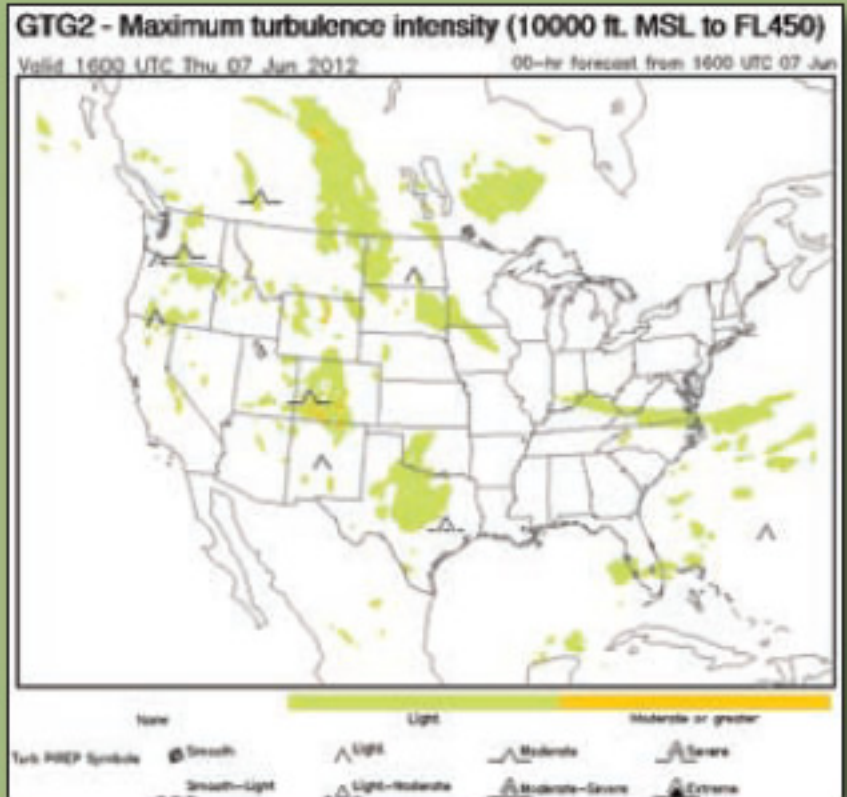


AVOIDANCE MANEUVERS

Sometimes the best way to avoid the worst is to not go there—period. The sidebar on page 21 explores some types of turbulence and where they can be found. For example, those who fly high enough to encounter the jet stream can count on experiencing some degree of turbulence at the encounter. Then there's the well-recognized, widely known risks of turbulence for any who fly into any level of a cumulus cloud—or most any other cloud type, for that matter.

Avoidance necessarily begins with knowledge. It's hard to avoid something when you don't know it exists...or where. Which brings us to the three most fundamental intervention steps to help you avoid turbulence:



- **Be informed. Use available turbulence information, like the weather graphics above, in pre-flight preparation and in-flight stages;**
- **Improve your preflight/in-flight decision making for turbulence avoidance by tapping Flight Service and ATC for Pireps and updated information; and**
- **Focus your route selections on avoiding areas and seasons most prone to both atmospheric and mechanical turbulence, including mountains, high desert in the summer and fall, and over water.**

Let's throw in one more: stay away from convective weather—many miles away. Why? Well...start with the words "convective weather." It's that convection that you'll feel as real and possibly damaging bumps. Secondly, convective conditions often generate lots of static electricity in the clouds they produce. Those static build-ups eventually discharge themselves in bolts of lightning, and being struck by lightning has been known to make some pilots wish they'd only suffered from the turbulence they experienced before that bolt hit them from out of the blue. And when those bumps come anyway, the surest way to survive:

- **Slow down. Keep the airspeed needle in the green arc, well away from the top, and even those needle-bouncing gusts should pass without incurring damage. Climb, if appropriate, to increase the margin with V_A ;**
- **Look for a way out or, if there's no escape and conditions are deteriorating...**
- **Make a new plan and land at the earliest possible opportunity—keeping in mind that low-level wind shear and vertical turbulence can be their most dangerous at slow speeds and close to the ground.**