Colonel Mark W. Weiss, a native of Portland, Oregon, enlisted in 1982 into the 1st Ranger Battalion. He served as a rifleman, team leader, and Ranger Instructor until 1985. He was commissioned a Distinguished Military Graduate in Aviation, and graduated from Embry-Riddle Aeronautical University with a Bachelor of Science Degree in 1988. Additionally, Colonel Weiss holds a master's degree from the Naval War College in national security, and a master's degree from the Army War College in strategic studies.

His assignment history included: aero-scout and assault platoon leader, later assistant S-3, 2-82d, 82nd Airborne Division; Flight Operations Officer and HHC Company Commander, 17th Aviation Brigade; Squadron S-3, 1/158th Cavalry, later Commander, Reconnaissance and Interdiction Detachment, Maryland Army National Guard; Staff Officer, National Guard Bureau; Commander, WAATS Aviation Maintenance & Support Battalion, later Deputy Commander, Joint-Interagency Task Force, Arizona Army National Guard; Deputy Assistant Commandant/Senior Guard Advisor; United States Army Aviation Center of Excellence; Senior Army Aviation Advisor, Iraq Train & Assist Mission (Air Force), United States Forces – Iraq; and most recently, Chief, Domestic Operations, Office of the Deputy Chief of Staff for Operations, Headquarters Department of the Army. Colonel Weiss has participated in multiple deployments, both peacetime and combat; including Operation URGENT FURY in Grenada, Operation DESERT SHIELD/STORM in Southwest Asia, Operation IRAQ FREEDOM/NEW DAWN in Iraq, and Operation JUMP START along the U.S. - Mexico Border.

Colonel Weiss' military education includes Aviation Basic and Infantry Officer Career Courses, the Aviation Maintenance Manager's Course, the UH-1, OH-58, and UH-60 Aircraft Qualification Courses, the Combined Arms and Services Staff School, the Naval Command and Staff College, and the Army War College.

Colonel Weiss is a rated Master Aviator and Master Parachutist, and has earned the Combat Infantry Badge, Pathfinder Badge, and Ranger Tab. His other awards are typical for his time of service including combat deployments.