

**NORTH STAR HELICOPTERS, INC.  
NORTH STAR VMS**

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Texas Aquatic Plant Management Society Annual Conference  
September 11 – 13, 2006  
Rayburn Country Resort  
Jasper, TX

**Abstract**

**Precision Application of Aquatic Herbicides**

Why should land managers care about aerial application technology? Precision application improves our ability to address problems with the least effects on our environment. With advancements in equipment, we can improve productivity as well as improve the environment. When most people think of aerial application, they only think of helicopters and airplanes. However, ground support equipment has also seen great improvements too. Trucks with DOT spec 406 certification, provides the highest standards in case of an accident or roll over. Doubled walled tanks, measuring devices and rinse capabilities all contribute to quality application. Additional support technology that has benefited the application industry comes from the use of computers in the field. Lap tops and hand held GPS units on the ground complement the GPS systems used by the pilots in the air. Aerial GPS systems, flow meters, flow controllers using ground speed calibrations, and the use of avoidance zones, gives us the precision application needed today. Improvements in boom and nozzle configurations give us more control of where and how herbicides are applied. By using the USDA computer drift model in conjunction with the improved system set up, we are able to minimize the potential of herbicides being applied outside the target area. In most cases using a helicopter with the specifically configured equipment, potential drift can be reduced to approximately .33% of the total spray volume. In conclusion, by the incorporation of all the available technology, we can effectively and safely apply herbicide by the aerial method.