

RA 01 Risk Analysis and Assessment

RA 01: Guidance for Risk Analysis & Assessment

As defined by **FAA AC 150/5200-37**, risk is the composite of the predicted severity and probability of the outcome or effect (harm) of a particular hazard. In order to assess the level of risk severity and probability are first determined.

Severity is determined by the worst credible potential outcome. Less severe effects may be considered in addition to this, but at a minimum, the most severe effects are considered. Determination of severity is assessed independent of probability.

Probability is the likelihood of a consequence related to the hazard occurring.

Every hazard is assessed in terms of its severity followed by an assessment of its probability to determine level of risk. Definitions are provided to help guide the assessment.

The first action will be to determine a numerical value for each category and consequence as listed in Part 1. Should additional consequences be determined they will also be evaluated.

The second action will be to average the numbers previously determined and documented in Part 2.

The third action will be to plot the numbers on a risk matrix chart (example below). The risk matrix chart has degrees of color based on levels of severity and probability. Green is the highest level of acceptability, lowest level severity and lowest level of probability. Yellow is a caution area where the tolerability needs to be determined by the Safety Board. A yellow hazard should be further addressed for mitigation to move the risk value to green or into green if practical. Red should be considered not tolerable and should be addressed as soon as possible to move the risk value closer to yellow and/or green.

The number factors for each square can range in tenths of a point, i.e.1.0 to 1.9, 3.0 to 3.9. These numbers per category and consequence will then be added and divided for an average and then plotted per the example below. For demonstration purposes, a possible hazard score could be 3.1 for severity and 4.3 for probability. This score (indicated by a blue dot) is illustrated as an example below:

5	Catastrophic		Example			
4	Hazardous					
3	Major			●		
2	Minor					
1	Insignificant					
		Extremely Improbable	Extremely Remote	Remote	Probable	Frequent
		Should never occur	Unlikely to occur, do not dismiss	Should be expected once	May occur	May occur often
		I	II	III	IV	V

Part 1: Identify Hazard Consequences by Severity and Probability

1. Hazard Tracking no.		2. Name:	3: Date
3. Hazard Categories:		4. Hazard Consequences Rated by Severity and Probability:	
<input type="checkbox"/> 1 – People: Threat to any airport employee, tenant, contractor, travelling public, and public at-large.		<input type="checkbox"/> Injury/Illness <u>SEVERITY</u> <input type="checkbox"/> Negligible = 1 to 1.9 point -No first aid required <input type="checkbox"/> Minor = 2 to 2.9 points -Injury/illness, minor first aid required <input type="checkbox"/> Major = 3 to 3.9 points -Significant injury/illness 1 to 5 persons <input type="checkbox"/> Hazardous = 4 to 4.9 points -Significant injury/illness, 6-49 people <input type="checkbox"/> Catastrophic = 5 to 5.9 points -Significant injury/illness, 50 or greater <u>PROBABILITY</u> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point -Almost impossible -Possibly only once in 10-100 years <input type="checkbox"/> Extremely Remote = 2 to 2.9 points -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <input type="checkbox"/> Death <u>SEVERITY</u> <input type="checkbox"/> Major = 3 to 3.9 points -Death, less than 2 persons <input type="checkbox"/> Hazardous = 4 to 4.9 points -Death, less than 5 persons (not Mass Casualty Incident) <input type="checkbox"/> Catastrophic = 5 to 5.9 points -Significant injury, 50 or greater -Death, 5 or greater, MCI -Lost work time, greater than 1 month <u>PROBABILITY</u> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point -Almost impossible -Possibly only once in 10-100 years	

Score

Score

Score

	<ul style="list-style-type: none"> <input type="checkbox"/> Extremely Remote = 2 to 2.9 points -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <div style="text-align: right; background-color: #cccccc; padding: 5px;"><u>Score</u></div> <p><input type="checkbox"/> Loss of Work</p> <p><u>SEVERITY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point -No lost work time <input type="checkbox"/> Minor = 2 to 2.9 points -Little to no lost work time, less than 2 days (16 hours) <input type="checkbox"/> Major = 3 to 3.9 points -Lost work time, less than 1 week (40 hours) <input type="checkbox"/> Hazardous = 4 to 4.9 points -Lost work time 1 week to 1 month <input type="checkbox"/> Catastrophic = 5 to 5.9 points -Lost work time, greater than 1 month <div style="text-align: right; background-color: #cccccc; padding: 5px;"><u>Score</u></div> <p><u>PROBABILITY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point -Almost impossible -Possibly only once in 10-100 years <input type="checkbox"/> Extremely Remote = 2 to 2.9 points -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <div style="text-align: right; background-color: #cccccc; padding: 5px;"><u>Score</u></div>
<p><input type="checkbox"/> 2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (navaids), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact.</p>	<p><input type="checkbox"/> Movement Area Pavement Impacted</p> <p><u>SEVERITY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point -None to very limited operational impact, less than 1 hour <input type="checkbox"/> Minor = 2 to 2.9 points -None to very limited operational impact, less than 4 hours <input type="checkbox"/> Major = 3 to 3.9 points

2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (navaids), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact

- Loss of total airport operation, less than 2 hours
- Loss of partial airport operation, less than 1 day (24-hours)

- Hazardous = 4 to 4.9 points**
-Loss of total operation, 2 to 12 hours
-Partial loss of operation, 48 hours or less

- Catastrophic = 5 to 5.9 points**
-Loss of total operation, greater than 12 hours
-Loss of partial operations, greater than 48 hours

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
-Regularly expected to occur in the system
-Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
-Continuously expected to occur in the system
-Likely to occur once a day or multiple times per week

Score

- Movement Area Marking/Lighting/Signage Impacted**

SEVERITY

- Negligible = 1 to 1.9 point**
-None to very limited operational impact, less than 1 hour
- Minor = 2 to 2.9 points**
-None to very limited operational impact, less than 4 hours
- Major = 3 to 3.9 points**
-Loss of total airport operation, less than 2 hours
-Loss of partial airport operation, less than 1 day (24-hours)
- Hazardous = 4 to 4.9 points**
-Loss of total operation, 2 to 12 hours
-Partial loss of operation, 48 hours or less
- Catastrophic = 5 to 5.9 points**
-Loss of total operation, greater than 12 hours
-Loss of partial operations, greater than 48 hours

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**

<p>2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (navaids), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact</p>	<ul style="list-style-type: none"> -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <p><input type="checkbox"/> Frequent = 5 to 5.9 points</p> <ul style="list-style-type: none"> -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <p style="text-align: right;">Score</p> <p><input type="checkbox"/> RWY Safety Area Impacted</p> <p><u>SEVERITY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point <ul style="list-style-type: none"> -None to very limited operational impact, less than 1 hour -None to minimal equipment loss, less than 1 day out of service <input type="checkbox"/> Minor = 2 to 2.9 points <ul style="list-style-type: none"> -None to very limited operational impact, less than 4 hours -None to minimal equipment loss, less than 2 days out of service <input type="checkbox"/> Major = 3 to 3.9 points <ul style="list-style-type: none"> -Loss of total airport operation, less than 2 hours -Loss of partial airport operation, less than 1 day (24-hours) <input type="checkbox"/> Hazardous = 4 to 4.9 points <ul style="list-style-type: none"> -Loss of total operation, 2 to 12 hours -Partial loss of operation, 48 hours or less <input type="checkbox"/> Catastrophic = 5 to 5.9 points <ul style="list-style-type: none"> -Loss of total operation, greater than 12 hours -Loss of partial operations, greater than 48 hours <p style="text-align: right;">Score</p> <p><u>PROBABILITY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point <ul style="list-style-type: none"> -Almost impossible -Possibly only once in 10-100 years <input type="checkbox"/> Extremely Remote = 2 to 2.9 points <ul style="list-style-type: none"> -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points <ul style="list-style-type: none"> -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points <ul style="list-style-type: none"> -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points <ul style="list-style-type: none"> -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <p><input type="checkbox"/> TWY Safety Area Impacted</p> <p><u>SEVERITY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point <ul style="list-style-type: none"> -None to very limited operational impact, less than 1 hour <input type="checkbox"/> Minor = 2 to 2.9 points <ul style="list-style-type: none"> -None to very limited operational impact, less than 4 hours <input type="checkbox"/> Major = 3 to 3.9 points <ul style="list-style-type: none"> -Loss of total airport operation, less than 2 hours -Loss of partial airport operation, less than 1 day (24-hours) <input type="checkbox"/> Hazardous = 4 to 4.9 points <ul style="list-style-type: none"> -Loss of total operation, 2 to 12 hours
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<p>2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (navaids), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Catastrophic = 5 to 5.9 points <ul style="list-style-type: none"> -Partial loss of operation, 48 hours or less -Loss of total operation, greater than 12 hours -Loss of partial operations, greater than 48 hours <p>PROBABILITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point <ul style="list-style-type: none"> -Almost impossible -Possibly only once in 10-100 years <input type="checkbox"/> Extremely Remote = 2 to 2.9 points <ul style="list-style-type: none"> -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points <ul style="list-style-type: none"> -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points <ul style="list-style-type: none"> -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points <ul style="list-style-type: none"> -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week 	<p><u>Score</u></p>
	<ul style="list-style-type: none"> <input type="checkbox"/> Non Movement Area Pavement Impacted <p>SEVERITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point <ul style="list-style-type: none"> -None to very limited operational impact, less than 1 hour <input type="checkbox"/> Minor = 2 to 2.9 points <ul style="list-style-type: none"> -None to very limited operational impact, less than 4 hours <input type="checkbox"/> Major = 3 to 3.9 points <ul style="list-style-type: none"> -Loss of total airport operation, less than 2 hours -Loss of partial airport operation, less than 1 day (24-hours) <input type="checkbox"/> Hazardous = 4 to 4.9 points <ul style="list-style-type: none"> -Loss of total operation, 2 to 12 hours -Partial loss of operation, 48 hours or less <input type="checkbox"/> Catastrophic = 5 to 5.9 points <ul style="list-style-type: none"> -Loss of total operation, greater than 12 hours -Loss of partial operations, greater than 48 hours <p>PROBABILITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point <ul style="list-style-type: none"> -Almost impossible -Possibly only once in 10-100 years <input type="checkbox"/> Extremely Remote = 2 to 2.9 points <ul style="list-style-type: none"> -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points <ul style="list-style-type: none"> -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points <ul style="list-style-type: none"> -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points 	<p><u>Score</u></p>

<p>2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (NAVAIDS), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact</p>	<ul style="list-style-type: none"> -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <div style="text-align: right;"><u>Score</u></div> <p><input type="checkbox"/> Non Movement Area Marking/Lighting/Signage Impacted</p> <p>SEVERITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point -None to very limited operational impact, less than 1 hour <input type="checkbox"/> Minor = 2 to 2.9 points -None to very limited operational impact, less than 4 hours <input type="checkbox"/> Major = 3 to 3.9 points -Loss of total airport operation, less than 2 hours -Loss of partial airport operation, less than 1 day (24-hours) <input type="checkbox"/> Hazardous = 4 to 4.9 points -Loss of total operation, 2 to 12 hours -Partial loss of operation, 48 hours or less <input type="checkbox"/> Catastrophic = 5 to 5.9 points -Loss of total operation, greater than 12 hours -Loss of partial operations, greater than 48 hours <p>PROBABILITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point -Almost impossible -Possibly only once in 10-100 years <input type="checkbox"/> Extremely Remote = 2 to 2.9 points -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <div style="text-align: right;"><u>Score</u></div>
	<p><input type="checkbox"/> Access/Perimeter Road Impacted</p> <p>SEVERITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point -None to very limited operational impact, less than 1 hour <input type="checkbox"/> Minor = 2 to 2.9 points -None to very limited operational impact, less than 4 hours <input type="checkbox"/> Major = 3 to 3.9 points -Loss of total airport operation, less than 2 hours -Loss of partial airport operation, less than 1 day (24-hours) <input type="checkbox"/> Hazardous = 4 to 4.9 points -Loss of total operation, 2 to 12 hours -Partial loss of operation, 48 hours or less <input type="checkbox"/> Catastrophic = 5 to 5.9 points -Loss of total operation, greater than 12 hours -Loss of partial operations, greater than 48 hours <div style="text-align: right;"><u>Score</u></div>

2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (NAVAIDS), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
-Regularly expected to occur in the system
-Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
-Continuously expected to occur in the system
-Likely to occur once a day or multiple times per week

Score

Navigational Aids Impacted

SEVERITY

- Negligible = 1 to 1.9 point**
-None to very limited operational impact, less than 1 hour
- Minor = 2 to 2.9 points**
-None to very limited operational impact, less than 4 hour
- Major = 3 to 3.9 points**
-Loss of total airport operation, less than 2 hours
-Loss of partial airport operation, less than 1 day (24-hours)
- Hazardous = 4 to 4.9 points**
-Loss of total operation, 2 to 12 hours
-Partial loss of operation, 48 hours or less
- Catastrophic = 5 to 5.9 points**
-Loss of total operation, greater than 12 hours
-Loss of partial operations, greater than 48 hours

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
-Regularly expected to occur in the system
-Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
-Continuously expected to occur in the system
-Likely to occur once a day or multiple times per week

Score

Damage to Airport Equipment/Vehicles

2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (NAVAIDS), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact

SEVERITY

- Negligible = 1 to 1.9 point**
-None to minimal equipment loss less than 1 day out of service
- Minor = 2 to 2.9 points**
-None to minimal equipment loss less than 2 days out of service
- Major = 3 to 3.9 points**
-Equipment loss less than one week
- Hazardous = 4 to 4.9 points**
-Equipment loss less than 30 days
- Catastrophic = 5.5 points**
-Total loss of equipment

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
-Regularly expected to occur in the system
-Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
-Continuously expected to occur in the system
-Likely to occur once a day or multiple times per week

Score

Damage to Aircraft

SEVERITY

- Negligible = 1 to 1.9 point**
-None to minimal equipment loss less than 1 day out of service
- Minor = 2 to 2.9 points**
-None to minimal equipment loss less than 2 days out of service
- Major = 3 to 3.9 points**
-Equipment loss less than one week)
- Hazardous = 4 to 4.9 points**
-Equipment loss less than 30 days
- Catastrophic = 5 to 5.9 points**
-Total loss of equipment

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**

2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (NAVAIDS), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact

- Conceivable, but highly unlikely
- Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
- Unlikely, but possible to occur
- Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
- Regularly expected to occur in the system
- Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
- Continuously expected to occur in the system
- Likely to occur once a day or multiple times per week

Score

Damage to Tenant Equipment/Vehicles

SEVERITY

- Negligible = 1 to 1.9 point**
- None to minimal equipment loss less than 1 day out of service
- Minor = 2 to 2.9 points**
- None to minimal equipment loss less than 2 days out of service
- Major = 3 to 3.9 points**
- Equipment loss less than one week)
- Hazardous = 4 to 4.9 points**
- Equipment loss less than 30 days
- Catastrophic = 5.5 points**
- Total loss of equipment

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
- Almost impossible
- Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
- Conceivable, but highly unlikely
- Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
- Unlikely, but possible to occur
- Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
- Regularly expected to occur in the system
- Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
- Continuously expected to occur in the system
- Likely to occur once a day or multiple times per week

Score

Building Facilities Impacted

SEVERITY

2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (NAVAIDS), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact

- Negligible = 1 to 1.9 point**
-None to very limited operational impact, less than 1 hour
- Minor = 2 to 2.9 points**
-None to very limited operational impact, less than 4 hours
- Major = 3 to 3.9 points**
-Loss of total airport operation, less than 2 hours
-Loss of partial airport operation, less than 1 day (24-hours)
- Hazardous = 4 to 4.9 points**
-Loss of total operation, 2 to 12 hours
-Partial loss of operation, 48 hours or less
- Catastrophic = 5 to 5.9 points**
-Loss of total operation, greater than 12 hours
-Loss of partial operations, greater than 48 hours

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
-Regularly expected to occur in the system
-Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
-Continuously expected to occur in the system
-Likely to occur once a day or multiple times per week

Score

Services Impacted (fueling, utilities, aircraft support)

SEVERITY

- Negligible = 1 to 1.9 point**
-None to very limited operational impact, less than 1 hour
- Minor = 2 to 2.9 points**
-None to very limited operational impact, less than 4 hours
- Major = 3 to 3.9 points**
-Loss of total airport operation, less than 2 hours
-Loss of partial airport operation, less than 1 day (24-hours)
- Hazardous = 4 to 4.9 points**
-Loss of total operation, 2 to 12 hours
-Partial loss of operation, 48 hours or less
- Catastrophic = 5 to 5.9 points**
-Loss of total operation, greater than 12 hours
-Loss of partial operations, greater than 48 hours

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely

<p>2- Continuity of Operations: Threat to any disruption to airport operations including aircraft delays, loss of operation of a facility, runway, taxiway, ramp, navigational aids (NAVAIDS), buildings, equipment, ATC, roadways or any other infrastructure needed to maintain normal operations and damage that incurs an airport financial loss/impact</p>	<ul style="list-style-type: none"> <input type="checkbox"/> -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points <ul style="list-style-type: none"> -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points <ul style="list-style-type: none"> -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points <ul style="list-style-type: none"> -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <p style="text-align: right;">Score</p> <p><input type="checkbox"/> Terminal Impacted</p> <p>SEVERITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point <ul style="list-style-type: none"> -None to very limited operational impact, less than 1 hour <input type="checkbox"/> Minor = 2 to 2.9 points <ul style="list-style-type: none"> -None to very limited operational impact, less than 4 hours <input type="checkbox"/> Major = 3 to 3.9 points <ul style="list-style-type: none"> -Loss of total airport operation, less than 2 hours -Loss of partial airport operation, less than 1 day (24-hours) <input type="checkbox"/> Hazardous = 4 to 4.9 points <ul style="list-style-type: none"> -Loss of total operation, 2 to 12 hours -Partial loss of operation, 48 hours or less <input type="checkbox"/> Catastrophic = 5 to 5.9 points <ul style="list-style-type: none"> -Loss of total operation, greater than 12 hours -Loss of partial operations, greater than 48 hours <p style="text-align: right;">Score</p> <p>PROBABILITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point <ul style="list-style-type: none"> -Almost impossible -Possibly only once in 10-100 years <input type="checkbox"/> Extremely Remote = 2 to 2.9 points <ul style="list-style-type: none"> -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points <ul style="list-style-type: none"> -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points <ul style="list-style-type: none"> -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points <ul style="list-style-type: none"> -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <p style="text-align: right;">Score</p>
<p><input type="checkbox"/> 3 – Environmental: Threat to any impact either through a ground or air release that may potentially harm the current natural state. Impacts may include chemical, emissions, and bio hazard agents.</p>	<p><input type="checkbox"/> Water Supply Impacted</p> <p>SEVERITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point <ul style="list-style-type: none"> -No environmental impact <input type="checkbox"/> Minor = 2 to 2.9 points

3 – Environmental: Threat to any impact either through a ground or air release that may potentially harm the current natural state. Impacts may include chemical, emissions, and bio hazard agents

- Contained with none to limited impact
- Major = 3 to 3.9 points**
-Non-contained but manageable/mitigated within 1 day
- Hazardous = 4 to 4.9 points**
- Non-contained, resulting in environmental impact 1 to 30 days
- Catastrophic = 5 to 5.9 points**
-Non-contained, long term impact, great than 30 days

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
-Regularly expected to occur in the system
-Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
-Continuously expected to occur in the system
-Likely to occur once a day or multiple times per week

Score

Ground/Soil Impacted

SEVERITY

- Negligible = 1 to 1.9 point**
-No environmental impact
- Minor = 2 to 2.9 points**
-Contained with none to limited impact
- Major = 3 to 3.9 points**
-Non-contained but manageable/mitigated within 1 day
- Hazardous = 4 to 4.9 points**
- Non-contained, resulting in environmental impact 1 to 30 days
- Catastrophic = 5 to 5.9 points**
-Non-contained, long term impact, great than 30 days

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
-Regularly expected to occur in the system
-Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**

Score

3 – Environmental: Threat to any impact either through a ground or air release that may potentially harm the current natural state. Impacts may include chemical, emissions, and bio hazard agents

- Continuously expected to occur in the system
- Likely to occur once a day or multiple times per week

Air Quality Impacted

SEVERITY

- Negligible = 1 to 1.9 point**
-No environmental impact
- Minor = 2 to 2.9 points**
-Contained with none to limited impact
- Major = 3 to 3.9 points**
-Non-contained but manageable/mitigated within 1 day
- Hazardous = 4 to 4.9 points**
- Non-contained, resulting in environmental impact 1 to 30 days
- Catastrophic = 5 to 5.9 points**
-Non-contained, long term impact, great than 30 days

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
-Regularly expected to occur in the system
-Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
-Continuously expected to occur in the system
-Likely to occur once a day or multiple times per week

Score

Wildlife Impacted

SEVERITY

- Negligible = 1 to 1.9 point**
-No environmental impact
- Minor = 2 to 2.9 points**
-Contained with none to limited impact
- Major = 3 to 3.9 points**
-Non-contained but manageable/mitigated within 1 day
- Hazardous = 4 to 4.9 points**
- Non-contained, resulting in environmental impact 1 to 30 days
- Catastrophic = 5 to 5.9 points**
-Non-contained, long term impact, great than 30 days

Score

	<p><u>PROBABILITY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point -Almost impossible -Possibly only once in 10-100 years <input type="checkbox"/> Extremely Remote = 2 to 2.9 points -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <p style="text-align: right;"><u>Score</u></p>
<p><input type="checkbox"/> 4 – Budget: Threat to the annual budget for the airport. The consequence results in an unexpected expense</p>	<p><input type="checkbox"/> Airport Operating Budget</p> <p><u>SEVERITY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Negligible = 1 to 1.9 point -None to minimal budget impact <input type="checkbox"/> Minor = 2 to 2.9 points -Minimal budget impact <input type="checkbox"/> Major = 3 to 3.9 points -Moderate budget impact <input type="checkbox"/> Hazardous = 4 to 4.9 points - Serious budget impact <input type="checkbox"/> Catastrophic = 5 to 5.9 points -Grave budget impact <p style="text-align: right;"><u>Score</u></p> <p><u>PROBABILITY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Extremely Improbable = 1 to 1.9 point -Almost impossible -Possibly only once in 10-100 years <input type="checkbox"/> Extremely Remote = 2 to 2.9 points -Conceivable, but highly unlikely -Possibly once in every 5 to less than 10 years <input type="checkbox"/> Remote = 3 to 3.9 points -Unlikely, but possible to occur -Possibly once a year or multiple times from 1 year to less than 5 years <input type="checkbox"/> Probable = 4 to 4.9 points -Regularly expected to occur in the system -Likely to occur multiple times per year or once per month <input type="checkbox"/> Frequent = 5 to 5.9 points -Continuously expected to occur in the system -Likely to occur once a day or multiple times per week <p style="text-align: right;"><u>Score</u></p> <p><input type="checkbox"/> CIP Project</p>

4 – Budget: Threat to the annual budget for the airport. The consequence results in an unexpected expense

SEVERITY

- Negligible = 1 to 1.9 point**
-None to minimal budget impact
- Minor = 2 to 2.9 points**
-Minimal budget impact
- Major = 3 to 3.9 points**
-Moderate budget impact
- Hazardous = 4 to 4.9 points**
- Serious budget impact
- Catastrophic = 5 to 5.9 points**
-Grave budget impact

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years
- Probable = 4 to 4.9 points**
-Regularly expected to occur in the system
-Likely to occur multiple times per year or once per month
- Frequent = 5 to 5.9 points**
-Continuously expected to occur in the system
-Likely to occur once a day or multiple times per week

Score

Tenant Budget

SEVERITY

- Negligible = 1 to 1.9 point**
-None to minimal budget impact
- Minor = 2 to 2.9 points**
-Minimal budget impact
- Major = 3 to 3.9 points**
-Moderate budget impact
- Hazardous = 4 to 4.9 points**
- Serious budget impact
- Catastrophic = 5 to 5.9 points**
-Grave budget impact

Score

PROBABILITY

- Extremely Improbable = 1 to 1.9 point**
-Almost impossible
-Possibly only once in 10-100 years
- Extremely Remote = 2 to 2.9 points**
-Conceivable, but highly unlikely
-Possibly once in every 5 to less than 10 years
- Remote = 3 to 3.9 points**
-Unlikely, but possible to occur
-Possibly once a year or multiple times from 1 year to less than 5 years

	<ul style="list-style-type: none"><input type="checkbox"/> Probable = 4 to 4.9 points<ul style="list-style-type: none">-Regularly expected to occur in the system-Likely to occur multiple times per year or once per month<input type="checkbox"/> Frequent = 5 to 5.9 points<ul style="list-style-type: none">-Continuously expected to occur in the system-Likely to occur once a day or multiple times per week <div data-bbox="1370 254 1487 344" style="background-color: #cccccc; padding: 5px; text-align: center;"><u>Score</u></div>
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Part 2: Calculate Hazard Consequences by Severity and Probability

- a) Add up each score for hazard category by consequence, for Severity and average by dividing total score by number of consequences to get an average score
- b) Add up each score for hazard category by consequence, for Probability and average by dividing total score by number of consequences to get an average score
- c) Then add each category scores for Severity and divide by 4 and Probability and divide by 4
- d) Plot final scores on Risk Matrix Chart next page

Severity Scores			
	Scores	# of Consequences	Scores ÷ Consequences
People			
COOP			
Environment			
Budget			
Total			
Total divided by 4			

Probability Scores			
	Scores	# of Consequences	Scores ÷ Consequences
People			
COOP			
Environment			
Budget			
Total			
Total divided by 4			

Part 3 Plot the Hazard Consequences by Severity and Probability

Risk Matrix Severity vs. Probability

5	Catastrophic					
4	Hazardous					
3	Major					
2	Minor					
1	Insignificant					
		<i>Extremely Improbable</i>	<i>Extremely Remote</i>	<i>Remote</i>	<i>Probable</i>	<i>Frequent</i>
		<i>Should never occur</i>	<i>dismiss</i>	<i>Should be</i>	<i>May occur</i>	<i>May occur often</i>
		I	II	III	IV	V

- Unacceptable risk by threat
- Reduced risk of casualties by threats
- Acceptable mitigation of risk by threat

Signed off by:

Full Name:	
Signature	
Date:	