



# Interagency Aviation Lessons Learned



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**Subject:** Helicopter Dip Site Operations

**Area of Concern:** Flight Safety

**Distribution:** All Aviation Activities

**Discussion:** Earlier this year, a helicopter crew was practicing dipping from a water tank on a private ranch. When they arrived at the tank, the pilot noticed that the water was flowing in from a pipe on the eastern side of the top of the tank, which protruded out one foot (horizontally) into the tank. The pilot hovered over the tank and dipped the bucket into the tank until it was almost completely submerged while attempting to keep the bucket away from the protruding pipe. When the bucket was filled, the pilot attempted to take off vertically but noted that it was taking an excessive amount of power to climb away. This was verified by the co-pilot, who was also monitoring the power. The pilot attempted to open the bucket release in order to discharge the water from the bucket, but the bottom of the bucket remained submerged. After multiple attempts to raise and lower the bucket, it finally broke free. After moving away from the water tank, the crew noticed that the bucket was torn and as a result, terminated the training and returned to the helibase to inspect the helicopter and bucket.



A more proactive mitigation would have been to inspect the site prior to the training mission which would have afforded a better risk assessment/hazard identification. The crew made the decision to continue based on an impulsive decision after arriving at the site. The pilot observed the pipe going into the tank and tried to mitigate the risk by attempting to stay clear of it. After the incident, the pipe was replaced with a flush mount filler. A better strategy would have been to replace the pipe before the training mission.



Always take time to study and understand all of the characteristics in your particular mission. Be sure that your risk tolerance matches the urgency/reward that management’s provided. The tolerance/threshold for a training mission should be fairly low. Fortunately this incident resulted in nothing more than a torn Bambi bucket. It could have resulted in an accident.

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