THREAT VECTORS		LIKELIHOC	DD		IMPACT		
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Completed by: Cyber Security Expert 1. Data extracted.	what perceithink the threalized ANI effect? Province maximum vof values as be realized affect in [methe time but	ext of a Federa ntage of the til reat would be D have an obs ide minimum "I think this the AND have an o ost likely] pero t this estimate imum] % and a	me do you most likely ervable and et this range hreat would observeable cent (%) of	assuming the what perce it have a lov	ext of a Federa ne threat is re ntage of the t w, medium, a umbers shoul	alized, ime would nd high	
		%." (numbers	_				
Voting Step: REGISTRATION	Minimum	Most Likely	Maximum	Low	Medium	High	
ATTACKS							
INSIDER ATTACKS							
Attacks Against VRDB	10	15	30	70	20	10	
Types of threat vectors: Intentional modification of registration records; Intentional destruction of registration records; Intentional addition of fake registration records; VRDB intentional crash;							
Attacks to Voter's Assistance	10	15	20	60	30	10	
Types of threat vectors: Intentional corruption by malicious insiders of information provided to voters (omission, false or incomplete statement, outdated information);							
Attacks to Voting Access	5	10	15	20	40	40	
Types of threat vectors: Intentional failure at LEO to mail or misaddress registration form and instructions; Intentional failure at LEO to mail or misaddress registration rejections; Intentional addition of confusing language on registration form and instructions;							
Attacks by Denial of Service	5	10	15	60	30	10	
Types of threat vectors: Intentional disruption of registration activities at LEO; Intentional disruption of transmission of registration materials; Intentional disruption of voter's ability to register;							
Attacks Against Registration Forms and Instructions	5	10	15	60	30	10	
Types of threat vectors: Intentional modification at LEO of registration forms and instructions; Intentional destruction at LEO of registration forms and instructions; Intentional addition at LEO of fake registration forms and instructions;							
Attacks During Transmission of Registration Forms and Instructions	5	10	15	60	30	10	
Types of threat vectors: Intentional modification of registration forms and instructions during their transmission from LEO to the voters; Intentional destruction of registration forms and instructions during their transmission from LEO to the voters; Intentional addition of fake registration forms and instructions during transmission from LEO to the voters;							

REAT VECTORS		LIKELIHOC	DD		IMPACT	
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component completed by: Cyber Security spert 1. Data extracted.	what percei think the th realized ANI effect? Prov maximum v of values as be realized effect in [mithe time but low as [mini	ext of a Federa ntage of the ti reat would be D have an obs ide minimum alues. Interpre "I think this ti AND have an o ost likely] pere t this estimate imum] % and a %." (numbers n to 100)	me do you most likely ervable and et this range hreat would observeable cent (%) of e could be as as high as	assuming the what perce it have a low	ext of a Feder he threat is re ntage of the t w, medium, a umbers shoul	alized, ime would nd high
Voting Step: REGISTRATION	Minimum	Most Likely	Maximum	Low	Medium	High
Attacks During Transmission of Completed Registration Packets	10	15	20	60	30	10
Types of threat vectors: Intentional modification of completed registration packets during their transmission from the voters to the LEO; Intentional destruction of completed registration packets during their transmission from the voters to the LEO; Intentional addition of fake completed registration packets during transmission from the voters to the LEO;						
Attacks Against Processing of Completed Registration Packets	5	10	15	20	40	40
Types of threat vectors: Intentional modification of completed registration packets at the LEO; Intentional destruction of completed registration packets at the LEO; Intentional addition of fake completed registration packets at the LEO;						
Attacks During Transmission of Registration Rejections	5	10	15	60	30	10
Types of threat vectors: Intentional modification of registration rejections during their transmission from LEO to the voters; Intentional destruction of registration rejections during their transmission from LEO to the voters; Intentional addition of fake registration rejections during transmission from LEO to the voters;						
JTSIDER ATTACKS						
Attacks Against Voter's Assistance	10	15	25	60	30	10
Types of threat vectors: Intentional corruption by malicious outsiders of information provided to voters (omission, false or incomplete statement, outdated information);						
Attacks Against Marking of Registration Forms	10	15	25	70	20	10
Types of threat vectors: Coerced registration; Masqueraded registration; Vote buying; Pay voter not to vote; Ineligible registration;						

THREAT VECTORS		LIKELIHOC	D		IMPACT			
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component	what perce think the th realized AN effect? Prov maximum v	ext of a Federa ntage of the ti- reat would be D have an obs vide minimum values. Interpre	me do you most likely ervable and et this range	assuming th	In the context of a Federal election, assuming the threat is realized, what percentage of the time would			
Completed by: Cyber Security Expert 1. Data extracted.	be realized effect in [m the time bu low as [min	AND have an oost likely] peroot this estimate imum] % and of %." (numbers	observeable cent (%) of could be as as high as		it have a low, medium, and high impact? (numbers should sum to 100)			
Voting Step: REGISTRATION	Minimum	Most Likely	Maximum	Low	Medium	High		
UNINTENTIONAL DISRUPTIONS								
ERRORS AT LOCAL ELECTION OFFICE								
Errors in VRDB	15	20	30	60	30	10		
Types of threat vectors: Accidental modification of registration records; Accidental loss of registration records; Accidental destruction of registration records; Accidental addition of erroneous registration records; VRDB accidental crash;								
Errors in Voter's Assistance	15	20	30	60	30	10		
Types of threat vectors: Erroneous information provided to voters (omission, false or incomplete statement, outdated information);								
Errors in Registration Forms and Instructions	15	20	30	60	30	10		
Types of threat vectors: Accidental modification at LEO of registration forms and instructions; Accidental loss at LEO of registration forms and instructions; Accidental destruction at LEO of registration forms and instructions; Accidental addition at LEO of erroneous registration forms and instructions;								
Errors in Processing Completed Registration Packets	15	20	30	60	30	10		
Types of threat vectors: Accidental modification of completed registration packets at the LEO; Accidental loss of completed registration packets at the LEO; Accidental destruction of completed registration packets at the LEO;	,							
ERRORS DURING TRANSMISSION OF ELECTION MATERIALS								
Errors in Transmission of Registration Forms and Instructions	15	20	30	60	30	10		
Types of threat vectors: Accidental modification of registration forms and instructions during their transmission from LEO to the voters; Accidental loss of registration forms and instructions during their transmission from LEO to the voters; Accidental destruction of registration forms and instructions during their transmission from LEO to the voters;								

THREAT VECTORS		LIKELIHOO	D		IMPACT	
restricted to <u>paper ballots transmitted by</u> <u>postal mail</u> , with <u>no electronic component</u>	what percer think the thi realized ANI effect? Prov maximum vi of values as be realized i effect in [mo the time but low as [mini	ext of a Federa trage of the tile reat would be to have an obse in the pro- "I think this the AND have an obse tilkely] pero- tithis estimate mum] % and a %." (numbers it to 100)	me do you most likely ervable and et this range breat would observeable eent (%) of could be as as high as	assuming the what percent it have a love	ext of a Feder ne threat is re ntage of the t w, medium, a umbers shoul	alized, ime would nd high
Voting Step: REGISTRATION	Minimum	Most Likely	Maximum	Low	Medium	High
Errors in Transmission of Completed Registration Packets	10	15	20	70	20	10
Types of threat vectors: Accidental modification of completed registration packets during their transmission from the voters to the LEO; Accidental loss of completed registration packets during their transmission from the voters to the LEO; Accidental destruction of completed registration packets during their transmission from the voters to the LEO;						
Errors in Transmission of Registration Rejections	10	15	20	70	20	10
Types of threat vectors: Accidental modification of registration rejections during their transmission from LEO to the voters; Accidental loss of registration rejections during their transmission from LEO to the voters; Accidental destruction of registration rejections during their transmission from LEO to the voters;						

THREAT VECTORS		LIKELIHOO	D		IMPACT	
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Completed by: Cyber Security Expert 1. Data extracted.	what perceithink the threalized AN effect? Provmaximum vof values as be realized effect in [m. the time bu	ext of a Federa ntage of the til reat would be D have an obs' ride minimum alues. Interpre "I think this th AND have an c ost likely] perc t this estimate	me do you most likely ervable and et this range preat would observeable eent (%) of	assuming the what percent it have a low	ext of a Feder ne threat is re ntage of the t w, medium, a umbers shoul	alized, time would nd high
Impere 1. Data extracted.		imum] % and a %." (numbers n to 100)	Ü			
Voting Step: REGISTRATION	Minimum	Most Likely	Maximum	Low	Medium	High
ERRORS AT VOTER'S LOCATION						
Errors in Voting Access	20	30	40	35	35	30
Types of threat vectors: Mail service nonexistent, irregular and/or unreliable; Ease-of-use and clarity of registration form and instructions;						
Errors in Obtaining Voter's Assistance	20	30	40	60	30	10
Types of threat vectors: Contact wrong LEO; Being unaware of voter's assistance resources; Putting trust in unvetted third-party resources;						
Errors in Registration Application	20	30	40	60	30	10
Types of threat vectors: Incorrect contact information provided to LEO; Registration packet incorrectly or illegibly completed/signed; Registration form lost or damaged; Registration packet incorrectly transmitted to LEO;						
ACCIDENTAL DISRUPTIONS						
Disruptions by Natural Events	10	20	30	50	30	20
Types of threat vectors: Weather-related; Earthquake; Outbreak;						
Disruptions by Environmental Events	10	20	30	50	30	20
Types of threat vectors: Fire; Spill; Flooding;						
Disruptions by Human-Created Collateral Events	10	20	30	50	30	20
Types of threat vectors: Technical failure; Labor-related; Terrorism;						

REAT VECTORS		LIKELIHOC	DD		IMPACT	
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component completed by: Cyber Security expert 1. Data extracted.	what perceithink the threalized AN effect? Proving a values as be realized effect in [m the time bullow as [min]	ext of a Federa ntage of the ti ireat would be D have an obs vide minimum values. Interpr "I think this t AND have an AND have an tit this estimate imum] % and %." (numbers n to 100)	ime do you e most likely servable a and et this range hreat would observeable cent (%) of e could be as as high as	assuming the what perce it have a lo	ext of a Fedei he threat is ro ntage of the w, medium, a umbers shou	ealized, time would and high
Voting Step: ABSENTEE BALLOT REQUEST	Minimum	Most Likely	Maximum	Low	Medium	High
ACKS						
Attacks Against VRDB	10	15	30	35	35	30
Types of threat vectors: Intentional modification of registration records; Intentional destruction of registration records; Intentional addition of fake registration records; VRDB intentional crash;						
Attacks to Voter's Assistance	10	15	20	70	20	10
Types of threat vectors: Intentional corruption by malicious insiders of information provided to voters (omission, false or incomplete statement, outdated information);					•	
Attacks to Voting Access	5	10	15	70	20	10
Types of threat vectors: Intentional failure at LEO to mail or misaddress absentee ballot request form and instructions; Intentional failure at LEO to mail or misaddress absentee ballots; Intentional addition of confusing language on absentee ballot request form and instructions; Intentional addition of confusing language on instructions for marked ballot return;						
Attacks by Denial of Service	5	10	15	60	30	10
Types of threat vectors: Intentional disruption of absentee ballot request activities at LEO; Intentional disruption of transmission of absentee ballot request materials; Intentional disruption of voter's ability to request an absentee ballot;						
Attacks Against Absentee Ballot Request Forms and Instructions	5	10	15	60	30	10
Types of threat vectors: Intentional modification at LEO of absentee ballot request forms and instructions; Intentional destruction at LEO of absentee ballot request forms and instructions; Intentional addition at LEO of fake absentee ballot request forms and instructions;						

REAT VECTORS		LIKELIHOC	DD		IMPACT	
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component ompleted by: Cyber Security xpert 1. Data extracted.	what perce think the th realized AN effect? Prov maximum v of values as be realized effect in [m the time bu low as [min	ext of a Federa ntage of the ti reat would be D have an obs vide minimum ralues. Interpr "I think this t AND have and ost likely] per t this estimate imum] % and %." (numbers n to 100)	me do you e most likely servable and et this range hreat would observeable cent (%) of e could be as as high as	assuming the what perce it have a low	ext of a Fedei he threat is ro ntage of the w, medium, a umbers shou	ealized, time would and high
Voting Step: ABSENTEE BALLOT REQUEST	Minimum	Most Likely	Maximum	Low	Medium	High
Attacks During Transmission of Absentee Ballot Request Forms and Instructions	2	5	10	70	20	10
Types of threat vectors: Intentional modification of absentee ballot request forms and instructions during their transmission from LEO to the voters; Intentional destruction of absentee ballot request forms and instructions during their transmission from LEO to the voters; Intentional addition of fake absentee ballot request forms and instructions during transmission from LEO to the voters;						
Attacks During Transmission of Completed Absentee Ballot Request Packets	2	5	10	60	30	10
Types of threat vectors: Intentional modification of completed absentee ballot request packets during their transmission from the voters to the LEO; Intentional destruction of completed absentee ballot request packets during their transmission from the voters to the LEO; Intentional addition of fake completed absentee ballot request packets during transmission from the voters to the LEO;						
Attacks Against Processing of Completed Absentee Ballot Request Packets	5	10	15	50	30	20
Types of threat vectors: Intentional modification of completed absentee ballot request packets at the LEO; Intentional destruction of completed absentee ballot request packets at the LEO; Intentional addition of fake completed absentee ballot request packets at the LEO;						
Attacks During Transmission of Rejections of Absentee Ballot Requests	5	10	15	70	20	10
Types of threat vectors: Intentional modification of rejections of absentee ballot requests during their transmission from LEO to the voters; Intentional destruction of rejections of absentee ballot requests during their transmission from LEO to the voters; Intentional addition of fake rejections of absentee ballot requests during transmission from LEO to the voters;						
Attacks Against Absentee Ballots and Instructions	5	10	15	70	20	10
Types of threat vectors: Intentional modification at LEO of absentee ballots and instructions; Intentional destruction at LEO of absentee ballots and instructions; Intentional addition at LEO of fake absentee ballots and instructions;						

THREAT VECTORS		LIKELIHOC	D		IMPACT			
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Completed by: Cyber Security Expert 1. Data extracted.	what percer think the th realized ANI effect? Prov maximum v. of values as be realized effect in [mo the time but low as [mini	ext of a Federa ntage of the ti reat would be D have an obs ide minimum alues. Interpr "I think this t AND have and ost likely] per t this estimate mum] % and %." (numbers n to 100)	me do you most likely ervable and et this range hreat would observeable cent (%) of e could be as as high as	assuming the what perce it have a lo	ext of a Feder ne threat is re ntage of the (w, medium, a umbers shou	ealized, time would and high		
Voting Step: ABSENTEE BALLOT REQUEST	Minimum	Most Likely	Maximum	Low	Medium	High		
OUTSIDER ATTACKS								
Attacks Against Voter's Assistance	10	15	20	70	20	10		
Types of threat vectors: Intentional corruption by malicious outsiders of information provided to voters (omission, false or incomplete statement, outdated information);								
Attacks by Denial of Service	10	15	20	70	20	10		
Types of threat vectors: Intentional disruption of absentee ballot request activities at LEO; Intentional disruption of transmission of absentee ballot request materials; Intentional disruption of voter's ability to request an absentee ballot;								
Attacks Against Marking of Absentee Ballot Requests	10	15	20	70	20	10		
Types of threat vectors: Coerced absentee ballot request; Masqueraded absentee ballot request; Vote buying; Pay voter not to vote; Ineligible absentee ballot request;								
UNINTENTIONAL DISRUPTIONS								
ERRORS AT LOCAL ELECTION OFFICE								
Errors in VRDB	10	15	20	70	20	10		
Types of threat vectors: Accidental modification of registration records; Accidental loss of registration records; Accidental destruction of registration records; Accidental addition of erroneous registration records; VRDB accidental crash;					-			
Errors in Voter's Assistance	15	20	25	80	15	5		
Types of threat vectors: Erroneous information provided to voters (omission, false or incomplete statement, outdated information);								
Errors in Absentee Ballot Request Forms and Instructions	10	15	20	80	15	5		
Types of threat vectors: Accidental modification at LEO of absentee ballot request forms and instructions; Accidental loss at LEO of absentee ballot request forms and instructions; Accidental addition at LEO of absentee ballot request forms and instructions; Accidental addition at LEO of erroneous absentee ballot request forms and instructions;								

REAT VECTORS		LIKELIHOO	DD		IMPACT	
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component ompleted by: Cyber Security xpert 1. Data extracted.	what perce think the th realized AN effect? Prov maximum v of values as be realized effect in [m the time bu low as [min	ext of a Federa ntage of the ti treat would be D have an ob- vide minimum values. Interpr "I think this t AND have an AND have an ost likely] per t this estimat imum] % and %." (number n to 100)	ime do you e most likely servable a and ret this range chreat would observeable ccent (%) of e could be as as high as	assuming to what perce it have a lo	ext of a Fedei he threat is ro ntage of the w, medium, a umbers shou	ealized, time would and high
Voting Step: ABSENTEE BALLOT REQUEST	Minimum	Most Likely	Maximum	Low	Medium	High
Errors in Processing Completed Absentee Ballot Request Packets	15	20	25	80	15	5
Types of threat vectors: Accidental modification of completed absentee ballot request packets at the LEO; Accidental loss of completed absentee ballot request packets at the LEO; Accidental destruction of completed absentee ballot request packets at the LEO;		-	•		_	
Errors in Absentee Ballots and Instructions	10	15	20	80	15	5
Types of threat vectors: Accidental modification at LEO of absentee ballots and instructions; Accidental loss at LEO of absentee ballots and instructions; Accidental destruction at LEO of absentee ballots and instructions; Accidental addition at LEO of erroneous absentee ballots and instructions;						
RRORS DURING TRANSMISSION OF ELECTION MATERIALS						
Errors in Transmission of Absentee Ballot Request Forms and Instructions	5	10	15	80	15	5
Types of threat vectors: Accidental modification of absentee ballot request forms and instructions during their transmission from LEO to the voters; Accidental loss of absentee ballot request forms and instructions during their transmission from LEO to the voters; Accidental destruction of absentee ballot request forms and instructions during their transmission from LEO to the voters;						
Errors in Transmission of Completed Absentee Ballot Request Packets	5	10	15	80	15	5
Types of threat vectors: Accidental modification of completed absentee ballot request packets during their transmission from the voters to the LEO; Accidental loss of completed absentee ballot request packets during their transmission from the voters to the LEO; Accidental destruction of completed absentee ballot request packets during their transmission from the voters to the LEO;					•	
Errors in Transmission of Rejections of Absentee Ballot Requests	5	10	15	80	15	5
Types of threat vectors: Accidental modification of rejections of absentee ballot requests during their transmission from LEO to the voters; Accidental loss of rejections of absentee ballot requests during their transmission from LEO to the voters; Accidental destruction of rejections of absentee ballot requests during their transmission from LEO to the voters;						
RRORS AT VOTER'S LOCATION						
Errors in Voting Access	20	25	30	80	15	5
Types of threat vectors: Mail service nonexistent, irregular and/or unreliable; Ease-of-use and clarity of absentee ballot request form and instructions;						

THREAT VECTORS		LIKELIHOC	DD		IMPACT		
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component	what percenthink the threalized ANI effect? Prov	xt of a Federa ntage of the ti reat would be D have an obs ide minimum alues. Interpr	me do you most likely ervable and	you likely e In the context of a Federal election, assuming the threat is realized,			
Completed by: Cyber Security Expert 1. Data extracted.	of values as be realized a effect in [mo the time bu low as [min	"I think this to AND have an object likely] perot to this estimate (mum] % and %." (numbers	hreat would observeable cent (%) of e could be as as high as	what percentage of the time would it have a low, medium, and high impact? (numbers should sum to 100)			
Voting Step: ABSENTEE BALLOT REQUEST	Minimum	Most Likely	Maximum	Low	Medium	High	
Errors in Obtaining Voter's Assistance	30	35	40	70	20	10	
Types of threat vectors: Contact wrong LEO; Being unaware of voter's assistance resources; Putting trust in unvetted third-party resources;							
Errors in Absentee Ballot Requests	20	25	30	70	20	10	
Types of threat vectors: Incorrect contact information provided to LEO; Accidental loss of absentee ballot request form; Absentee ballot request packet incorrectly or illegibly completed/signed; Absentee ballot request form lost or damaged; Absentee ballot request packet incorrectly transmitted to LEO;							
ACCIDENTAL DISRUPTIONS							
Disruptions by Natural Events	10	15	20	80	15	5	
Types of threat vectors: Weather-related; Earthquake; Outbreak;							
Disruptions by Environmental Events	5	10	15	70	20	10	
Types of threat vectors: Fire; Spill; Flooding;							
Disruptions by Human-Created Collateral Events	15	20	30	60	30	10	
Types of threat vectors: Technical failure; Labor-related; Terrorism;							

THREAT VECTORS		LIKELIHOO	D	IMPACT					
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Completed by: Cyber Security Expert 1. Data extracted.	what percer think the thi realized ANI effect? Prov maximum vi of values as be realized i effect in [mo the time but low as [mini	xt of a Federa ntage of the til reat would be D have an obs ide minimum alues. Interpre "I think this ti AND have an o ost likely] pero t this estimate mum] % and a %." (numbers n to 100)	me do you most likely ervable and et this range hreat would observeable cent (%) of e could be as as high as	assuming the what percent it have a love	In the context of a Federal election, assuming the threat is realized, what percentage of the time would it have a low, medium, and high impact? (numbers should sum to 100)				
Voting Step: ABSENTEE BALLOT DELIVERY	Minimum	Most Likely	Maximum	Low	Medium	High			
ATTACKS									
INSIDER ATTACKS									
Attacks by Denial of Service	10	15	20	60	30	10			
Types of threat vectors: Intentional disruption of transmission of absentee ballots;									
Attacks During Transmission of Absentee Ballot and Instructions	5	10	15	70	20	10			
Types of threat vectors: Intentional modification of absentee ballots and instructions during their transmission from LEO to the voters; Intentional destruction of absentee ballots and instructions during their transmission from LEO to the voters; Intentional addition of fake absentee ballots and instructions during transmission from LEO to the voters;									
OUTSIDER ATTACKS									
Attacks by Denial of Service	5	10	15	70	20	10			
Types of threat vectors: Intentional disruption of transmission of absentee ballots;									
UNINTENTIONAL DISRUPTIONS									
ERRORS DURING TRANSMISSION OF ELECTION MATERIALS									
Errors in Transmission of Absentee Ballot and Instructions	5	10	15	70	20	10			
Types of threat vectors: Accidental modification of absentee ballots and instructions during their transmission from LEO to the voters; Accidental loss of absentee ballots and instructions during their transmission from LEO to the voters; Accidental destruction of absentee ballots and instructions during their transmission from LEO to the voters;									
ACCIDENTAL DISRUPTIONS									
Disruptions by Natural Events	10	15	20	80	15	5			
Types of threat vectors: Weather-related; Earthquake; Outbreak;									

THREAT VECTORS		IKELIHOO	D	IMPACT					
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Completed by: Cyber Security Expert 1. Data extracted.	what percer think the thi realized ANI effect? Prov maximum vi of values as be realized / effect in [mo the time but low as [mini	ext of a Federal stage of the tirect would be D have an obst ide minimum alues. Interpre "I think this th NND have an obst likely] perce this estimate mum] % and a %." (numbers i to 100)	me do you most likely ervable and et this range areat would observeable eent (%) of could be as as high as	In the context of a Federal election, assuming the threat is realized, what percentage of the time would it have a low, medium, and high impact? (numbers should sum to 100)					
Voting Step: ABSENTEE BALLOT DELIVERY	Minimum	Most Likely	Maximum	Low	Medium	High			
Disruptions by Environmental Events	10	15	20	80	15	5			
Types of threat vectors: Fire; Spill; Flooding;									
Disruptions by Human-Created Collateral Events	10	15	20	80	15	5			
Types of threat vectors: Technical failure; Labor-related; Terrorism;									

THREAT VECTORS	I	LIKELIHOO	D		IMPACT				
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Completed by: Cyber Security Expert 1. Data extracted.	what percer think the thine realized ANI effect? Proving maximum violation of of values as be realized a effect in [months] the time but low as [mini	ext of a Federa ntage of the tir reat would be D have an obstide minimum alues. Interpre "I think this the AND have an cost likely] perce t this estimate imum] % and a %." (numbers n to 100)	me do you most likely ervable and et this range hreat would observeable eent (%) of e could be as as high as	assuming the what percent it have a love	the context of a Federal election, suming the threat is realized, nat percentage of the time would nave a low, medium, and high pact? (numbers should sum to 0)				
Voting Step: BALLOT MARKING	Minimum	Most Likely	Maximum	Low	Medium	High			
ATTACKS									
OUTSIDER ATTACKS									
Attacks Against Marking Absentee Ballots and Forms	15	20	25	60	30	10			
Types of threat vectors: Coerced vote; Masqueraded vote; Vote buying; Pay voter not to vote; Ineligible vote;									
UNINTENTIONAL DISRUPTIONS									
ERRORS AT VOTER'S LOCATION									
Errors in Voting Access	15	20	25	70	20	10			
Types of threat vectors: Mail service nonexistent, irregular and/or unreliable; Ease-of-use and clarity of absentee ballot and instructions;									
Errors in Obtaining Voter's Assistance	25	30	35	60	30	10			
Types of threat vectors: Contact wrong LEO; Being unaware of voter's assistance resources; Putting trust in unvetted third-party resources;									
Errors in Absentee Ballot Marking	35	40	45	70	20	10			
Types of threat vectors: Marked ballot packet incorrectly or illegibly completed/signed; Absentee ballot lost or damaged; Marked ballot packet incorrectly transmitted to LEO; Marked ballot packet not transmitted to LEO;									
ACCIDENTAL DISRUPTIONS									
Disruptions by Natural Events	10	15	20	80	15	5			
Types of threat vectors: Weather-related; Earthquake; Outbreak;									
Disruptions by Environmental Events	10	15	20	80	15	5			
Types of threat vectors: Fire; Spill; Flooding;									

THREAT VECTORS		LIKELIHOC	D		IMPACT	
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Completed by: Cyber Security Expert 1. Data extracted.	what percentage of the time do you think the threat would be most likely realized AND have an observable effect? Provide minimum and maximum values. Interpret this range of values as "I think this threat would be realized AND have an observeable effect in [most likely] percent (%) of the time but this estimate could be as low as [minimum] % and as high as					ealized, time would and high
	need to sun	%." (numbers n to 100)	DO NOT			
Voting Step: BALLOT MARKING	Minimum	Most Likely	Maximum	Low	Medium	High
Disruptions by Human-Created Collateral Events	10	15	20	80	15	5
Types of threat vectors: Technical failure; Labor-related; Terrorism;						

THREAT VECTORS	ı	.IKELIHOO)D		IMPACT		
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component	In the context of a Federal election, what percentage of the time do you think the threat would be most likely realized AND have an observable effect? Provide minimum and maximum values. Interpret this range of values as "I think this threat would it have a low, medium				ne threat is re ntage of the t	alized, ime would	
Completed by: Cyber Security	effect in [m	ost likely] pe	observeable rcent (%) of te could be as	it have a low, medium, and high impact? (numbers should sum to 100)			
Expert 1. Data extracted.		imum] % and %." (numbei 1 to 100)	Ū				
Voting Step: MARKED BALLOT RETURN	Minimum Most Likely Maximum			Low	Medium	High	
ATTACKS							
INSIDER ATTACKS							
Attacks by Denial of Service	15	20	25	80	15	5	
Types of threat vectors: Intentional disruption of transmission of marked ballots from voter to LEO;							
Attacks During Transmission of Marked Ballots Packets	5	10	15	80	15	5	
Types of threat vectors: Intentional modification of marked ballot packets during their transmission from LEO to the voters; Intentional destruction of marked ballot packets during their transmission from LEO to the voters; Intentional addition of fake marked ballot packets during transmission from LEO to the voters;							
OUTSIDER ATTACKS							
Attacks by Denial of Service	10	15	20	80	15	5	
Types of threat vectors: Intentional disruption of transmission of marked ballots;							
UNINTENTIONAL DISRUPTIONS							
ERRORS DURING TRANSMISSION OF ELECTION MATERIALS							
Errors in Transmission of Marked Ballot Packets	10	15	20	80	15	5	
Types of threat vectors: Accidental modification of marked ballot packets during their transmission from LEO to the voters; Accidental loss of marked ballot packets during their transmission from LEO to the voters; Accidental destruction of marked ballot packets during their transmission from LEO to the voters;							
ACCIDENTAL DISRUPTIONS							
Disruptions by Natural Events	10	15	20	70	20	10	
Types of threat vectors: Weather-related; Earthquake; Outbreak;							

THREAT VECTORS	L	IKELIHOC	D	IMPACT					
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Completed by: Cyber Security Expert 1. Data extracted.	what percer think the thi realized ANI effect? Prov maximum vi of values as be realized A effect in [mo	reat would be a beginning the minimum alues. Interport think this the analyst likely] per this estimat mum] % and %." (number	ime do you e most likely servable a and ret this range threat would observeable reent (%) of e could be as as high as	o you t likely ole In the context of a Federal ele assuming the threat is realized what percentage of the time v it have a low, medium, and his impact? (numbers should sun 100)					
Voting Step: MARKED BALLOT RETURN	Minimum	Most Likely	Maximum	Low	Medium	High			
Disruptions by Environmental Events	10	15	20	70	20	10			
Types of threat vectors: Fire; Spill; Flooding;									
Disruptions by Human-Created Collateral Events	10	15	20	70	20	10			
Types of threat vectors: Technical failure; Labor-related; Terrorism;									

THREAT VECTORS		LIKELIHOC	DD		IMPACT		
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component	what perce think the the realized AN effect? Pro- maximum v	ext of a Federa ntage of the ti nreat would be ID have an obs vide minimum values. Interpr s "I think this t	me do you e most likely servable and et this range	In the context of a Federal electic assuming the threat is realized,			
Completed by: Cyber Security Expert 1. Data extracted.	be realized effect in [m the time bu low as [min [maximum]	AND have an open ost likely] per out this estimate imum] % and %." (numbers	observeable cent (%) of e could be as as high as	it have a low, medium, and high impact? (numbers should sum to 100)			
Voting Step: RETURNED BALLOT PROCESSING & TABULATION	need to sum to 100) Minimum Most Likely Maximum			Low	Medium	High	
ATTACKS							
INSIDER ATTACKS							
Attacks Against VRDB	10	15	20	80	15	5	
Types of threat vectors: Intentional modification of registration records; Intentional destruction of registration records; Intentional addition of fake registration records; VRDB intentional crash;					•		
Attacks by Denial of Service	10	15	20	70	20	10	
Types of threat vectors: Intentional disruption of processing of marked ballots at LEO;							
Attacks Against Processing of Returned Ballots	5	10	15	50	30	20	
Types of threat vectors: Intentional modification of marked ballot packets at the LEO; Intentional destruction of marked ballot packets at the LEO; Intentional addition of fake marked ballot packets at the LEO;							
Attacks Against Tabulation	5	10	15	50	30	20	
Types of threat vectors: Intentional subversion of the counting process; Intentional subversion of the validation process; Intentional destruction of tabulated results; Intentional subversion of the tabulated results;					•		
Attacks Against Adjudication	5	10	15	40	35	25	
Types of threat vectors: Intentional refusal of legitimate ballots; Intentional acceptance of invalid ballots; Intentional misapplication of rules for determining voter's intent;							
OUTSIDER ATTACKS							
Attacks by Denial of Service	5	10	15	30	40	30	
Types of threat vectors: Intentional disruption of marked ballot processing and tabulation activities at LEO;							

REAT VECTORS		LIKELIHOC	D	IMPACT				
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Sompleted by: Cyber Security expert 1. Data extracted.	what perce think the th realized AN effect? Pro- maximum of of values as be realized effect in [m the time bu low as [min	ext of a Federa intage of the ti D have an obs vide minimum ralues. Interpri "I think this t AND have an ost likely] per it this estimate imum] % and %." (numbers in to 100)	me do you most likely servable and et this range hreat would observeable cent (%) of e could be as as high as	In the context of a Federal electi assuming the threat is realized, what percentage of the time wo it have a low, medium, and high impact? (numbers should sum to 100)				
Voting Step: RETURNED BALLOT PROCESSING & TABULATION	Minimum	Most Likely	Maximum	Low	Medium	High		
ENTIONAL DISRUPTIONS								
ERORS AT LOCAL ELECTION OFFICE Errors in VRDB	10	15	20	60	30	10		
Types of threat vectors: Accidental modification of registration records; Accidental loss of registration records; Accidental destruction of registration records; Accidental addition of erroneous registration records; VRDB accidental crash;	10	15	20	00	30	10		
Errors in Processing of Returned Ballots	10	15	20	60	30	10		
Types of threat vectors: Accidental modification of marked ballot packets at the LEO; Accidental destruction of marked ballot packets at the LEO; Accidental loss of marked ballot packets at the LEO;								
Errors in Tabulation	10	15	20	60	30	10		
Types of threat vectors: Errors in counting process; Errors in validation process; Accidental loss of tabulated results; Accidental destruction of tabulated results; Errors in publication of tabulated results;								
Errors in Adjudication	15	20	25	60	30	10		
Types of threat vectors: Accidental refusal of legitimate ballots; Accidental acceptance of invalid ballots; Accidental misapplication of rules for determining voter's intent;								
CCIDENTAL DISRUPTIONS								
Disruptions by Natural Events	10	15	20	60	30	10		
Types of threat vectors: Weather-related; Earthquake; Outbreak;								
Disruptions by Environmental Events	10	15	20	50	30	20		
Types of threat vectors: Fire; Spill; Flooding;								

THREAT VECTORS		LIKELIHOC	D	IMPACT						
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component	In the context of a Federal election, what percentage of the time do you think the threat would be most likely realized AND have an observable effect? Provide minimum and maximum values. Interpret this range of values as "I think this threat would			assuming th	ext of a Feder ne threat is re ntage of the	ealized,				
Completed by: Cyber Security Expert 1. Data extracted.	be realized effect in [m the time bu low as [min	AND have an ost likely] per this estimate imum] % and %." (numbers	observeable cent (%) of e could be as as high as	it have a lov	w, medium, a umbers shou	and high				
Voting Step: RETURNED BALLOT PROCESSING & TABULATION	Minimum	Most Likely	Maximum	Low	Medium	High				
Disruptions by Human-Created Collateral Events	10	15	20	60	30	10				
Types of threat vectors: Technical failure; Labor-related; Terrorism;										

THREAT VECTORS		LIKELIHOC)D		IMPACT		
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component	what percer think the th realized ANI effect? Prov maximum v	ext of a Federa ntage of the ti reat would be D have an obs ride minimum alues. Interpro	me do you e most likely ervable and et this range	In the context of a Federal election, assuming the threat is realized, what percentage of the time would it have a low modium and birth			
Completed by: Cyber Security Expert 1. Data extracted.	effect in [me the time but low as [mini	AND have an oost likely] peroot this estimate imum] % and oo %." (numbers	cent (%) of e could be as as high as	it have a low, medium, and high impact? (numbers should sum to 100)			
Voting Step: POST-ELECTION AUDIT	Minimum Most Likely Maximum			Low	Medium	High	
ATTACKS							
INSIDER ATTACKS							
Attacks Against VRDB	15	20	25	30	35	35	
Types of threat vectors: Intentional modification of registration records; Intentional destruction of registration records; Intentional addition of fake registration records; VRDB intentional crash;							
Attacks Against Post-Election Audit	15	20	25	30	35	35	
Types of threat vectors: Intentionally compromise auditors; Intentionally select audit samples non-randomly; Intentional modification of audit results; Intentional destruction of audit results;							
UNINTENTIONAL DISRUPTIONS							
ERRORS AT LOCAL ELECTION OFFICE							
Errors in VRDB	20	25	30	60	30	10	
Types of threat vectors: Accidental modification of registration records; Accidental loss of registration records; Accidental destruction of registration records; Accidental addition of erroneous registration records; VRDB accidental crash;			•				
Errors in Post-Election Audit	20	25	30	60	30	10	
Types of threat vectors: Accidental non-random selection of audit samples; Accidental modification of audit results; Accidental loss of audit results; Accidental destruction of audit results;							
ACCIDENTAL DISRUPTIONS							
Disruptions by Natural Events	10	15	20	80	15	5	
Types of threat vectors: Weather-related; Earthquake; Outbreak;							

THREAT VECTORS		LIKELIHOO	D	IMPACT						
VOTING SCENARIO: Current UOCAVA absentee voting system, restricted to paper ballots transmitted by postal mail, with no electronic component Completed by: Cyber Security Expert 1. Data extracted.	what percer think the thi realized ANI effect? Prov maximum vi of values as be realized / effect in [mo the time but low as [mini	ext of a Federa trage of the tireat would be D have an obsi- ide minimum alues. Interpre "I think this the AND have an cost likely] perce this estimate mum] % and a %." (numbers to to 100)	me do you most likely ervable and et this range areat would observeable eent (%) of could be as as high as	In the context of a Federal election, assuming the threat is realized, what percentage of the time would it have a low, medium, and high impact? (numbers should sum to 100)						
Voting Step: POST-ELECTION AUDIT	Minimum	Most Likely	Maximum	Low	Medium	High				
Disruptions by Environmental Events	10	15	20	80	15	5				
Types of threat vectors: Fire; Spill; Flooding;										
Disruptions by Human-Created Collateral Events	10	15	20	80	15	5				
Types of threat vectors: Technical failure; Labor-related; Terrorism;										