

RISK ASSESSMENT MATRIX		PROBABILITY					
		Likelihood of Mishap if Hazard is Present					
		Almost Certain (Continuously experienced)	Likely (Will occur frequently)	Possible (Will occur several times)	Unlikely (Improbable; but has occurred in the past)	Rare (Remotely possible; but highly improbable)	
SEVERITY	Consequence if Mishap Occurs	Catastrophic (Death, Loss of Asset or Mission Capability or Unit Readiness)	Extremely High	Extremely High	Extremely High	High	Medium
	Critical (Permanent Disabling Injury or Damage, Significantly Degraded Mission Capability or Unit Readiness)	Extremely High	Extremely High	High	Medium	Medium	
	Moderate (Non-Permanent Disabling Injury or Damage, Degraded Mission Capability or Unit Readiness)	High	High	Medium	Low	Low	
	Negligible (Minimal Injury or Damage, Little or No Impact to Mission Capability or Unit Readiness)	Medium	Medium	Low	Low	Low	
		Risk Assessment Codes (RAC)					
		Extremely High=1 High=2 Medium=3 Low=4					

Risk Assessment Codes

RAC Value	Risk Category	Action Required
1	Extremely High	Stop, Mitigation Required
2	High	Mitigation Needed, Consider Stopping
3	Medium	Mitigation Recommended
4	Low	Possible Acceptance, Mitigation Optional

**Reference specific agency policy regarding action required based on risk category*

Risk Assessment Worksheet

SYSTEM: Helicopter Aerial Seeding		Pre-Mitigation			Post Mitigation								
Sub System	Hazard(s)	Probability	Severity	Risk Level	Mitigation(s)	Probability	Severity	Risk Level	Additional Local Mitigation(s)	Probability	Severity	Overall Risk	Mitigation Achieved?
													Yes/No
Seed Loading/ Helibase Operations	Injury from equipment and aircraft	Possible	Moderate	Medium	Wear proper PPE (hard hat, ear protection, gloves, and boots). Other protection may be required on some jobs; eye protection and respiratory protection., Training, Tailgate Safety.	Unlikely	Moderate	Low		Choose an	Choose an	Low	YES
Seed Loading/ Helibase Operations	Movement of seeder/machine during service or maintenance	Possible	Moderate	Medium	Ensure the machine cannot be started or operated when in transport or servicing, Training, Tailgate Safety Briefing.	Unlikely	Moderate	Low		Choose an	Choose an	Low	YES
Seed Loading/ Helibase Operations	Slips and falls	Possible	Moderate	Medium	Ensure safe footing and handholds. Keep oil/fuel spills clean. Wet boots or wet equipment increase hazard of slipping, Training, Tailgate Safety Briefing.	Unlikely	Moderate	Low		Choose an	Choose an	Low	YES
Seed Loading/ Helibase Operations/ Flight Operations	Unknown Responsibilities	Possible	Moderate	Medium	Prior to each project, operator will review appropriate portions of MASP. The project briefing will cover responsibilities and emergency procedures, Morning Safety briefing/evening debriefing.	Unlikely	Moderate	Low		Choose an	Choose an	Low	YES

Flight Operations	Pilot Qualifications	Possible	Critical	High	Helicopter and Pilot shall be certified. Pilot and aircraft will be carded annually for seeding operations. Pilot will be knowledgeable and trained in seeding operations. Use of proper PPE by all. Pre- and Post Op briefings will be performed. Contract Requirements, OJ training from Contractor.	Unlikely	Critical	Medium		Choose an item.	Choose an item.	Medium	YES
Flight Operations	Aircraft Avoidance	Possible	Critical	High	See and avoid. Check MTR routes in advance. Practice risk management; confirm that Dispatch has contacted schedulers to de-conflict. Fly established airport patterns, initiate and stay in radio contact. Morning Safety briefing/evening debriefing	Unlikely	Critical	Medium		Choose an	Choose an	Medium	YES
Flight Operations Environmental	Weather	Possible	Moderate	Medium	Use weather advisory. Maintain VFR minimums, cancel mission if necessary.	Unlikely	Moderate	Low		Choose an	Choose an	Low	YES
Flight Operations Environmental	High/Hot/Heavy Flight Conditions	Possible	Critical	High	Performance planning complete/insure accurate Load & Balance calculations. Do not place the aircraft in performance-related situations.	Unlikely	Critical	Medium		Choose an	Choose an	Medium	YES
Flight Operations	Low level obstacles	Possible	Critical	High	Provide pilot with aerial hazard map, Complete a high-level recon, no unnecessary low-level flight.	Unlikely	Critical	Medium		Choose an	Choose an	Medium	YES
Seed Loading/ Helibase Operations/ Flight Operations	Noise, Rotor wash	Likely	Moderate	High	Wear ear and eye protection	Unlikely	Moderate	Low		Choose an	Choose an	Low	YES

Flight Operations	Pilot not familiar with area	Possible	Critical	High	Supply hazard maps. Complete high-level recon prior to low-level work, project area identified	Unlikely	Critical	Medium		Choose an	Choose an	Medium	YES
Flight Operations	Unplanned aircraft events	Unlikely	Critical	Medium	All personnel are equipped with required PPE and trained in crash procedures.	Rare	Critical	Medium		Choose an	Choose an	Medium	YES
Seed Loading/ Helibase Operations/ Flight Operations	Hazardous materials	Possible	Moderate	Medium	Qualified personnel will handle, review MSDS, inform pilot. Use proper PPE. Driver of Fuel Service Vehicles will have current Hazmat endorsement and comply w/all federal/state/local laws.	Unlikely	Moderate	Low		Choose an	Choose an	Low	YES
Seed Loading/ Helibase Operations/ Flight Operations	Communication	Possible	Critical	High	Flight following established, checked and followed, communication plan posted. Always maintain communications, establish backup alternate frequencies. Take handheld radio along. Call in prior to landing. If radio contact is lost return to best suitable landing area and check-in. All handheld electronic devices such as radios, pagers, cell phones, etc. shall be turned off within 50' of any fueling operations. Carry extra batteries, have back up radio	Unlikely	Critical	Medium		Choose an item.	Choose an item.	Medium	YES
Seed Loading/ Helibase Operations/ Flight Operations	Rotor Hazard	Unlikely	Catastrophic	High	Pilot performs aircraft safety brief, approach/depart safely or after shutdown and rotor stop.	Rare	Catastrophic	Medium		Choose an	Choose an	Medium	YES

<p><i>*Final Risk Value is the overall risk of the mission/flight after all mitigations have been implemented. Overall risk cannot be lower than the highest risk after mitigations. One high risk rating will result in the overall risk being high. It is not an average.</i></p>			<p>Final Risk Value:</p>	<p><i>Medium</i></p>
<p>Prepared By:</p>		<p>Title:</p>		<p>Date:</p>
<p>Approved By:</p>		<p>Title:</p>		<p>Date:</p>