Holdover Threat Index
WFO Elko and WFO Pocatello (Local)
Product Description Document (PDD)

Part I – Mission Connection

a. Product Description: In the Great Basin a significant threat to large fire spread occurs when relative humidity is low and strong winds develop a day or two after a lightning event. The Holdover Threat Index (HoTI) is a GFE graphic that displays the threat of "holdover fires" to grow and spread within specific fire weather forecast zones. In addition to the actual Holdover Threat Index graphic the 4 elements that go into the index calculation will be displayed for the fire weather community and for forecasters. Participating offices are WFO Elko, Nevada and WFO Pocatello, Idaho.

b. Purpose:

1. The purpose of the HoTI is to provide increased situational awareness on days when conditions are favorable for smoldering fires to grow.

2. The goal will be to help protect life and property, mitigate economic losses, and maximize economic gains by giving customers and partners information that will 1) give them increased situational awareness; and 2) allow them to pre-position initial attack resources during crucial fire weather periods.

c. Audience: The primary audience for the HoTI includes NWS internal users, federal, state, and local fire managers and fire fighters.

d. Presentation Format:

The product will be in the form of images available on the WFO's webpage. Each image product will display the individual components of the HoTI (Fig. 1). The components include the Relative Humidity Threat Index (Fig. 2), the Lightning Threat Index (Fig. 3), Wind Threat Index (Fig. 4) and the Dryness grid (Fig. 5). Figure 6 shows a screen capture of what the webpage interface will look for all the graphics.

e. Example:

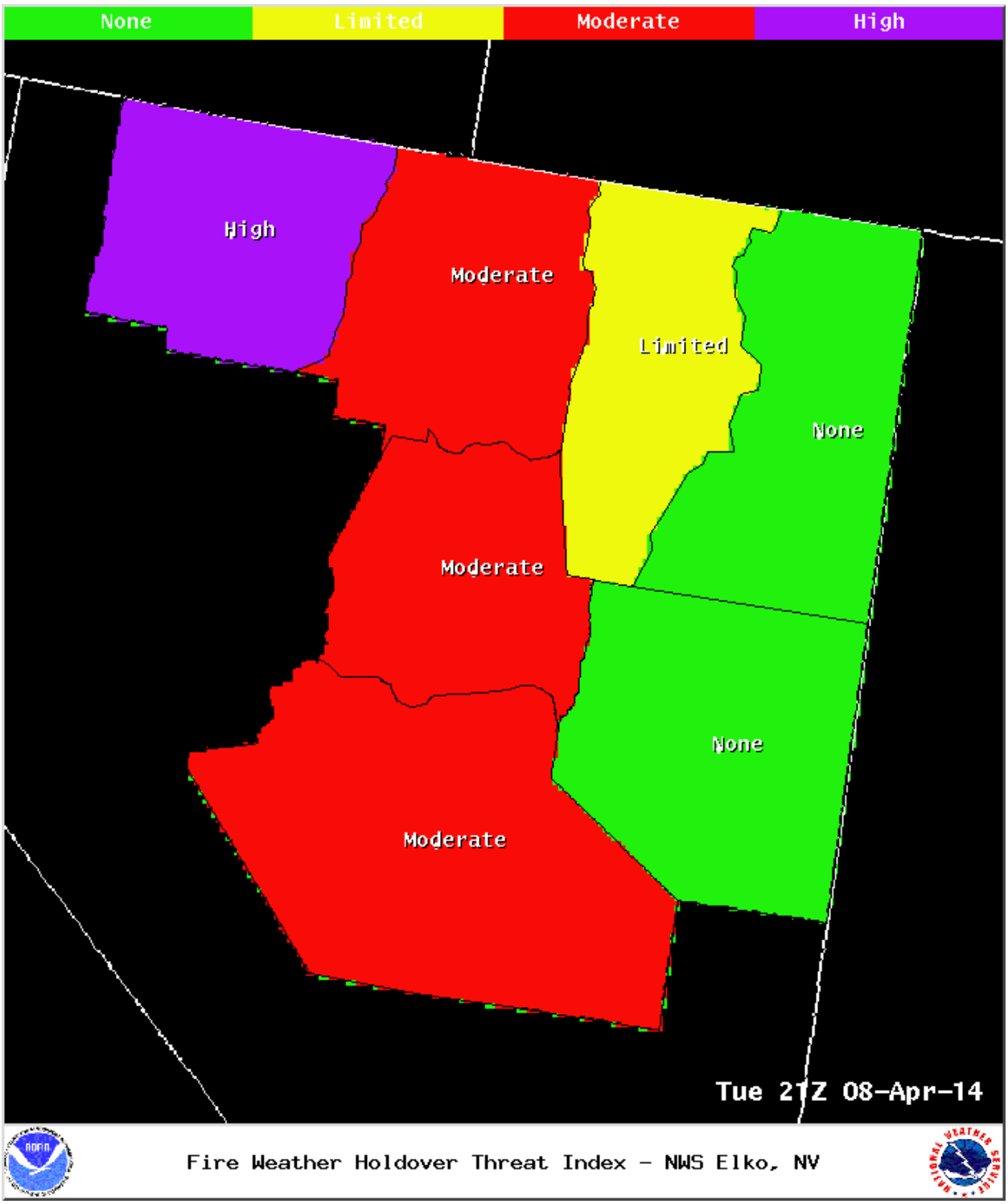

Figure 1: Example of completed HoTI grid for Elko, NV.

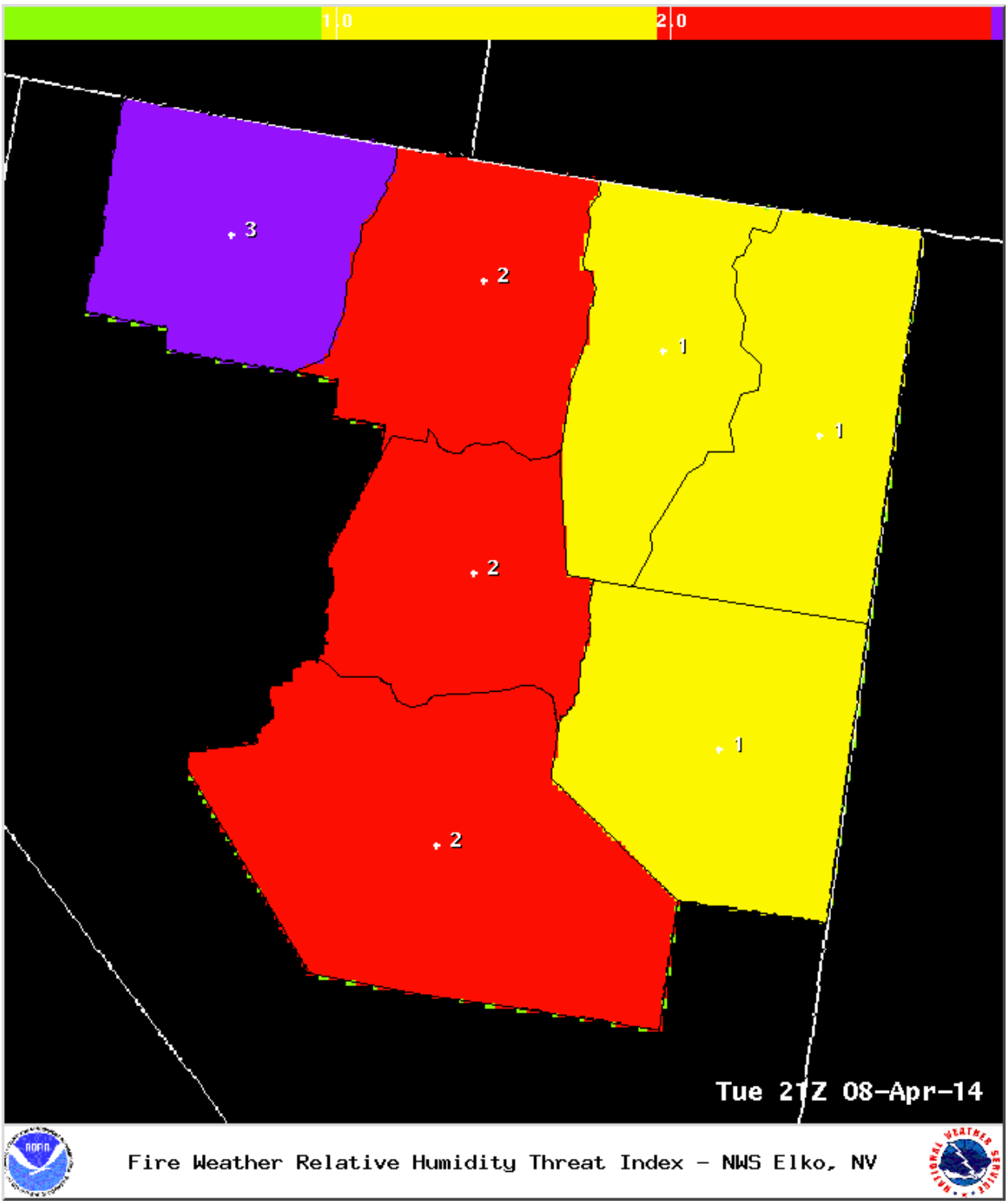

Figure 2: Example of Relative Humidity Threat Index grid for Elko, NV.

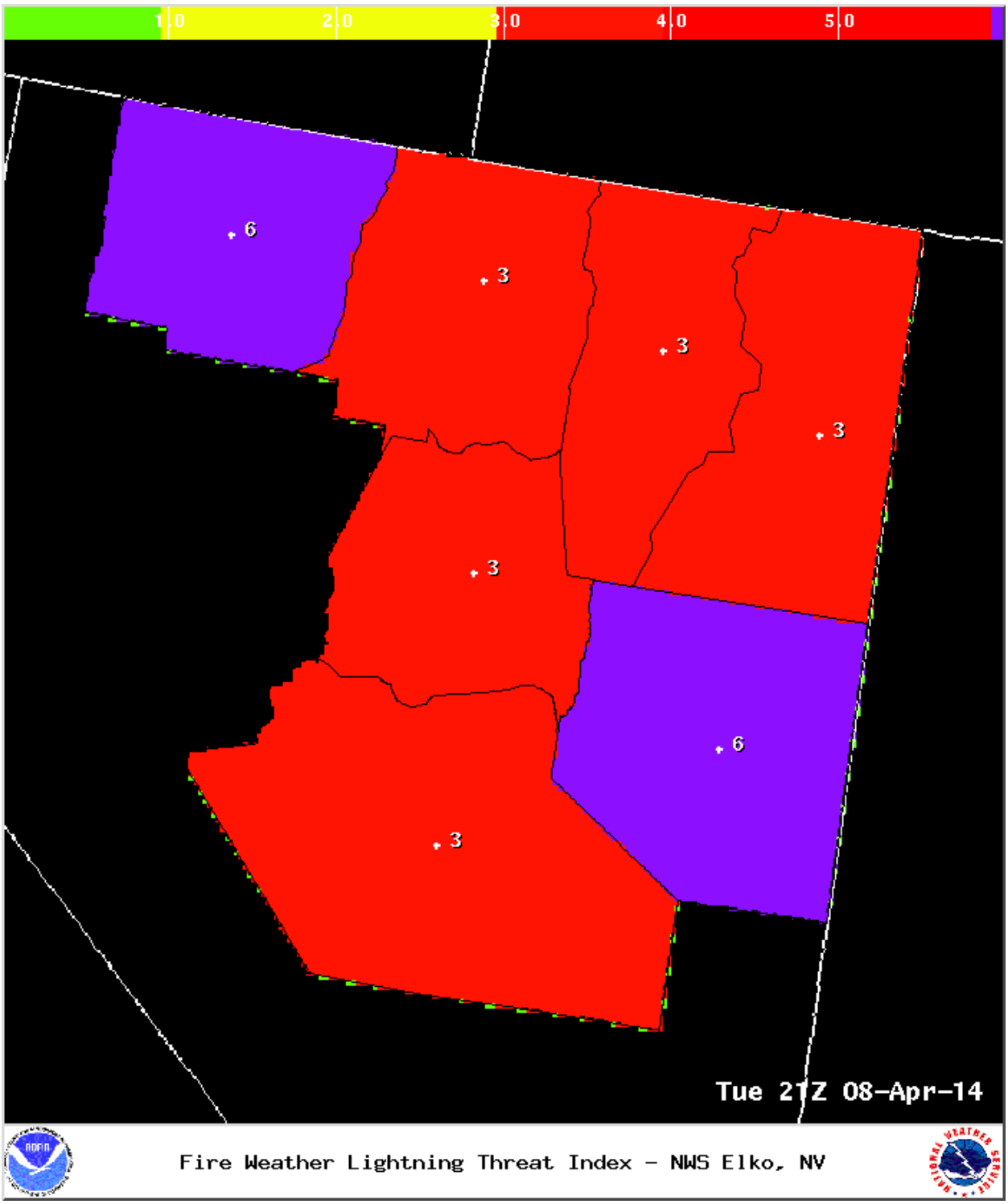

Figure 3: Example of Lightning Threat Index grid for Elko, NV.

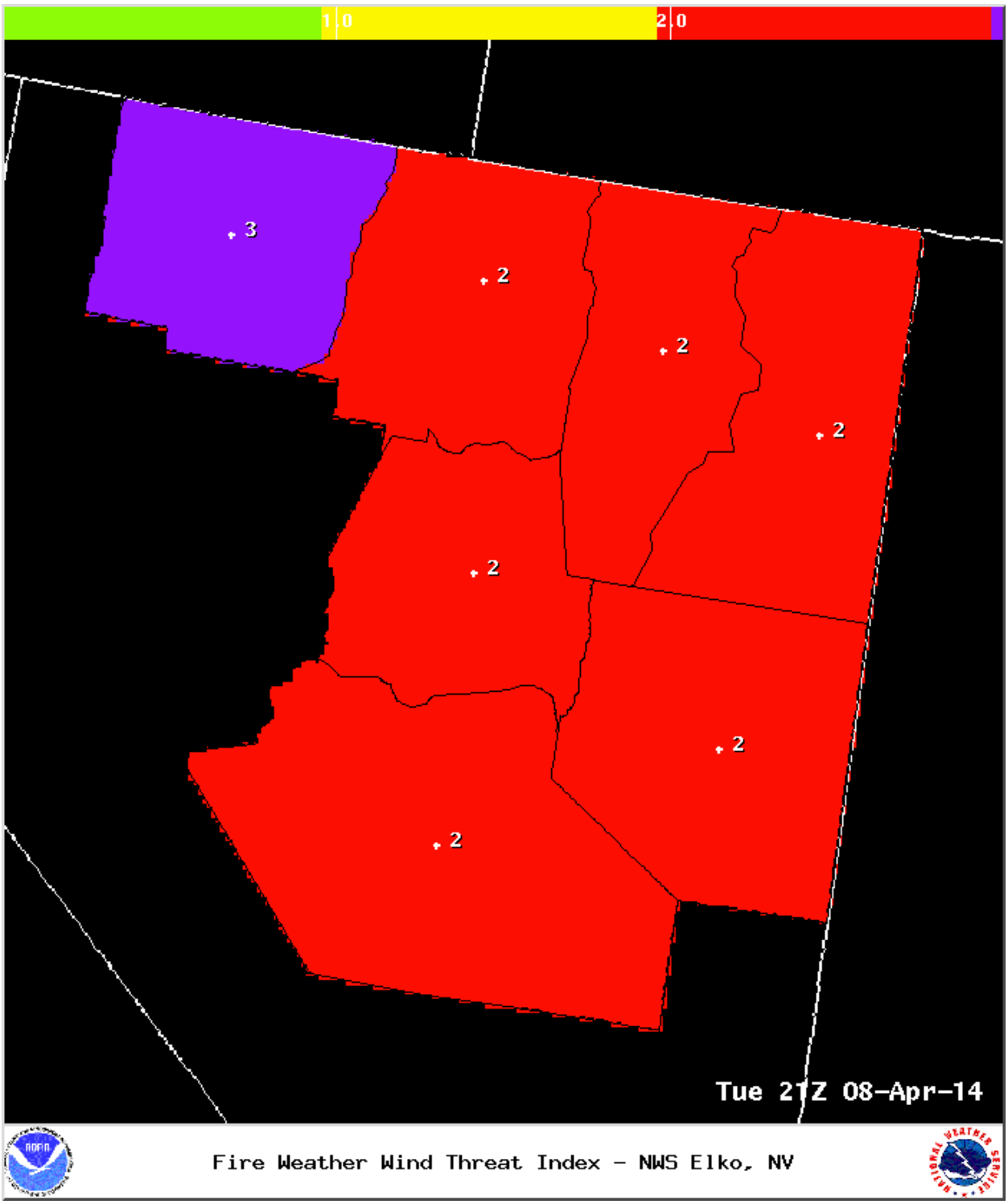

Figure 4: Example of Wind Threat Index grid for Elko, NV.

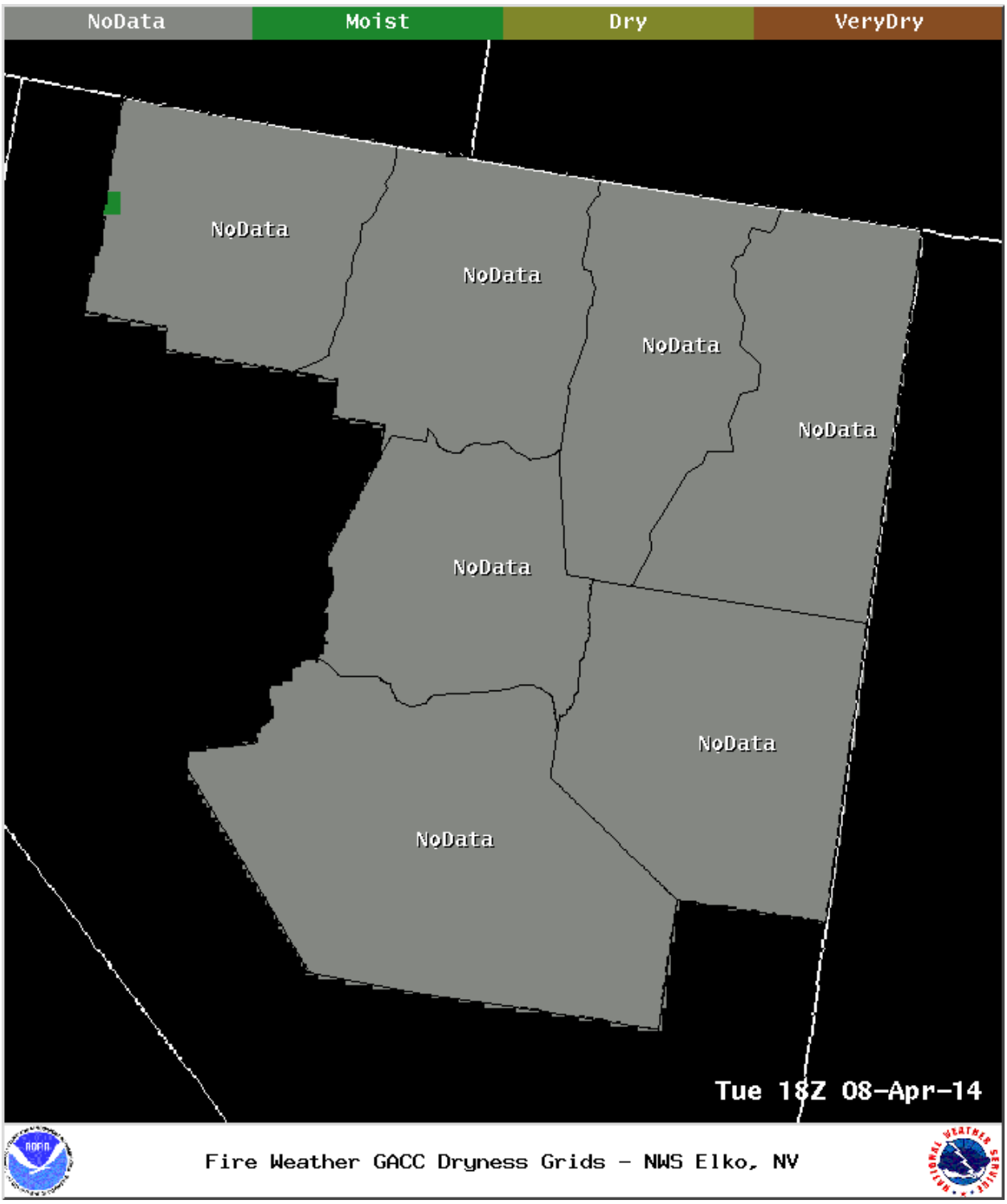

Figure 5: Example of a GACC Dryness grid for Elko, NV.

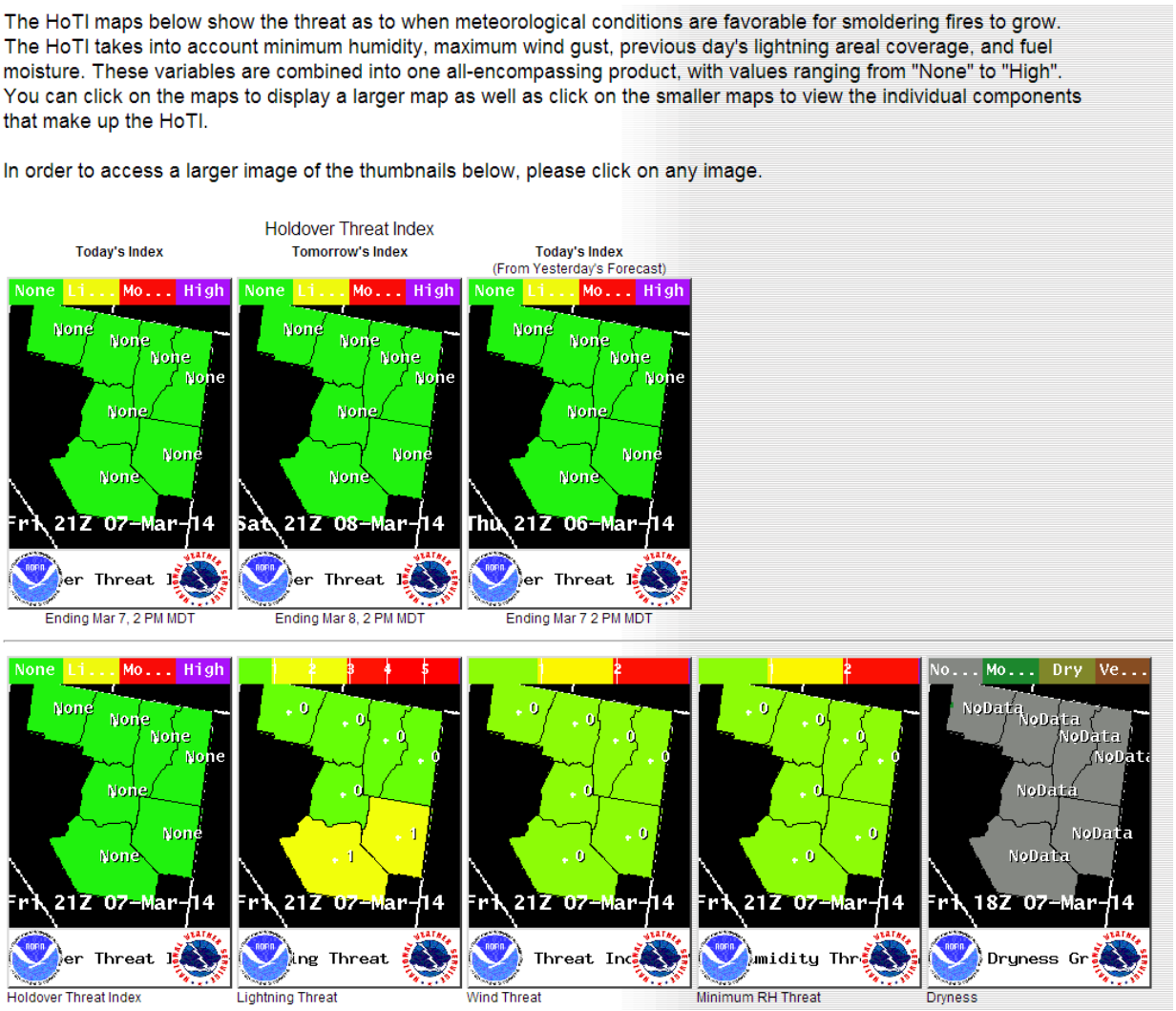

Figure 6: Example of webpage and all the forecast graphics

f. Feedback Method: Customers will be encouraged to provide feedback through directions on the webpage.

Part II – Technical Description

a. Format and Science Basis:
   1. WFOs Elko and Pocatello will be producing an experimental HoTI grid at least once per day. The methodology is based upon a forecast process developed at WFO Elko.
   2. For each fire weather zone, a category value (called a threat index) will be determined for:
      i. Observed lightning strike coverage – For the past 24 hours
      ii. Forecast average minimum relative humidity – Days 1 and 2
      iii. Forecast average wind gust – Days 1 and 2
      iv. Current fuel status – Days 1 and 2

3. From these threat index values (i through iii above), a weighted threat index value will be assigned for each meteorological category. Assign these values to the fire weather zones.
4. Combine the three threat index values into one all-inclusive HoTI.
5. Run a pass of values if fuels are dry or not. If the fuels are considered "dry" or "very dry", assign the HoTI to the fire zone. If fuels are "moist" or "no data", assign 0 (no value) to the HoTI.

b. Availability: This product will be available on the WFOs' websites (http://www.wrh.noaa.gov/lkn/hoti/hoti.php) and will be produced at least once per day (6 AM) during the fire weather season (May 15 – October 15).

c. Contact Information: Clair Ketchum, WFO Elko, clair.ketchum@noaa.gov or Claudia Bell, Western Region Headquarters, claudia.bell@noaa.gov