



Chapter 736 Newsletter for March 2017

AOPA Urges Neighbors To Accept BasicMed

AOPA President Mark Baker has written the aviation authorities of three countries whose airspace borders the U.S. asking that they accept new BasicMed medical requirements that will cover some private pilots. BasicMed goes into effect in May 1 and is expected to be adopted by many U.S. pilots but Canada, Mexico and the Bahamas don't have parallel regulations so BasicMed pilots will not be able to fly in those countries. "Many of our members continue to contact us hoping to visit the Bahamas under these new rules," Baker said in the letter to the Bahamian Ministry of Transport and Aviation. All three countries require an ICAO-recognized third class medical and BasicMed will not be approved by ICAO. Canada has a Category 4 medical that shares some of the features of BasicMed, including the family doctor declaration, but is much more restrictive in terms of aircraft type and operation. It is not recognized by the U.S. or ICAO.

Baker is appealing to the leading officials of the three countries to "officially recognize" BasicMed to allow holders to exercise their U.S. privileges on visits. While Baker doesn't ask the other jurisdictions to adopt a BasicMed system themselves, he does list its selling points. "The new law was enacted by Congress because it reduces costs, bureaucracy, and most importantly maintains safety," Baker wrote in the letter to Transport Canada.

TRUMP PROPOSES ATC PRIVATIZATION

The White House proposed privatizing air traffic control in a [budget outline](#) released March 16. The plan would "shift the air traffic control function of the Federal Aviation Administration to an independent, non-government organization."

Sen. Bill Nelson (D-Fla.), ranking Member of the Senate Commerce Committee, said the proposal is "going nowhere in the Senate."

The House Transportation and Infrastructure Committee passed legislation last year that would have privatized air traffic control and imposed user fees on Part 135 charter operations based outside Alaska and Hawaii. The proposal was supported by some major airlines and the National Air Traffic Controllers Association, but it failed to make it to the House floor amid strong bipartisan criticism.

Those criticisms have continued.

Last month, the leadership of the Senate Appropriations Committee sent a letter to Senate Commerce Committee Chairman John Thune (R-S.D.) and Nelson opposing privatization.

More recently, Grover Norquist, president of the conservative Americans for Tax Reform, sent a letter raising a number of concerns to House Committee on Transportation and Infrastructure Chairman Rep. Bill Shuster (R-Pa.), who has led recent efforts on Capitol Hill to privatize air traffic control. Norquist wrote that Shuster's plan could result in "increased economic and financial burdens," and he also questioned provisions designed "to appease union interests."

GA Lobbies For Contract Towers

With a new cost-cutting budget proposal, general aviation advocates took the offensive and sent a letter to Congress asking them to protect funding for contract towers. NBAA, AOPA and eight other groups sent a letter to Congress asking them to fully fund the towers in the FAA appropriations bill for this year. President Trump's proposal is expected to include \$54 billion in budget cuts and dramatically reduce the federal workforce, according to news reports from The Hill and The Washington Post. The contract-tower program needs at least \$159 million, according to the letter. All controllers who work in the contract facilities are certified by the FAA, and meet the same training and operational standards as FAA-employed controllers.

The program saves the FAA about \$200 million per year while providing essential services, the letter states. "The bottom line is that, absent this highly successful partnership, many local communities and smaller airports would not receive the significant safety benefits of ATC services," the letter concludes. Contract towers now number 253 in 46 states, and handle 28 percent of all tower operations in the U.S., yet the contract towers account for only about 14 percent of FAA's overall budget for control-tower operations, according to NBAA. Back in 2013, the FAA threatened to close the 149 contract towers that serve smaller GA airports, but advocates lobbied successfully to save them. Since then, every year at budget time, advocacy groups rally once again to be sure the budget makers don't forget about these towers.

A Look To The Future: Magnetically Repelling Ice (from the ASME Journal)

People can be nervous fliers to begin with. Even when there isn't a cloud in the sky, there are few words that cause anxiety in some like, "Prepare for takeoff." But add wintry conditions to the mix, add some ice, and the uneasy feeling can turn to fear. Now, a University of Houston team wants to help calm nerves, as well as increase safety, by preventing the harmful effects of ice—with the aid of magnetic forces, of all things.

“Icy conditions are a problem in nature and industry,” says Hadi Ghasemi, assistant professor of mechanical engineering at the University of Houston. “I was in Canada and doing a Ph.D. at the University of Toronto [in mechanical engineering]. It’s a serious problem over there. You couldn’t open up a door of a car sometimes with ice building up, icing on airplanes. Even your air conditioner in homes has problems. I was constantly around these issues. In my group, we looked at different approaches of nanotechnology for these problems and started to look at the problem of ice. At the same time, working with this magnetic fluid, I saw a possible solution and that’s why I started this research in my group I think around a year ago.”

For now, the creation is simply called a “magnetic slippery surface” and is made of two components. The first is magnetic tape. “This tape can be put on any surface, whether polymer, metal, et cetera.” he says. The second component is ferrofluid, which he says is basically a mixture of fluid and magnetic nanoparticles, the latter being on the order of 5 to 10 nanometers in diameter.

The ultimate idea was that this combination would make sure ice never encounters a solid to cling to.

Looking at a water drop mixing with a solid, it showed a strong bond has adhesion strength on the order of 100,000 pascals. “That led to us asking: ‘How do we avoid this interface?’” he says. “When ice builds up and has contact with a solid then it has a very solid bond and is very hard to detach,” he says. “When cold weather sits on a fluid surface, this combination [of magnetic tape and ferrofluid] doesn’t allow the ice to see the solid and it just floats on the surface.” Adhesion strength with this invention is 2 pascals, according to Ghasemi. “I was definitely surprised it worked this well, that it could go this low.” One of his goals, he says, is for it to be used in spray form.

Ghasemi has enjoyed the process, particularly working with students to bring this invention to light. “I came up with the idea but they have been critical in testing and so much more,” he says. “It’s fun to see us moving this forward.”

Considering how many airline accidents and mishaps have been ice-related over the years, he hopes this will help avoid tragedy in the future. “There has been strong enthusiasm from industry,” he says. “I’m optimistic about its future.”