

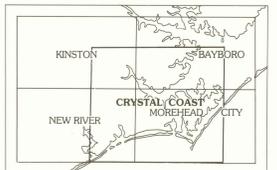
The satellite images (path 14, row 36) were recorded March 1, 2000, by the enhanced thematic mapper (ETM) sensor on the Landsat 7 satellite, which records seven multispectral bands and one panchromatic channel. This image map includes spectral bands 1 (440-510 nanometers, blue), 4 (775-900 nanometers, near-infrared), and 7 (2,080-2,350 nanometers, middle-infrared), and the new panchromatic band (530-900 nanometers, green to near-infrared). The spatial resolution of the input data is 30 m by 30 m for the multispectral bands and 15 m by 15 m for the panchromatic band. The imagery was georectified using ground control points identified on USGS digital orthophoto quadrangles and on the panchromatic data. The panchromatic data were resampled to 7.5-m by 7.5-m resolution and enhanced by filtering (9x9 filter with 100-percent add-back of the unfiltered data) and tone stretching. Then the spatial information in the panchromatic data was combined with the color information of the multispectral bands through a math-add based fusion technique. The tones produced from this process were further enhanced through histogram evaluation and contrast stretching. Panchromatic enhanced multispectral bands 7, 4, and 1 are shown in red, green, and blue.

**IMAGE INTERPRETATION**

-  Mud flats
-  Tidal marsh
-  Forest
-  Bare soils and crops
-  Industrial site and pond
-  Urban

The images were recorded at 10:33 a.m. e.s.t., which was also the predicted time of the low tide at the New River Inlet. Low tide was to have occurred 38 minutes earlier at Cape Lookout, 24 minutes later at Morehead City, and 1 hour and 57 minutes later at Harkers Island. In Beaufort, the low tide was predicted at 11:09 a.m. but was observed at 10:30 a.m. The predicted low tide elevation was 0.33 feet above mean lower low water, yet it was observed at 0.60 feet when it occurred. These differences suggest the effect of meteorological influences on the water levels. Normally, the tide range is limited to a few inches in Merrimon and is insignificant in New Bern. In the preceding seventeen hours, sustained winds of around 4 knots per hour blew from the West-Southwest and had been the same direction since Feb. 27 in the evening with only a seven hour change to the North-Northeast on Feb. 29 midday.

**CORRESPONDING 1:100 000-SCALE MAPS DIAGRAM**

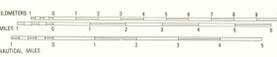


**LOCATION DIAGRAM**



Fully Controlled Limited Access Highways shown

**SCALE 1:100 000**



Universal Transverse Mercator Projection  
and 10 000-meter grid zone 17  
World Geodetic System 1984

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