Building forecast

1. Read forecast [Discussion](#)
   a. This will paint a general picture of weather trends over the next four days, and offer a brief look at days 6-9. Try to focus on periods of unsettled weather, and take note of the timing, strength, and duration of these events. These are the moments in the forecast that we want to describe with the most accuracy.
   b. Remember that the Discussion is generalized for the entire region covered by that forecast office (NWS Sacramento covers the northern San Joaquin valley, the entire Sacramento valley, and west slope of Sierra Nevada). Map of forecast regions [here](#).
2. Read the Northern CA Predictive Services [7-Day weather outlook](#)
   a. Not as polished as the NWS forecast discussion, but more tailored to how the weather will affect fuels and fire activity. I also find this source to provide better information for forecasting winds.
   b. Predictive Services is a group nested within the National Interagency Fire Center. They produce daily, weekly, and 4-month outlooks on predicticted weather and fire activity for each geographic area coordination center (more on [GACCs](#) here, or straight to the [Northern CA GACC](#)). These sites host a wealth of information on fuels, fire behavior, modeling, etc.
3. Other regional/generalized weather info
   a. Weather from the Emergency Communication Centers (EECs). These are the weather reports that are read daily over agency radio channels.
   b.
4. Point Forecast
   a. Now that we have a general idea of what to expect for our region, let's get more specific by looking at the point forecast. Go to weather.gov and enter your nearest town or landmark into the search bar in the upper left-hand corner. On the resulting page, scroll down to the map and find your specific point of interest and click on it. The page will reload, giving you your point forecast for that location. Or, do a google search for "[my location] weather nws".
   b. The upper portion shows the current conditions at the nearest Remotely Activated Weather Station (RAWS). This is not helpful, because the nearest RAWS is unlikely to be representative of what's happening at our site.
   c. The "Detailed Forecast" heading provides text descriptions of temperature, precipitation, clouds, and winds. Because we want a more specific temporal breakdown, we'll keep scrolling to the bottom of the page and find either the "Hourly Weather Forecast" or "Tabular Forecast" page. These pages provide the same exact information in different formats.
   d. Here, we see all the details that the so-called "Detailed Forecast" from the previous page has left out: Hourly resolution, relative humidity, precipitation amounts, etc.
   e. Other versions of the same point forecast are produced by NWS. They include:
      i. The [Fire Weather Dashboard](#)

1. Provides mixing heights, transport winds, Haines index, and other fire-focused metrics. Note that sharing a link to a specific forecast point general doesn't work i.e. the link above should take you to the BCCER crane unit, but it puts you east of there.
            ii. The IDDS Point Forecast
                        1. Same content as the hourly/tabular forecasts from above, but in a different format. Pick your poison.
   5. Winds
      a. The point forecast describes winds in terms of the direction that the wind is coming from. The accuracy of this forecast may depend on the complexity of your topography.
      b. Winds are always the fuzziest piece of the puzzle for me, so I like to check multiple sources to try to get as much clarity as possible. Here are two platforms that I like:
            i. WindNinja may provide a more detailed (and potentially more accurate) depiction of terrain-influenced winds. I have only played around with the mobile version, but it appears to offer valuable insight[1]. Here's the quick rundown:
                        1. Download the app to your smartphone and create an account within the app. I emailed wind.ninja.support@gmail.com after having trouble with registering, and they got back to me within the hour.
                        2. While in cell-service, create a simulation by selecting an area of interest and defining a simulation length (1-15 hours from now).
                        3. Wait for WindNinja's remote server to create your simulation (<10 minutes).
            ii. Windy.com also offers a spatial depiction of forecasted winds. You can also switch between different forecast models to capture a wider range of potential future conditions.
                        1. The different models are in the bottom right hand corner of the screen. They are ECMWF (European Center for Medium-range Weather Forecasting), GFS (Global Forecast System, from NWS), NAM (North American Mesoscale, also from NWS), and ICON (German).
                        2. Windy.com can also show you other weather components like precip, temperature, etc.
   6. Building a long-term outlook
      a. Our ability to predict the weather more than a week in advance remains foggy (ha). BUT, there are sources and tools out there that can help us understand the *potential* for storms. The word outlook is generally used to talk about long-term weather to indicate higher uncertainty with these predictions.
      b. NWS releases multiple weather outlooks on a regular basis.

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[1] The infinitely-more complex desktop version of WindNinja may also be a valuable tool for the ambitious and moderately-savvy user.

    i. 8-14 day outlook (updated daily)
    ii. Monthly outlook (updated middle of each month for the following month)
    iii. 3-month outlook (updated middle of each month for the following three months.

  c. Daniel Swainis a UCLA climate scientist and TNC climate fellow who manages weatherwest.com, a monthly blog on weather impacting California. I also find his twitter page to be very helpful to fill in the gaps between his monthly blog posts. (Note: you do not need to join the twitter cesspool in order to view twitter pages, fyi).
    i. The comments on Swain's blog posts can also be really insightful.
  d. Brian Allegretto with OpenSnow.com writes a daily blog on weather systems bringing snow to the Sierras.

7. Monitoring past weather
  a. RAWS
  b. Weather underground

8. Other useful resources
  a. Earth.nullschool.net beautifully animates wind patterns at large spatial scales. You can also show temperature, RH, etc.
  b.