



Hawai'i Ho'ohēkili

Skywarn Weather Spotter Newsletter
National Weather Service, Honolulu, HI



Dry Season Edition, 2016

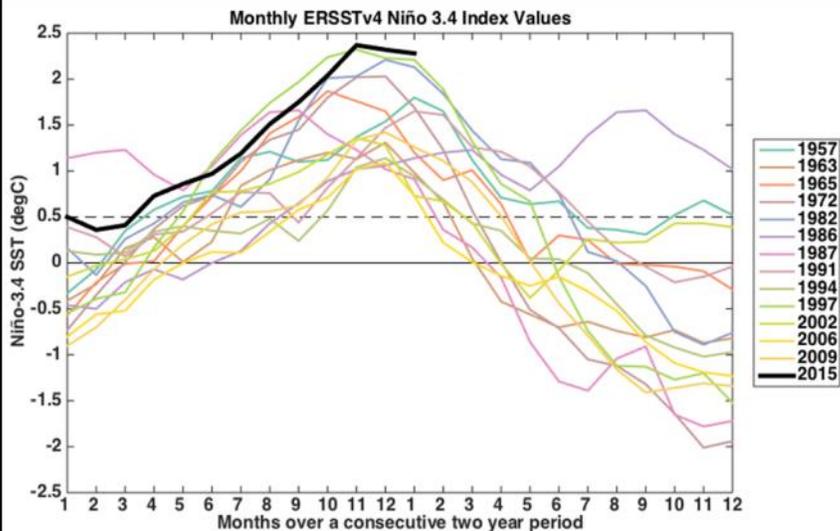
Issued – May 2016

Spotter Newsletter Volume 13

Inside this edition: Leeward Drought takes hold, Active brushfires expected, and the Era of Next Generation Satellites begins.....

Drier Than Normal Weather Expected Through the Summer with possible La Niña in the Fall

A transition to ENSO-neutral is likely during late Northern Hemisphere spring or early summer 2016, with an increasing chance of La Niña during the second half of the year. NWS Honolulu expects significant below average rainfall through the summer across Hawaii. The dry conditions are tied to the El Niño, which is one of the strongest recorded since 1950.



Drought Conditions Taking Hold

- Dry conditions developed in late December
- January rainfall below 20 % of normal for leeward sites with records broken at 17 gages
- February rainfall below 30 % of normal for leeward sites
- Drought has returned

Active Summer Fire Season Expected!!!

U.S. Drought Monitor Hawaii

April 26, 2016
(Released Thursday, Apr. 28, 2016)
Valid 8 a.m. EDT

| | Drought Conditions (Percent Area) | | | | | |
|---|-----------------------------------|-------|-------|-------|-------|------|
| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
| Current | 10.42 | 89.58 | 70.03 | 39.90 | 4.95 | 0.00 |
| Last Week 4/19/2016 | 10.42 | 89.58 | 70.03 | 39.90 | 4.95 | 0.00 |
| 3 Months Ago 1/26/2016 | 2.51 | 97.49 | 19.23 | 0.00 | 0.00 | 0.00 |
| Start of Calendar Year 1/2/2016 | 57.49 | 42.51 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start of Water Year 9/29/2015 | 96.75 | 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| One Year Ago 4/26/2015 | 34.40 | 65.60 | 23.33 | 0.00 | 0.00 | 0.00 |

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
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NCEI/NOAA

Logos: USDA, National Drought Situation Center, NOAA

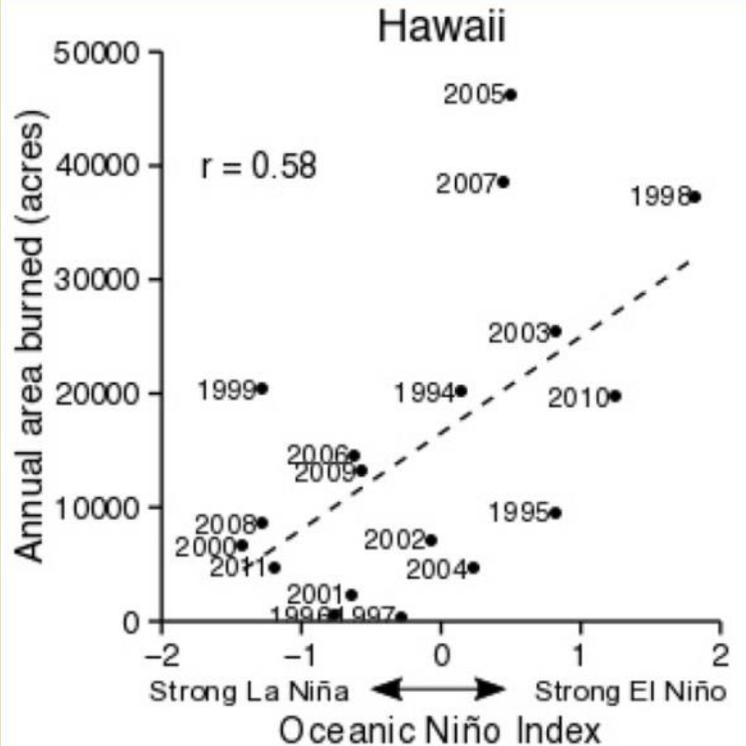
<http://droughtmonitor.unl.edu/>

Quote from a Scientist—*It will soon be time to bid good-bye to the strong El Niño of 2015-2016. After more than a year of El Niño conditions, what's next? La Niña often follows El Niño, although it's not a guarantee. Looking at earlier strong El Niño events, both the 1972/73 and 1997/98 El Niños were followed by a quick transition to long-lasting, strong La Niña conditions. La Niña impacts on weather are roughly the opposite of El Niño. Even though La Niña means cooler water in the central and eastern Pacific, it means warmer water in the western Pacific, which will likely extend the ongoing global coral bleaching, already the longest bleaching event on record.* - Emily Becker, NOAA Climate Prediction Center

Post El Niño Fire Seasons are VERY ACTIVE!!

Recent post-El Nino fire seasons have been very active!

- 1998: 13,000 acre Molokai Fire
- 2005: 25,000+ acre Waikoloa Fire
- 2007: 6700 acre Waiialua Fire
 - 2600 acre Olowalu Fire
 - 3000 acre Molokai Fire
- 2010: 6200 acre Maalaea Fire
- 2016: 5600 acre Kahinikinui Fire
 - 2500 acre Nanakuli Fire



In Hawaii, extreme fire behavior is typically observed under dry and windy conditions leading to rapid fire spread!!



Extreme fire behavior is characterized by rapid fire spread, intense burning, fire spotting, prolific crowning, presence of fire whirls, or a strong convection column

- Direct control no longer possible
- Firefighter safety compromised

How does the National Weather Service convey fire weather concerns to Fire Agencies and the Public?!?

The Fire Weather program is used by land management personnel primarily for input in decision-making related to pre-suppression and other planning, that may impact firefighter safety, protection of the public and property, and resource allocation. The primary source of information is the routinely issued **Fire Weather Planning Forecast**. In Hawaii, this product is issued once a day around 5:30 am HST.

Spot Forecasts are issued by WFO HFO at the request of and in support of wildfire suppression and natural resource management. These forecasts aid the land management and fire control agencies in protecting life and property during wildland fires, hazardous fuels reduction, and the rehabilitation and restoration of natural resources. Spot Forecasts can be issued for the first 36 hours.



Fire Weather Watch/Warning Products

A **Fire Weather Watch** is issued when there is a high potential for the development of a Red Flag event—Strong Winds, Low Humidity, and Dry Fuels. Issued 18 to 96 hours prior to expected onset of criteria.

Red Flag Warning - Issued for impending or occurring Red Flag event. Denotes a high degree of confidence that critical weather and fuel criteria will occur in 48 hours or less.

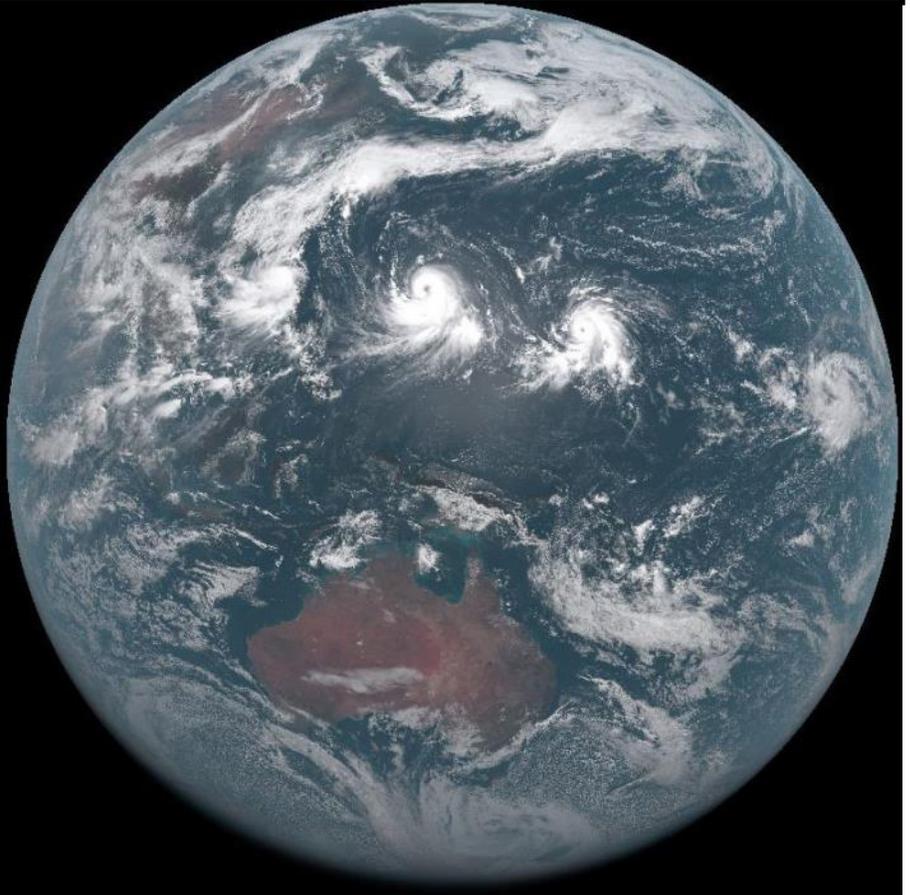
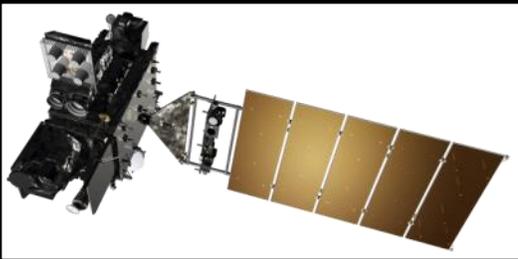
- The issuance of a Red Flag Warning does not predict nor guarantee new fire ignitions. It warns that predicted fuel and weather conditions are conducive for new ignitions and control problems with existing fires.

Check out our fire weather products at <http://www.prh.noaa.gov/hnl/pages/firewx.php>

NEXT GENERATION SATELLITES—A NEW ERA HAS BEGUN

A new era in environmental satellites began in October 2014 when Japan's Himawari-8 attained geostationary orbit. The satellite hosts a 16-channel Advanced Himawari Imager (AHI), which provides a preview of the future geostationary imagers to be launched by the United States, China, Korea, and EUMETSAT from 2016 to around 2019.

The AHI on Himawari images the Earth five times faster than the old MTSAT-2 and the current US GOES 13-15 Satellite imagers. It has three times the spectral coverage and a four-fold improvement in spatial resolution.



Although forecasters in East Asia and the western Pacific reap the full benefits of AHI, those in Hawaii, Alaska, and Continental U.S. benefit from AHI data and products as well.

Since weather systems move primarily from west to east at mid-latitudes, providing improved radiances and cloud and moisture-drift winds over East Asia and the western and central Pacific leads to better long-range numerical weather prediction (NWP) forecasts for systems moving into the eastern Pacific and approaching Alaska and the CONUS.

Next generation geostationary imagers will encircle the globe by 2019, revolutionizing the way we observe and forecast the weather.