

Experimental Forecast of Reference Crop Evapotranspiration (FRET) for Short Canopy Vegetation June 2014

Part I – Mission Connection

- a) Product Description – The forecast of reference crop evapotranspiration (FRET) is the expected depth of water (in hundredths of inches) that would evaporate and transpire from a reference crop under the forecast weather conditions on a daily and weekly basis over the next 7 days. FRET is displayed as a graphic of gridded data across the contiguous United States and as a tabular text product of selected sites within the contiguous United States.
- b) Purpose – The intent of this product is to provide our stakeholders with enhanced detail on the amount of evapotranspiration to make better water usage decisions.
- c) Audience – The FRET’s target audience includes water managers, agriculturalists, academia, media, and the general public.
- d) Presentation Format – Daily FRET grids for the next 7 days, total FRET grids for the 7-day period, FRET departure from normal grids, and climatology grids for reference evapotranspiration are available via a web page interface for the nation at: <http://graphical.weather.gov/#>. An ETT text product composed of a supplemental table generated from the gridded data is available at: <http://www.nws.noaa.gov/view/validProds.php?prod=ETT>.
- e) Feedback Method – Continuous feedback is available via an Internet page e-mail link to the program manager in the Hydrologic Services Branch.

Technical and policy questions and comments on the FRET may be addressed to:

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Part II – Technical Description

- a) Format and Science Basis – FRET is calculated using the Penman-Monteith Reference Evapotranspiration Equation and NWS gridded forecasts of temperature, relative humidity, wind, and cloud cover. The FRET is for short crops with an approximate height of 12 cm similar to full cover grasses.

- b) Product Availability – The graphics and tabular text product are available 24/7.
The forecast is updated hourly.
- c) Additional Information – None.