

January 2016 Lake Conway Data Analysis

This month is the first publishing of Lake Conway elevations based on the Orange County standard NAVD 88 datum. Archived records produced by TEC Engineering prior to 2016 are based on NGVD 29. To convert the old elevations to NAVD 88 simply subtract 0.94'.

Rainfall / Lake Level

NOAA predicted substantially above average rainfall last month and we got it at 5.85 inches. This was 254% of the 2.3" long term average. We are now using the one month projected average and it seems to be working better so far. At the end of the month the lake level was at 85.38 or a stage of 75% (an increase of 10% from last month). The lake is on the high end of the "normal" range and about 1.0 foot above the average for the beginning of February. NOAA is predicting significantly above normal rainfall conditions again the next month. February is a normal rainfall month so we should expect the lake level to rise this month.

http://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead01/off01_prctp.gif

This year's accumulated annual rainfall is 5.85 inches which is 2.23 inches more than we had last year by this time. Given the current NOAA heavy rainfall prediction and the "normal" rain season we should expect the lake to rise somewhat this month.

El Nino / Southern Oscillation (ENSO)

NOAA's January 14th ENSO: Diagnostic Discussion reports an El Nino Advisory with a "full on" El Nino for this winter. It will then return to neutral conditions this summer. This indicates a possibility of increased winter rainfall, agreeing with the earlier mentioned rainfall predictions. There is little if any link between ENSO and Florida's rainy season. El Nino is a phenomenon which effects Florida rainfall in the winter.

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.pdf

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf

Lake Temperature

The rain brought on by the cold fronts we got in January dropped the lake temperature to what should be normal for this time of year. January water temperatures started at 70 degrees then plummeted to the mid 60s to end up at 61. The Amoeba season is past but caution is still due. More amoeba information may be found at: <http://www.doh.state.fl.us/chd/volusia/eh/lab/pdf/amoeba.pdf>

January Bonus Charts

Every January we update the annual lake level chart which is attached as 2015 Conway Annual Average Water Levels.pdf. All the elevations have been converted to NAVD 88. This chart tracks the maximum, minimum, and average lake elevations back to 1952.

2015 Conway Water Stages 88.pdf – Every 5 years the lake stage percentages are recalculated based on the previous 30 years. This table shows the percentage of the time the lake has been lower than each elevation during the past 30 years. It is interesting to note the high lake levels in last 5 years has caused the normal elevations to shift up about 2 inches.

2010 Conway Water Stages 88.pdf – This table is identical to the 2010 lake stage table used for the last 5 years except it has been adjusted to NAVD 88 elevations.

2015 Conway Stage Histogram 88 V.pdf – This is a histogram showing the number of months the lake has been within each 0.1' elevation for the last 30 years. The line represents lake stage with the percentages shown on the right side. The average annual lake elevation for various years are represented by the location on the chart of the year numbers. Other significant events are also shown.

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time it is hard to make a clear call. the status of El Niño will have a significant impact on the end result.

<http://tropical.atmos.colostate.edu/Forecasts/2015/dec2015/dec2015.pdf>

If you would like to see an estimate of the probability of tropical storms hitting where you live check out this site. It is also produced by William Gray of the Colorado State University.

<http://landfalldisplay.geolabvirtualmaps.com/> It is showing 0.4% chance of a named storm entering Orange County this year. Please bear in mind that it takes only one event to wipe out everything so be prepared.

Planting and Weed Control

If you are doing aquatic planting now it should be off shore in 6 to 12" of water. With the lake level at the 75% stage we will assume this is a fairly long term trend. We should plant low to prevent the plants from being high and dry if the lake level drops next year. If planted too far out in the water they will not root well and could be washed out by wave action. When planting in the water it helps to have an offshore barrier of some sort to break up the waves to prevent them from being washed out by wave action before they root. Duck potato in less than 10" of water are easy meals for ducks. Yes, ducks do like duck potato for breakfast, lunch, and dinner.

To help us all enjoy a clear lake make sure you have maximized the number of aquatic plants on your shoreline. These plants help consume nutrients which run off from your yard and they provide habitat and food for fish and fowl. A sandy beach = a cloudy lake.

You might be inspired to attack some of that torpedo grass with a weed whacker. **DON'T DO IT!** That is about the worst way to control the weeds on your beach. It does not kill them. If you are doing any lakeshore cleaning, please capture **all** of your cuttings. Sprigs of torpedo grass are very hardy and easily survive an excursion across the lake while growing a new set of roots. Once on the beach they immediately start to take over and choke out the beneficial plants. A single sprig will take root and in three months it will be a circle of healthy torpedo grass 10 feet in diameter. Considering it is likely over a hundred of these sprigs could float away from a weed whacking job, your efforts could easily seed another 1000 square feet of torpedo grass all around the lake. Respect your neighbors and capture all your weed bits.

[As an example on the weekend of 8/3/13 someone on the west to south west side of the middle lake wacked their torpedo grass and on 8/5 I fished out nearly a bushel of torpedo grass sprigs which had just floated in. Probably a half mile of shoreline is now planted with new torpedo grass. These get caught in our good weeds so we cannot see them then choke out the good plants in about a year. As long as people do not collect their trimmings it will be impossible to control torpedo grass.]

The best approach for controlling torpedo grass is with lake friendly herbicides. These may only be **applied with the proper permit** from Orange County Environmental Protection Division 407-836-1400 and Florida Fish and Wildlife Conservation Commission 407-858-6170. These permits are not expensive nor difficult to obtain. The County allowed weed free area on any lot is a maximum of 30' and there is no "grandfathering" of larger cleared areas. In any event make sure you collect any and all weeds you remove from your beach.

Orange County Lakeshore Vegetation Removal Permit:

<http://www.orangecountyfl.net/PermitsLicenses/Permits/LakeshoreVegetationRemovalPermit.aspx>

County Lakefront Clearing Regulations

Orange County Code of Ordinances - Section 15-251 through Section 15-256

<http://www.orangecountyfl.net/Portals/0/Library/Permitting-Licensing/docs/ArticleVIILakeshoreProtectionCode.pdf>

Florida Fish and Wildlife Conservation Commission Permit page including links to the permit and regulations:

<http://myfwc.com/license/aquatic-plants/>

NOAA current La Nina - El Nino Synopsis (with discussion):

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.pdf

Orlando Weather Averages by month

<http://countrystudies.us/united-states/weather/florida/orlando.htm>

Live weather data on the north shore of the middle lake, updated by the minute, can be viewed at:

http://www.wunderground.com/swf/Rapid_Fire.swf?units=english&station=KFLORLAN51

Thank you for your help maintaining our lakes.

David Woods PE
TEC Engineering, Inc.
Voice 407-859-8737
email DWoodsTCR@gmail.com

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