

# DEPARTMENT of the INTERIOR

## news release

GEOLOGICAL SURVEY

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### SPACE IMAGES OF MISSISSIPPI FLOODS AVAILABLE

Images produced by NASA's Earth Technology Satellite (ERTS-1), showing the lower Mississippi and Missouri Rivers in flood on March 31, 1973, are now available for purchase and study, the U.S. Geological Survey, Department of the Interior, announced today.

The space views of the flood are among many NASA high-altitude images being analyzed by USGS scientists of the Interior Department's EROS (Earth Resources Observation Systems) program. These scientists are using remote sensor data for a variety of environmental and natural resources studies.

Covering 34,000 square miles of the Mississippi basin, from about 50 miles north of St. Louis, Mo., to the confluence of the Arkansas River some 250 miles to the south, the images are especially useful in preliminary assessments of flood damage, studying the areas of inundation, determining the effectiveness of flood control structures and methods, and determining areas where significant changes in the course of the river may require later dredging or other construction.

USGS remote sensing specialists point out that investigators will be able to compare river conditions shown on the March 31 images with previous images, particularly the low-flow imagery taken on October 20, 1972. Although satellite coverage of the Mississippi region is possible every 18 days, cloud cover on April 16 and 17 prevented follow-up imagery of most of the flood-stricken area.

The March 31 images are available in black-and-white and as color composites. The color composites contain more information, but the black-and-white images, each representing a different color band, are superior for specialized purposes: band 4 (green light) is superior for water penetration; band 5 (red light) for sediment distribution; band 6 (short infrared) for establishing relationships between water and cultural features; and band 7 (long infrared) for delineating the land-water contact.

In requesting images, order should specify if color or black-and-white prints are desired, what band of black-and-white, and what scale image (1:1,000,000; 1:500,000 or 1:250,000) is desired. Color prints at 1:1,000,000 cost \$7.00 and black-and-white prints are \$1.75 each; print size at this scale is about 7-1/2 inches square. Prepaid orders and requests for additional information should be addressed to the EROS Data Center, Interior/Geological Survey, Sioux Falls, South Dakota 57198 (Phone 605-339-2270).

(more)



These NASA ERTS-1 Satellite photos of the St. Louis, Missouri area show changes in the Illinois, Missouri and Mississippi Rivers during the period October 1972 to March 1973. The photo at left was taken on October 2, 1972 and shows St. Louis below the confluence of the rivers. North of St. Louis, the Missouri River joins the Mississippi and further upstream the Illinois and Mississippi Rivers join. The photo at right, of the same region, was taken on March 31, 1973 and shows the areas under water as a result of the flooding. The Mississippi River at St. Louis is at a stage of 38 feet (the highest since 1903) and still rising. The flood wave is slowly making its way downstream threatening cities and agricultural lands along the entire length of the river.

U. S. Geological Survey/NASA