter Weather Watch. To the issue of being prepared for

a freeze, the 2019-20 edition of the Winter Weather Watch began on November 15, 2019. The outlook maps above call for above-normal temperatures and below-normal (for December) to equal chances for rainfall the balance of the winter.

The 2019-20 Winter Weather Watch registration forms are attached to the end of this newsletter.

Just as a reminder this year, we are looking at neutral ENSO conditions. In the past, under these conditions, we typically get our most devastating freezes.



CITRUS FLOWERING MONITOR

The Citrus Flowering Monitor predicts date(s) when citrus trees will bloom based on observed and predicted weather patterns and other parameters (cultivar, expected yield, tree age, and soil type). You can enter parameters specific to your grove in order to get a prediction. Knowing the bloom date is important for managing bloom and other related events. The Citrus Flowering Monitor also gives specific recommendations on how to manage bloom.

Click "[Run Model](#)" to enter parameters for your grove and run the Monitor.

Microsprinkler Irrigation for Citrus Cold Protection

Low volume irrigation using micro-sprinklers is the most widely used method in the Florida citrus industry to protect citrus trees from freezing temperatures. Early attempts to utilize irrigation in the 1962 freeze with overhead irrigation resulted in extensive damage to trees due to insufficient rates of water applied. The memory of this injury resulted in growers being reluctant to use irrigation for cold protection until the early 1980s. Widespread use of micro-sprinklers in the mid-1980's allowed growers to apply sufficient volumes of water directly under and on the lower portions of citrus trees resulting in the protection of these trees from cold damage.

Irrigation, when used for freeze protection, is based on a few simple principles. First, there is a benefit from the sensible heat of the water that is released when water hits the tree. This sensible heat is due in large part to the actual temperature of well water (about 68° F). There may also be some additional benefit if irrigation can cause the development of fog in the grove that, in turn, will reduce the rate of temperature fall during the night (this is highly dependent on the dew point temperature). Secondly, the process of water turning to ice (called the latent heat of fusion) will also add additional heat to the grove microclimate. The formation of ice will also help insulate plant tissues above critical temperatures.

Current recommendations call for application rates of 2000 gallons per acre per hour to protect trees from freezing temperatures. During radiation freezes, water applied under the canopy of citrus trees modifies the tree microclimate resulting in limited protection of the tree from freeze damage. This modification of the tree microclimate decreases with height above the irrigation source. Generally, irrigation under mature trees will not protect the fruit on the exterior canopy of the tree, but may, to a limited extent, provide protection to fruit located closer to the water source. In an advective freeze, mature trees likely will not benefit from micro-sprinkler irrigation. Any protection would be highly dependent on evaporative cooling and the amount of irrigation heat removed from the grove due to increased wind speeds.

Micro-sprinklers can provide excellent protection of young citrus trees from freeze damage. Micro-sprinklers should be located on the north or northwest sides of the tree no further away than 2 to 3 feet. This positioning allows winds during an advective freeze to blow water at the tree. The type and pattern of emitter used are critical. Emitters should be the fan type, either a 90° or 180° pattern applying a uniform distribution of water at the tree. This condition should provide for excellent protection of young citrus trees. Another version of this system would be to elevate 360° fan type micro-sprinklers on PVC stakes of 18 to 24 inches in length in the center (2 to 4 inches from the trunk) of

young trees. The emitter tubing should be wrapped around the PVC stake to eliminate ice formation pulling down the elevated emitter. This positioning of the micro-sprinkler has provided additional protection to greater heights in young citrus trees.

Before deciding on using irrigation for cold protection, a grower must understand some of the possible problems. Low volume irrigation works as long as the heat added to the grove (sensible and the heat of fusion) is greater than that which is lost. Heat losses from a grove when using irrigation will generally come from evaporative cooling. This process occurs when dew points are low, and evaporation of ice exceeds that of ice formation. It takes 7.5 gallons of water freezing to equal the heat lost in one gallon of ice evaporating, demonstrating the importance of knowing the effect of dew point and wind speed on the effectiveness of low volume irrigation. Another consideration is the power source of the irrigation system. Growers using electricity to power their irrigation systems should exercise caution. In past freezes, rolling power outages during peak demand have resulted in damage to citrus groves due to irrigation plugging caused by iced-up emitters. Growers in this situation need to evaluate contingency plans for back up power sources. Growers need to determine a critical temperature start time if micro-irrigation will be for cold protection. This start time needs to be before the formation of ice in the irrigation tubing.

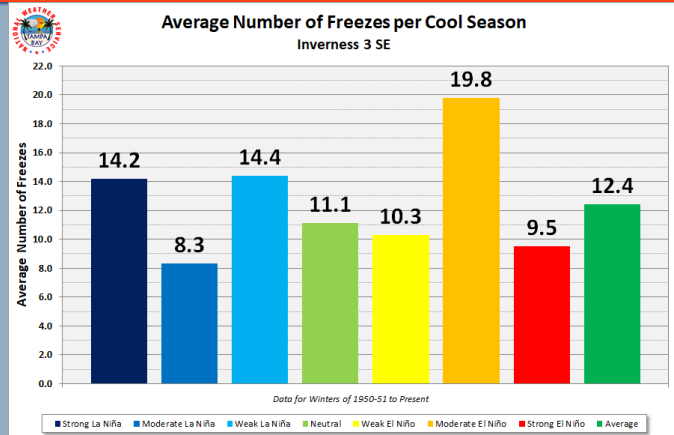
AVERAGE FREEZES

BASED ON THE STATUS OF EL NINO

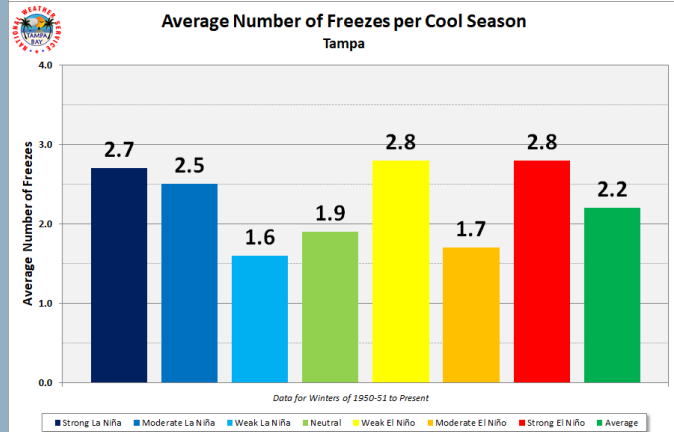
The graphs on this page come from the National Weather Service office in Tampa, Florida. These depict the number of freezes on average since 1950, based upon the El Niño status of the winter.

Information presented previously in the newsletter (pg 2) indicates this winter is forecasted to be a neutral winter. Based on that information looking at the graphs on this page, you notice that the number of freezes during a neutral winter varies quite a bit based on location within the state. In north-central Florida, at Inverness, the average number of freezes for neutral conditions is just over 11. In Ft. Myers that number is only 0.7, quite a variation.

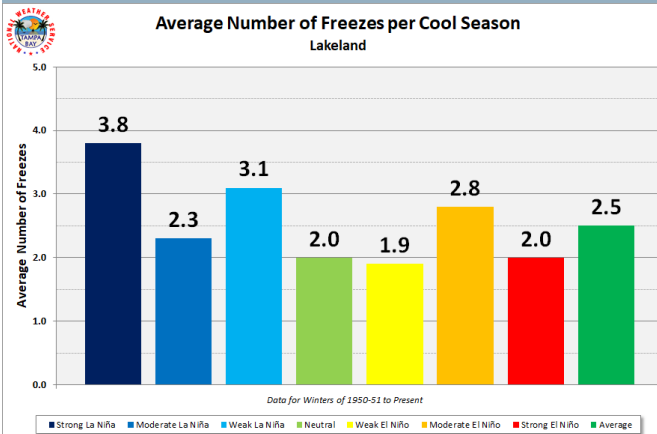
Looking at the graphs, the average number of freezes per year since 1950 is relatively close to that on average for neutral winter weather conditions. Remember, our most significant freezes have occurred in neutral - El Niño conditions. It only takes one significant freeze event to cause substantial citrus crop or tree damage.



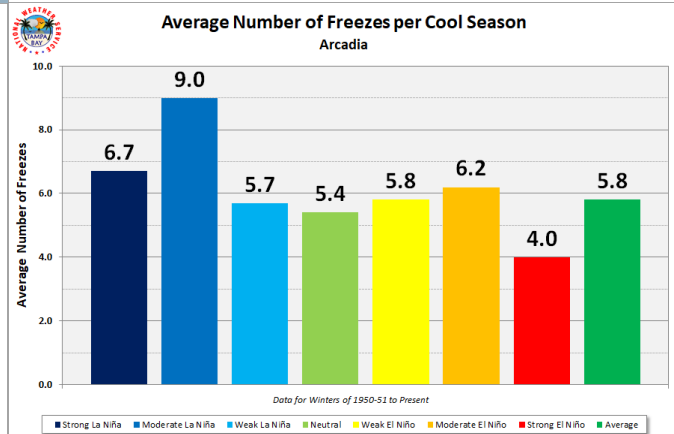
The term Cool Season for this graph includes Freezes that occur between October and April of the following year broken down by ENSO category



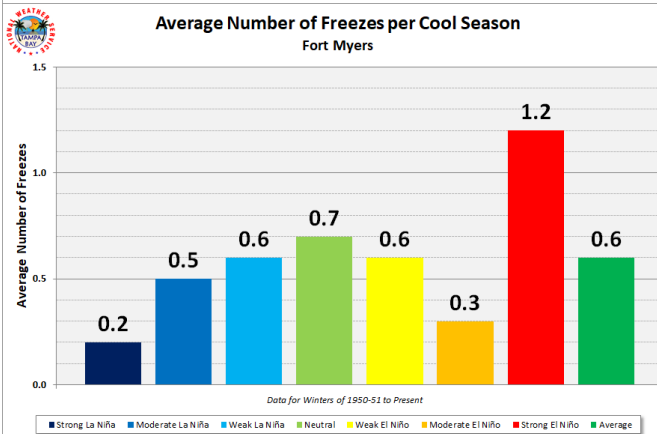
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CREC CUPS Field Day

Program Information:

The field day will allow participants to view the Citrus Under Protective Screen (CUPS) at the UF/IFAS Citrus Research and Education Center. We have been growing citrus in CUPS for nearly 5.5 years.

- We will show and discuss the management and performance of various citrus varieties grown for fresh fruit markets in CUPS, including Red grapefruit, Honey Murcott, W. Murcott, Early Pride, Page Tangelo, Sugarbelle, Dancy, and UF914
- Production problems / solutions will be highlighted, including alternate bearing, tangerine collapse, canopy management, fruit splitting, delayed color break, and enhancing fruit set
- Problematic pests and diseases that are common in a CUPS will be discussed
- Fruit samples from in-season varieties will be available for tasting

Please do not enter any other citrus groves, nurseries, or other citrus plantings prior to visiting. Good hygiene is critical in maintaining an economically viable production system. In addition, personal decontamination will be required immediately prior to entering the structure. Materials for decontamination will be provided on site.

Speakers: Chris Oswalt, Tim Ebert, Arnold Schumann, Laura Waldo

When: Thursday December 12, 2019

Where: Check in at the CREC, BHG building, 700 Experiment Station Rd, Lake Alfred, FL

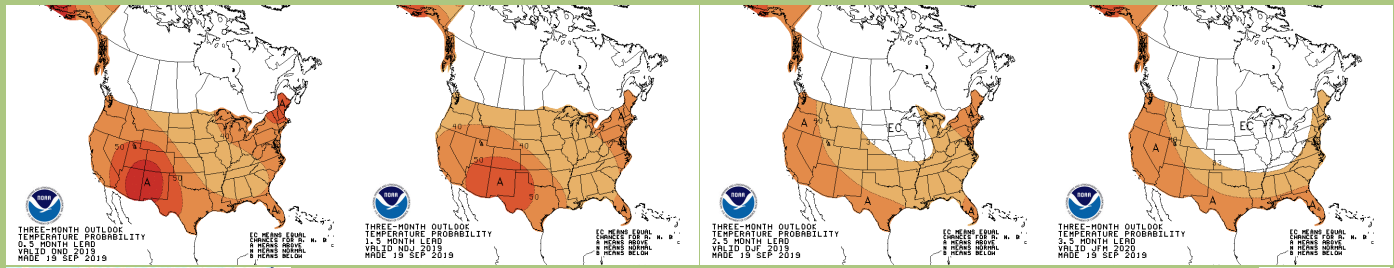
Time: Registration at 9:45am, then the program starts at 10:00am with Chris Oswalt's OJ Break (Young citrus tree cold protection)

Other: Lunch will be provided. Parking is on-site, follow the UF/IFAS event signs

Registration: There will be limited pre-registration only. Please register at [Qualtrics.com](https://www.qualtrics.com) by December 10



Winter Weather Watch



Polk County Cooperative Extension Service
 Phone: 863-519-1052
 Email: wcoswalt@ufl.edu



UF/IFAS Polk County Cooperative Extension Service

The 2019 - 20 version of the Winter Weather Watch will begin on November 15, 2019. Time is short so send in your subscription form to receive timely agricultural winter weather forecasts and information.



The 2019-20 edition of the Polk County Winter Weather Watch program will begin on November 15, 2019. The program provides growers with winter weather forecast

information specifically geared toward agricultural interests in West Central and Southwest Florida. The program provides subscribers with an unlisted phone number for (24 hour/7 days a week) access to daily weather forecasts. The zone forecasts are from the National Weather Service (NWS) and are listed on the automated phone menu, so you can select the products you are interested in. Forecasts include the zone forecasts, 6-10 and 8-14 day outlook forecasts. In addition to the forecasts we have special weather narratives provided as needed in the event of freezing temperatures and a weekly outlook provided by our own meteorologist Fred Crosby. When freezing temperatures are predicted in our area additional updates will include the afternoon zone forecast and the modified sunset brunt minimum temperature equation. If this is not enough we will also provide the weekly citrus leaf freezing

temperatures and the 2019-20 Winter Weather Watch manual. You will also have access to weather data from five Polk County Citrus Extension Weather Stations.

Subscriptions for the Winter Weather Watch program are only \$100.00 for the entire 4 month period (Nov 15 to Mar 15). The cost is about the same as one tank of gas for your pickup truck. You can subscribe to the Winter Weather Watch by completing and returning the enclosed "subscription form".

Forecast Schedule



The following schedule lists the products available from the Winter Weather Watch. The times and specific days of week and the forecasted minimum temperature dictate

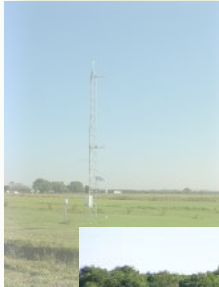
when these forecasts products will be updated. Our Winter Weather Watch area includes the following areas by county: Pasco, Hillsborough, Polk, Highlands, Hardee, Manatee, Sarasota, DeSoto, Charlotte, Lee, Glades, Hendry and Inland Collier.

FORECAST SCHEDULE

Forecast Product	Above 32 ° F	32°-29°F	Below 28° F
<i>Zone</i>	<i>Daily 8:30 a.m.</i>	<i>Daily 8:30 a.m.</i>	<i>Daily 8:30 a.m.</i>
<i>6-10 & 8-14 Day Outlooks</i>	<i>Mon/Wed/Fri 8:30 a.m.</i>	<i>Mon/Wed/Fri 8:30 a.m.</i>	<i>Mon/Wed/Fri 8:30 a.m.</i>
<i>Weekly Outlook</i>	<i>Friday 5:00 p.m.</i>	<i>Friday 5:00 p.m.</i>	<i>Friday 5:00 p.m.</i>
<i>Leaf Freezing Temperatures</i>	<i>Friday 5:00 p.m.</i>	<i>Friday 5:00 p.m.</i>	<i>Friday 5:00 p.m.</i>
<i>Special Weather Narratives</i>	<i>As Needed</i>	<i>Daily 4:00 p.m.</i>	<i>Daily 4:00 p.m.</i>
<i>Afternoon Zone</i>	<i>None</i>	<i>Daily 5:30 p.m.</i>	<i>Daily 5:30 p.m.</i>
<i>Sunset/Brunt</i>	<i>As Needed</i>	<i>As Needed</i>	<i>Daily 7:00 p.m.</i>

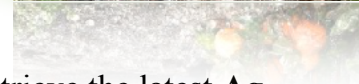
2019 - 2020 WINTER WEATHER WATCH PROGRAM

NOVEMBER 15, 2019 TO MARCH 15, 2020
REGISTRATION FEE: \$100.00



It's once again time to register for the upcoming 2019 - 2020 Winter Weather Watch Program. Upon receiving your \$100.00 registration payment, you will be

sent an unlisted telephone number with which you can retrieve the latest **Ag Forecasts**, 24 hours a day. **Please do not give this number to others.** The *Winter Weather Watch Program* is funded by the registration fees to pay for telephone equipment rentals, long distance calls, repairs and our meteorologist.



2019 - 2020 Winter Weather Watch Program

NAME: _____ PHONE NUMBER: _____

ADDITIONAL PHONE NUMBERS: _____

COMPANY: _____

MAILING ADDRESS: _____

EMAIL ADDRESS: _____

CITY: _____ ZIP CODE: _____

REGISTRATION FEE \$100.00

PLEASE RETURN THIS REGISTRATION FORM AND YOUR CHECK PAYABLE TO:

**POLK COUNTY EXTENSION CITRUS ADVISORY COMMITTEE
PO BOX 9005, DRAWER HS03
BARTOW, FL 33831-9005**



**Institute of Food and Agricultural Sciences
UF-IFAS Polk County Extension Service**

**1702 US Highway 17 S
Bartow, FL 33830**

Information for the next Certified Pile Burners Course:

The Florida Forest Service and University of Florida Cooperative Extension Service will be conducting a Certified Pile Burners Course on Wednesday, January 15, 2020. This course will show you how to burn piles *legally, safely and efficiently*. Most importantly, it could save a life. If you burn piles regularly, don't put off registering for this training. When the weather is dry, certified pile burners will receive priority for authorization to burn. Also, certified pile burners are allowed to burn up to two hours longer per day and get multiple day authorizations. Don't wait. The number of trainings offered and attendance at each training is LIMITED. This training will be held from 8:30 am till 4:30 pm at the **UF/IFAS Citrus Research and Education Center, Ben Hill Griffin Jr. Citrus Hall, Lake Alfred, Florida**. Included are a registration form and program agenda.

Registration is required to attend and class size is limited. To attend please send the following information (see form on next page):

1. Your full name (as wanted on your pile burning certificate).
2. Your mailing address (where you want the certificate mailed).
3. Your Florida Forest Service Customer Number (It is the number that you are required to give the FFS when you call in for your burn permits. If you do not know it please call the local FFS office and ask them to create one for you).
4. Your email address (if you have one) and/or contact phone number.
5. A check made out to: Polk County BOCC for \$50.00.

The first fifty individuals to provide these five requirements will be registered; there will be a 7-day non refundable fee limit. If you do not make the training and did not contact our office at least one week before the class, you will not receive a refund. There will be a test at the end of the session. You must receive a grade of 70% or higher on the exam and demonstrate a proper pile burn with your local FFS office to become certified. Once you are certified it will be noted with your customer number, thus it is important for us to have the proper number. If you do not have a customer number the FFS office will set one up for you. Fill out the registration form on the next page and return as directed.

Sincerely,

Chris Oswald
UF/IFAS Commercial Citrus
Extension Agent
Polk & Hillsborough Counties

For Questions Contact: Chris Oswald at wcoswalt@ufl.edu or 863-519-1052

Registration Form

Florida's Certified Pile Burner Program
Wednesday, January 15, 2020

UF/IFAS Citrus Research and Education Center
Ben Hill Griffin Jr. Citrus Hall
700 Experiment Station Rd, Lake Alfred, FL 33850
863-519-1041

Please send this form and a check for \$50.00 made payable to:

Polk County BOCC

**Mail to: Polk County Cooperative Extension Service
Attn: Gail Crawford
P. O. Box 9005, Drawer HS03
Bartow, FL 33831**

Name

Mailing address

Email address

Phone Number

FFS Customer Number



Florida's Certified Pile Burner Training
Wednesday, January 15, 2020
UF/IFAS Citrus Research and Education Center
Ben Hill Griffin Jr. Citrus Hall
700 Experiment Station Rd, Lake Alfred, FL 33850
(863) 519-1041

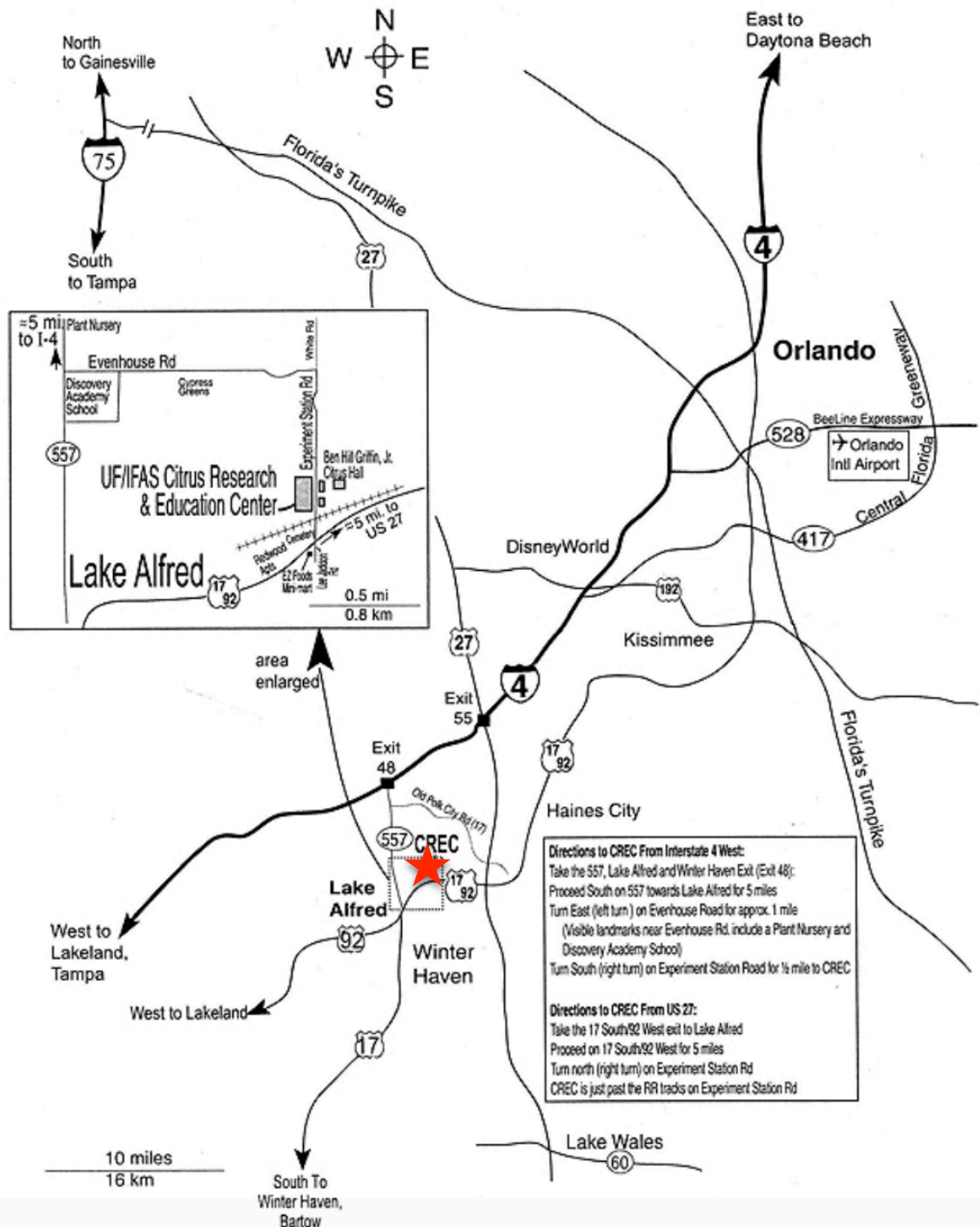
All Times Are Local

1. Opening Comments and Introduction	08:30 – 09:10
2. Fire Weather	09:10 – 09:50
3. BREAK	09:50 – 10:00
4. Smoke Management	10:00 – 11:20
5. Open Burning Regulations	11:20 – 12:15
6. LUNCH (provided)	12:15 – 01:15
7. Planning and Implementation	01:15 – 02:30
8. Safety	02:30 – 03:10
9. BREAK	03:10 – 03:20
10. Public Relations	03:20 – 04:00
11. Wrap Up & Test	04:00 – 04:30

Please bring a Pencil for the Exam!



UF/IFAS Citrus Research and Education Center
Ben Hill Griffin Jr. Citrus Hall
700 Experiment Station Rd, Lake Alfred, FL 33850
863-519-1041 (Registration Information)
863-956-1151 (Center Information)





Florida's Certified Pile Burner Training

Frequently Asked Questions

Q: Why should I be a certified pile burner?

A: Certified pile burners are trained to burn piles **legally, safely and efficiently**. Most importantly, it could save a life. Also, when the weather is dry, certified pile burners will receive priority for authorization to burn by the Florida Forest Service (FFS). Also, certified pile burners are allowed to burn up to two hours longer per day and get multiple day authorizations.

Q: What is a Pile Burner Customer Number?

A: When you call the FFS for an authorization to burn, you will be assigned a personal customer number. This number references your information so it doesn't need to be gathered each time you call for an authorization. You must have your individual FFS customer number in order to be certified.

Q: Is there a test?

A: Yes, the test is 20 questions and open-book. You must receive a score of at least 70% to pass.

Q: What if I don't pass?

A: Very few people fail the test but if you do, you will be provided another opportunity to take the test at a later date. If you fail the second time, you must re-register and take the training again.

Q: Why do you ask for my email on the application form?

A: Email is the fastest and most convenient method to inform registrants of their registration status. If no email address is provided then all correspondence will be sent through the federal mail. This can take several days to relay messages and this may not be practical if changes are made to the course schedule or for last minute registrations.

Q: How much does it cost to register for the training?

A: Registration for the training is \$50 per person and includes lunch, training materials and testing.

Q: How long does my certification last, and how long do I have to complete the certification from the time I finish the class?

A: As long as the person with the certification uses their number at least 5 times in a period of 5 years their certification will not expire under the current program. You **MUST** complete the certification burn within a year of taking the class.

Q: Will certified burners be notified if their certification expires?

A: Yes, notification will be sent out to them to let them know of their upcoming certification expiration date.

Q: Will I be certified at the end of the one day training?

A: No, you will need to follow the written instructions that you will receive from the FFS to become certified. You will need to complete a simple burn plan, have it reviewed and approved locally by the FFS and also have the burn itself reviewed and approved by the FFS.

Q: Is there a minimum age to be a certified pile burner?

A: Yes, you must be at least 18 years old to take the test and be a certified pile burner.