

Safety first

Meet Marlene Nelson,
who holds BCA's top
aviation safety job

By LIZ VERDIER

When Marlene Nelson hears the phone ring in the middle of the night, she knows something has gone dreadfully wrong.

As the director of Aviation Safety for Boeing Commercial Airplanes, she gets the first call from the Air Safety Investigation team if there is an accident involving a Boeing airplane. This exposure to the consequences of deficiencies in the global aviation safety system is the disheartening part of the job. But the flip side is that these accidents provide an impetus to work even harder to improve the system's safety.

Nelson's responsibilities include leading all BCA product safety-related activities, including accident investigations, contin-

ued airworthiness efforts for in-service airplanes, safety assessments for new and derivative airplanes, and Boeing's participation in industry global safety programs. There are about 20,000 large Western-built commercial airplanes operating worldwide today, and about 12,000 of those are Boeing products. Nelson is responsible for leading the development and implementation of Boeing strategies and tactics that positively influence global aviation safety.

A notable contribution since her appointment to this position was her leadership in the shaping of the BCA Aviation Safety Council. This council, led by the BCA chief operating officer, assembles the leaders of Engineering, Flight Operations, Product Development and Product Integrity to discuss and decide matters relevant to BCA aviation safety policy. Former U.S. National Transportation Safety Board chairman Ellen Engleman-Connors observed, "Safety is in Boeing's DNA." Nelson acknowledged: "That is an incredible compliment for our safety culture but is not something we can take for granted."

DIVERSE EXPERIENCE

Nelson's 33-year career at Boeing has spanned nearly every phase of the commercial airplane business from Sales and Marketing to final product test. She's sought new job opportunities and experiences to expand her knowledge of BCA in nearly all aspects of the business.

Nelson began her career in engineering design. She gained a systems perspective

through trade studies like the consideration of fly-by-wire spoilers on the Boeing 767. Subsequent assignment to the Flight Technical organization presented an opportunity for her contributions to the Wind Shear Safety Initiative, a significant industry activity that virtually eliminated wind shear as a cause of U.S. aviation accidents for commercial jets.

Ten-plus years of experience in the Flight Training organization, plus a commercial pilot license with instrument and multiengine ratings, led to a pilot position in Boeing Production Flight Test. She accumulated some 1,000 hours of flight time as she regularly flew production flight tests on new 737s. She currently pilots gliders and shrugs off the hazard of unpowered flight as "inherent risk management." As 747 Chief Project Engineer, Nelson moved the 747 Engineering team to the factory to further enable Lean+ concepts. Engineers on or near the factory floor, enabling the production processes, are now a way of life on all Boeing airplane production lines.

Over the past 20 years, the United States and Europe have made considerable progress to significantly reduce the rate of occurrence of aviation accidents and serious incidents. Nelson serves as Boeing's executive representative on the U.S. Commercial Aviation Safety Team, an organizational body made up of industry and government. "CAST has played a major role in leading this very successful effort; a 10-year goal to reduce the commercial transport airplane fatality risk by 80 percent has been met," she said.

Growth in commercial aviation outside of North America and Europe is ballooning. Within the past several years, coordinated international industry/government collaborative efforts have been launched that are aimed at addressing those regions of the world where aviation safety outcomes are not satisfactory. Nelson committed Boeing talent and resources to development and implementation of the resulting ICAO Global Aviation Safety Roadmap. Today, roadmap representatives are mentoring safety activities in Western Africa, Southeast Asia and South America.

"It's rewarding to be able to leverage my Boeing experiences toward something as important as improving aviation safety," Nelson said. "My experiences in design, build, support and operating the product really help me identify with all the stakeholders—the engineers, the production team, and the pilots." ■

elizabeth.a.verdier@boeing.com



COURT CHENOWETH PHOTO

Marlene Nelson buckles up an emergency parachute harness prior to takeoff in a Smyk PW5 glider. In addition to a private glider certificate, she has an Air Transport Pilot certificate with a 737 type-rating.