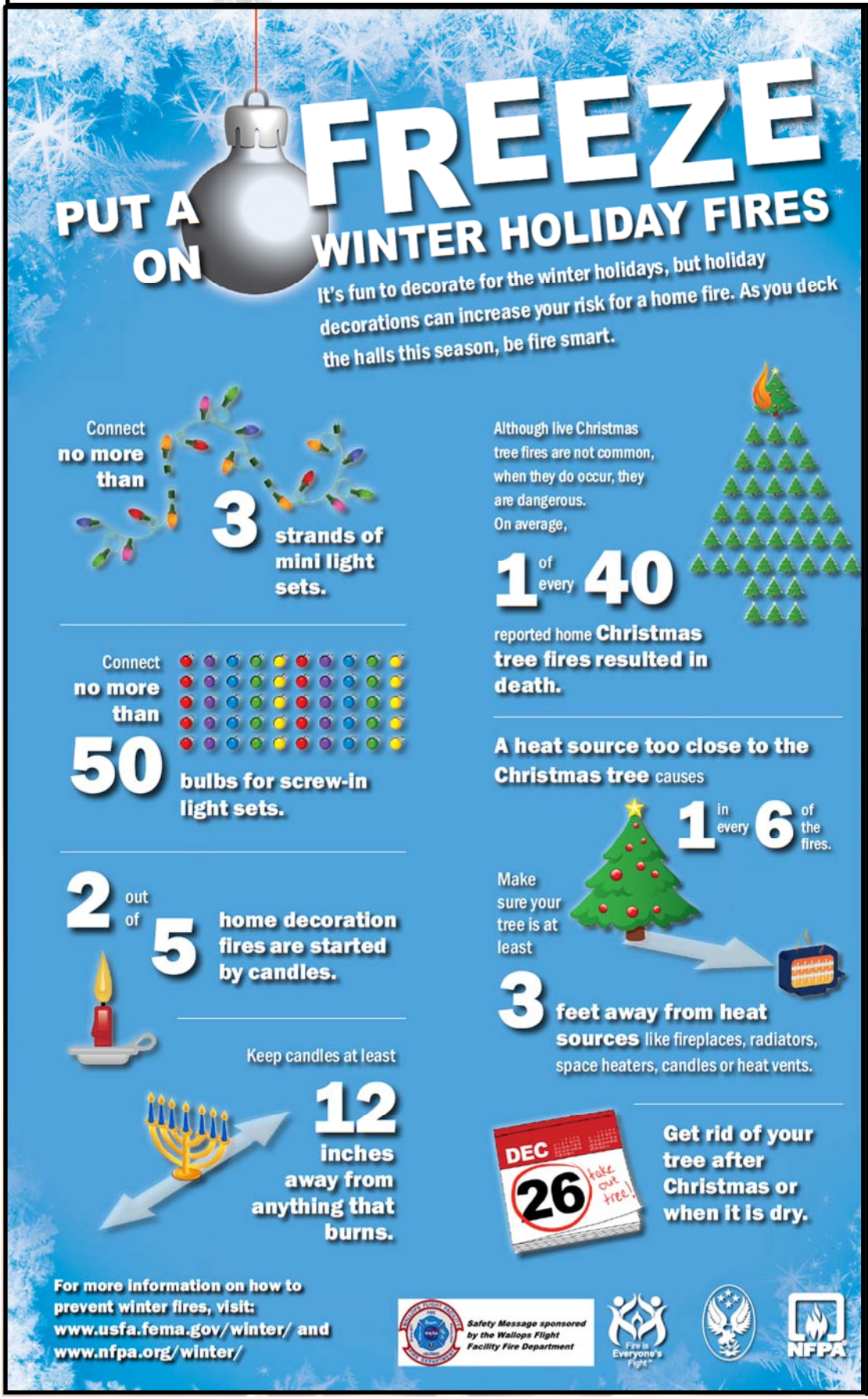
Safety & Environmental Newsletter

December 2014 Issue



Keep the blazing yule where it belongs: in the fireplace.

WARNING: 9-volt batteries pose a greater fire threat than you might think!

Check out this video to learn more:

https://www.youtube.com/watch?v=CnVDayI-gwI

Safety Editor: Robert Nock

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Antares ORB-3 Mishap Environmental Update As of December 8, 2014

The Virginia Commercial Space Flight Authority (VCSFA), Orbital Sciences Corporation (Orbital), and NASA are working diligently to investigate the environmental impacts of the October 28, 2014 Antares ORB-3 mishap. The mishap occurred on Pad 0-A at the Mid-Atlantic Regional Spaceport owned by VCSFA. The 7 acre Pad 0-A site is located on the south end of Wallops Island. Orbital and VCSFA are responsible for the environmental investigation and cleanup, with support from NASA. The Virginia Department of Environmental Quality, Virginia Department of Health, United States Environmental Protection Agency, and other federal and state agencies have been providing oversight.

Sampling results to date indicate that most environmental impacts are confined to Pad 0-A.

What Sampling and Observations Have Been Completed?

Air: The Wallops Fire Department performed air monitoring on Wallops Island beginning immediately following the mishap until three days after. A NASA industrial hygienist collected ten air samples within one hour of the incident, including sites to the west on the Mainland, Chincoteague causeway bridge, and Chincoteague Island.

Surface Water: The U.S. Coast Guard and Virginia Marine Resources Commission patrolled the inland bays and ocean for 24 hours following the mishap and reported no observations of water pollution, such as oil sheens. On October 29, water samples were collected near storm water outfalls along the inland bays downwind of Pad 0A where the mishap occurred. On October 31, surface water samples were collected near outfalls along Cat Creek and Hog Creek west of Pad 0-A, and from the retention basins inside Pad 0A. A larger surface water sampling effort, targeting areas in the wetlands where debris had fallen, and from ponds and ditches on Wallops Island, ended November 17.

Groundwater: On October 31, groundwater samples were collected from the impact crater. Additional samples were collected on November 13, 14, and 21.

Soil: On November 6, soil sampling in the Pad 0-A impact area was completed. On November 17, a larger sediment/soil sampling effort, targeting areas in the wetlands where debris had fallen, was completed.

What Is Known So Far About the Environmental Impacts?

Location	Air	Surface Water	Groundwater	Soil
Impacts inside Pad 0-A	No	Yes Cleanup Completed	Yes Cleanup Underway	Yes Cleanup Underway
Impacts to Wallops Island and wetlands	No	No*	TBD**	No*

*Based on preliminary results. Further assessment required for final determination.
**Future groundwater investigation will be performed.

Air: Air sampling did not detect HCl, anhydrous hydrazine, or dinitrogen tetroxide in any of the locations sampled.

Surface Water: Water sample results show RP-1 and perchlorate present in the retention basins and standing water against the seawall inside the Pad 0-A site.

Groundwater: The impact crater results show RP-1 and perchlorate present. The impact crater is filled with groundwater. However, this groundwater is not a drinking water source. Additionally, there is a substantive clay layer about 15 feet beneath Pad 0-A, which will prevent RP-1 and perchlorate from migrating deeper.

Soil: The soil sampling results show RP-1 present in the soil around the impact crater, at the state regulatory limit. Perchlorate was only found in the soil near the impact crater at levels well below federal and state limits.

For more information on environmental issues and actions related to the Antares ORB-3 mishap, please visit:
http://www.nasa.gov/sites/default/files/files/AntaresEnvFactsheetDec8.pdf.

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