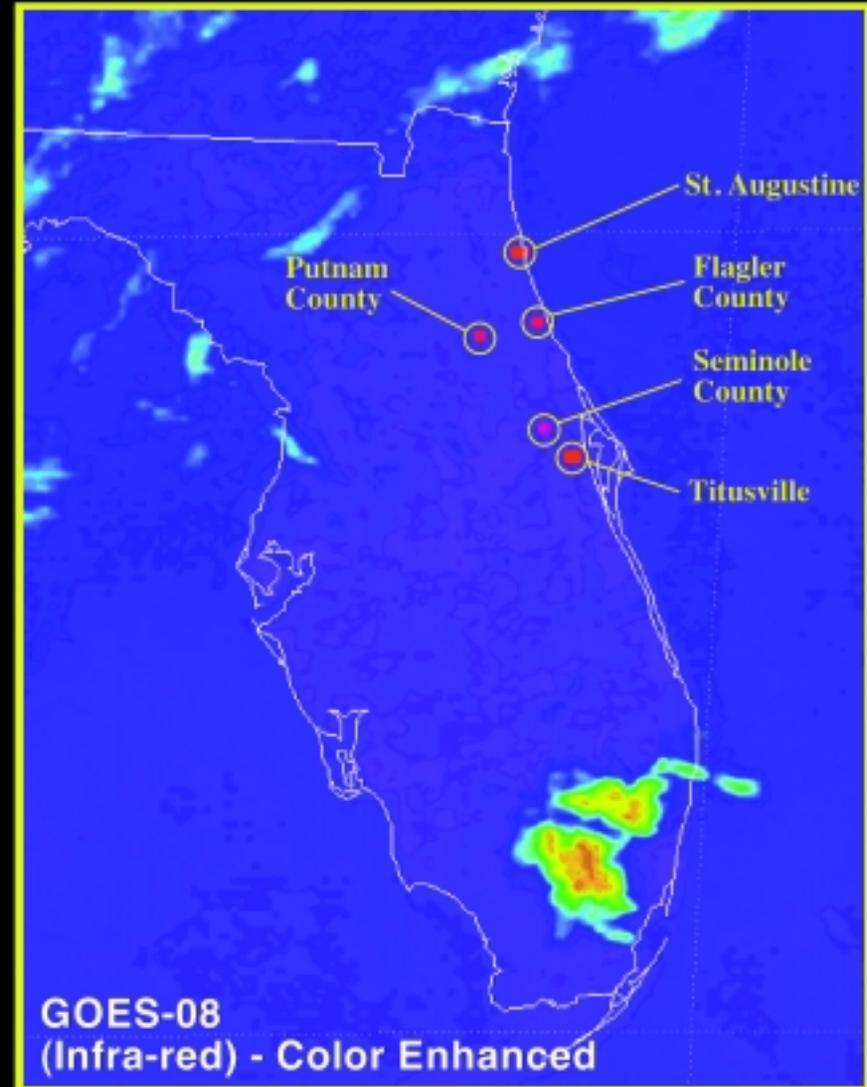


GLOBAL FIRE MONITORING

Fire Plumes in Florida as Seen from Space (June 6th, 1998)



Satellites provide observation capability for monitoring different fire characteristics such as fire susceptibility, active fires, burned areas, smoke, and trace gases. Specifically, the images on the front represent the detection of active fires and smoke associated with wildfires in Florida during June 1998.

Abnormally dry conditions combined with record high temperatures dried out woodland areas across the state, making conditions particularly ripe for wildfires. Fires visited 39 of Florida's 67 counties between May 25 and June 25 and burned more than 100,000 acres of land. Thick blankets of gray smoke were associated with burning eyes, scratchy throats, stuffed noses and heavy wheezing. Many communities were evacuated and major highways closed as firefighters battled to save forests, homes, and property.

The images on the front are National Oceanic and Atmospheric Administration (NOAA) Geostationary Operational Environmental Satellite (GOES)-8 false-color images of the Florida peninsula on June 6, 1998.

The image at left is a combination of visible and infrared (heat) data showing

smoke plumes and hot spots (red areas) along Florida's east coast. Some of the smoke plumes actually spawned cumulus clouds as water vapor condensed on aerosol particles (called cloud condensation nuclei) in the smoke. This is evident off the coast of Cape Canaveral as westerly winds carried the smoke out over the Atlantic Ocean.

The image at right is a color-enhanced infrared image of the "hot spots." Infrared images from satellites allow scientists to see a snapshot of the amount of radiation being emitted from the surfaces of objects such as clouds, land, and the ocean. In this image, land surface areas emitting high amounts of infrared radiation because of the fires have been colored red and are easily detectable on the image. These images prove to be extremely valuable as smoke typically hampers efforts to correctly map wildfires from aircraft. The accuracy of these images aids firefighters in tracking and forecasting the movement of wildfires.

GOES-8 was launched into a geosynchronous orbit, which means it orbits the equator at a speed matching the Earth's rotation, allowing it to hover continuously over one position on the surface, at an

altitude of 35,800 km.

Additional information can be found on the World Wide Web at:

<http://earthobservatory.nasa.gov/Library/GlobalFire/>

Images courtesy of NASA's EOS Terra (AM-1) Visualization Team and GOES Project Science Offices.

For the Classroom: Research Topic

As wildfires become more common and destructive, "prescribed burning" is often mentioned as a wildfire prevention tool. Have your students research the following questions on the merits of prescribed burning (copious amounts of information can be found on the internet).

Does prescribed burning reduce the number, size and intensity of wildfires?

Are the effects of prescribed burning as a wildfire prevention tool measurable?

Does the use of prescribed burning eliminate the threat of wildfire?