Federal Voting Assistance Program
Comparative Risk Analysis of the Current UOCAVA Voting System and an Electronic Alternative Report
Security Risk Estimates

SECURITY RISK ASSIGNMENT MATRIX - CURRENT UOCAVA VOTING SYSTEM

VOTING STEP	THREAT VECTORS Level 1	Level 2	Level 3	Threat ID	RISK ESTIMATES Current UOCAVA Voting System	Voter Authentication	Vote Secrecy	Vote Integrity	Vote Privacy	Auditability	Service Availability
Registration	Attacks	Insider Attacks	Attacks Against VRDB	REG-INS-VRDB	1.061	X		X		X	X
Registration	Attacks	Insider Attacks	Attacks to Voter's Assistance	REG-INS-ASST	0.859			X			
Registration	Attacks	Insider Attacks	Attacks to Voting Access	REG-INS-ACCS	1.045			X			X
Registration	Attacks	Insider Attacks	Attacks by Denial of Service	REG-INS-DOSV	0.814						X
Registration	Attacks	Insider Attacks	Attacks Against Registration Forms and Instructions	REG-INS-REGF	0.839			X		X	X
Registration	Attacks	Insider Attacks	Attacks During Transmission of Registration Forms and Instructions	REG-INS-TREG	0.838			X		X	X
Registration	Attacks	Insider Attacks	Attacks During Transmission of Completed Registration Packets	REG-INS-TCRP	1.042	X	X	X		X	
Registration	Attacks	Insider Attacks	Attacks Against Processing of Completed Registration Packets	REG-INS-PCRP	1.108	X	X	X		X	
Registration	Attacks	Insider Attacks	Attacks During Transmission of Registration Rejections	REG-INS-TRRP	0.826		X				
Registration	Attacks	Outsider Attacks	Attacks Against Voter's Assistance	REG-OUT-ASST	1.039			X			
Registration	Attacks	Outsider Attacks	Attacks Against Marking of Registration Forms	REG-OUT-MREG	1.471	X	X	X		X	
Registration	Unintentional Disruptions	Error at the LEO	Errors in VRDB	REG-ERL-VRDB	1.131	X		X		X	X
Registration	Unintentional Disruptions	Error at the LEO	Errors in Voter's Assistance	REG-ERL-ASST	2.228			X			
Registration	Unintentional Disruptions	Error at the LEO	Errors in Registration Forms and Instructions	REG-ERL-REGF	1.125			X		X	X
Registration	Unintentional Disruptions	Error at the LEO	Errors in Processing Completed Registration Packets	REG-ERL-PCRP	1.176	X	X	X		X	
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Registration Forms and Instructions	REG-ERT-TREG	1.389			X		X	X
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Completed Registration Packets	REG-ERT-TCRP	1.171	X	X	X		X	
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Registration Rejections	REG-ERT-TRRP	1.036		X				
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	REG-ERV-ACCS	2.985						X
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	REG-ERV-ASST	2.035			X			
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Registration Application	REG-ERV-REGF	2.959			X		X	
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	REG-DIS-NATL	1.360					X	X
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	REG-DIS-NVRO	0.797					X	X
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	REG-DIS-HUMN	0.797					X	X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against VRDB	ABR-INS-VRDB	1.128	X		X		X	X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks to Voter's Assistance	ABR-INS-ASST	0.875			X			
Absentee Ballot Request	Attacks	Insider Attacks	Attacks to Voting Access	ABR-INS-ACCS	0.914			X			X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks by Denial of Service	ABR-INS-DOSV	0.796						X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Absentee Ballot Request Forms and Instructions	ABR-INS-ABRF	0.859			X			X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Absentee Ballot Request Forms and Instructions	ABR-INS-TABR	0.769			X		X	X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Completed Absentee Ballot Request Packets	ABR-INS-TCAP	0.954	X	X	X		X	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Processing of Completed Absentee Ballot Request Packets	ABR-INS-PCAP	1.001	X	X	X		X	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Rejections of Absentee Ballot Requests	ABR-INS-TRAP	0.843		X				
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Absentee Ballots and Instructions	ABR-INS-ABSF	0.826			X		X	X
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Voter's Assistance	ABR-OUT-ASST	1.192			X			
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks by Denial of Service	ABR-OUT-DOSV	0.901						X
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Marking of Absentee Ballot Requests	ABR-OUT-MABR	1.344	X	X	X		X	
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in VRDB	ABR-ERL-VRDB	1.098	X		X		X	X
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Voter's Assistance	ABR-ERL-ASST	1.884			X			
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Absentee Ballot Request Forms and Instructions	ABR-ERL-ABRF	1.149			X		X	X
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Processing Completed Absentee Ballot Request Packets	ABR-ERL-PCAP	1.047	X	X	X		X	
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Absentee Ballots and Instructions	ABR-ERL-ABSF	1.365			X		X	X
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Absentee Ballot Request Forms and Instructions	ABR-ERT-TABR	1.157			X		X	X
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Completed Absentee Ballot Request Packets	ABR-ERT-TCAP	1.092	X	X	X		X	
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Rejections of Absentee Ballot Requests	ABR-ERT-TRAP	1.025		X				
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	ABR-ERV-ACCS	2.905						X
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	ABR-ERV-ASST	2.196			X			
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Absentee Ballot Requests	ABR-ERV-ABRF	2.689			X		X	
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ABR-DIS-NATL	1.039					X	X
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ABR-DIS-NVRO	0.732					X	X
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ABR-DIS-HUMN	1.113					X	X
Absentee Ballot Delivery	Attacks	Insider Attacks	Attacks by Denial of Service	ABD-INS-DOSV	0.924						X
Absentee Ballot Delivery	Attacks	Insider Attacks	Attacks During Transmission of Absentee Ballot and Instructions	ABD-INS-TABS	0.834			X		X	X
Absentee Ballot Delivery	Attacks	Outsider Attacks	Attacks by Denial of Service	ABD-OUT-DOSV	0.912						X
Absentee Ballot Delivery	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Absentee Ballot and Instructions	ABD-ERT-TABS	1.700			X		X	X
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ABD-DIS-NATL	0.570						X
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ABD-DIS-NVRO	0.607						X
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ABD-DIS-HUMN	0.568						X
Ballot Marking	Attacks	Outsider Attacks	Attacks Against Marking Absentee Ballots and Forms	BMK-OUT-MABS	1.271	X	X	X	X	X	
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	BMK-ERV-ACCS	2.507						X

SECURITY RISK ASSIGNMENT MATRIX - CURRENT UOCAVA VOTING SYSTEM

VOTING STEP	THREAT VECTORS				RISK ESTIMATES	SECURITY RISK OBJECTIVES					
	Level 1	Level 2	Level 3	Threat ID	Current UOCAVA Voting System	Voter Authentication	Vote Secrecy	Vote Integrity	Vote Privacy	Auditability	Service Availability
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	BMK-ERV-ASST	2.442			X			
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Absentee Ballot Marking	BMK-ERV-MABS	2.874	X		X		X	
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	BMK-DIS-NATL	0.568					X	X
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	BMK-DIS-NVRO	0.563					X	X
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	BMK-DIS-HUMN	0.535					X	X
Marked Ballot Return	Attacks	Insider Attacks	Attacks by Denial of Service	MBR-INS-DOSV	1.001						X
Marked Ballot Return	Attacks	Insider Attacks	Attacks During Transmission of Marked Ballot Packets	MBR-INS-TMBP	0.907	X	X	X	X	X	
Marked Ballot Return	Attacks	Outsider Attacks	Attacks by Denial of Service	MBR-OUT-DOSV	0.972						X
Marked Ballot Return	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Marked Ballot Packets	MBR-ERT-TMBP	2.371			X		X	
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	MBR-DIS-NATL	0.525			X		X	X
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	MBR-DIS-NVRO	0.511			X		X	X
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	MBR-DIS-HUMN	0.469			X		X	X
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against VRDB	RBP-INS-VRDB	0.843	X		X		X	X
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks by Denial of Service	RBP-INS-DOSV	0.823						X
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Processing of Returned Ballots	RBP-INS-PRBT	0.938	X	X	X	X	X	X
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Tabulation	RBP-INS-TABN	0.812			X		X	
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Adjudication	RBP-INS-ADJN	1.127			X		X	
Returned Ballot Processing and Tabulation	Attacks	Outsider Attacks	Attacks by Denial of Service	RBP-OUT-DOSV	0.836						X
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in VRDB	RBP-ERL-VRDB	1.108	X		X		X	X
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Processing of Returned Ballots	RBP-ERL-PRBT	1.110			X		X	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Tabulation	RBP-ERL-TABN	1.002			X		X	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Adjudication	RBP-ERL-ADJN	1.373			X		X	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	RBP-DIS-NATL	0.473			X		X	X
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	RBP-DIS-NVRO	0.529			X		X	X
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	RBP-DIS-HUMN	0.495			X		X	X
Post-Election Audit	Attacks	Insider Attacks	Attacks Against VRDB	ADT-INS-VRDB	1.073	X		X		X	X
Post-Election Audit	Attacks	Insider Attacks	Attacks Against Post-Election Audit	ADT-INS-PADT	1.113	X	X	X	X	X	X
Post-Election Audit	Unintentional Disruptions	Error at the LEO	Errors in VRDB	ADT-ERL-VRDB	1.239	X		X		X	X
Post-Election Audit	Unintentional Disruptions	Error at the LEO	Errors in Post-Election Audit	ADT-ERL-PADT	1.094			X			
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ADT-DIS-NATL	0.352			X			X
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ADT-DIS-NVRO	0.404			X			X
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ADT-DIS-HUMN	0.356			X			X

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Registration	Attacks	Insider Attacks	Attacks Against VRDB	REG-INS-VRDB	1.114	X		X		X	X
Registration	Attacks	Insider Attacks	Attacks to Voter's Assistance	REG-INS-ASST	0.944			X			
Registration	Attacks	Insider Attacks	Attacks to Voting Access	REG-INS-ACCS	1.067			X			X
Registration	Attacks	Insider Attacks	Attacks by Denial of Service	REG-INS-DOSV	1.517						X
Registration	Attacks	Insider Attacks	Attacks Against Registration Forms and Instructions	REG-INS-REGF	0.921			X		X	X
Registration	Attacks	Insider Attacks	Attacks During Transmission of Registration Forms and Instructions	REG-INS-TREG	0.908			X		X	X
Registration	Attacks	Insider Attacks	Attacks Against Marking of Registration Forms	REG-INS-MREG	1.276	X	X	X		X	
Registration	Attacks	Insider Attacks	Attacks During Transmission of Completed Registration Packets	REG-INS-TCRP	1.174	X	X	X		X	
Registration	Attacks	Insider Attacks	Attacks Against Processing of Completed Registration Packets	REG-INS-PCRP	0.867	X	X	X		X	
Registration	Attacks	Insider Attacks	Attacks During Transmission of Registration Rejections	REG-INS-TRRP	0.945			X			
Registration	Attacks	Outsider Attacks	Attacks Against Voter's Assistance	REG-OUT-ASST	1.638			X			
Registration	Attacks	Outsider Attacks	Attacks Against Voting Access	REG-OUT-ACCS	1.476	X	X	X		X	X
Registration	Attacks	Outsider Attacks	Attacks Against Marking of Registration Forms	REG-OUT-MREG	2.016	X	X	X		X	
Registration	Unintentional Disruptions	Error at the LEO	Errors in VRDB	REG-ERL-VRDB	1.134	X		X		X	X
Registration	Unintentional Disruptions	Error at the LEO	Errors in Voter's Assistance	REG-ERL-ASST	1.447			X			
Registration	Unintentional Disruptions	Error at the LEO	Errors in Registration Forms and Instructions	REG-ERL-REGF	1.718			X		X	X
Registration	Unintentional Disruptions	Error at the LEO	Errors in Processing Completed Registration Packets	REG-ERL-PCRP	1.347	X	X	X		X	
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Registration Forms and Instructions	REG-ERT-TREG	1.311			X		X	X
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Completed Registration Packets	REG-ERT-TCRP	1.605	X	X	X		X	
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Registration Rejections	REG-ERT-TRRP	0.925			X			
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	REG-ERV-ACCS	2.177						X
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	REG-ERV-ASST	1.824			X			
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Registration Application	REG-ERV-REGF	2.108			X		X	
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	REG-DIS-NATL	0.507					X	X
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	REG-DIS-NVRO	0.552					X	X
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	REG-DIS-HUMN	0.739					X	X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against VRDB	ABR-INS-VRDB	1.125	X		X		X	X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks to Voter's Assistance	ABR-INS-ASST	0.793			X			
Absentee Ballot Request	Attacks	Insider Attacks	Attacks to Voting Access	ABR-INS-ACCS	0.933			X			
Absentee Ballot Request	Attacks	Insider Attacks	Attacks by Denial of Service	ABR-INS-DOSV	1.491						X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Absentee Ballot Request Forms and Instructions	ABR-INS-ABRF	0.868			X		X	X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Absentee Ballot Request Forms and Instructions	ABR-INS-TABR	0.850			X		X	X
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Marking of Absentee Ballot Requests	ABR-INS-MABR	1.599	X	X	X		X	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Completed Absentee Ballot Request Packets	ABR-INS-TCAP	0.978	X	X	X		X	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Processing of Completed Absentee Ballot Request Packets	ABR-INS-PCAP	0.837	X	X	X		X	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Rejections of Absentee Ballot Requests	ABR-INS-TRAP	0.863			X			
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Absentee Ballots and Instructions	ABR-INS-ABSF	0.924			X		X	X
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Voter's Assistance	ABR-OUT-ASST	1.245			X			
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Voting Access	ABR-OUT-ACCS	2.100	X	X	X		X	X
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks by Denial of Service	ABR-OUT-DOSV	2.312						X
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Marking of Absentee Ballot Requests	ABR-OUT-MABR	1.254	X	X	X		X	
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in VRDB	ABR-ERL-VRDB	1.129	X		X		X	X
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Voter's Assistance	ABR-ERL-ASST	1.466			X			
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Absentee Ballot Request Forms and Instructions	ABR-ERL-ABRF	1.026			X		X	X
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Processing Completed Absentee Ballot Request Packets	ABR-ERL-PCAP	1.150	X	X	X		X	
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Absentee Ballots and Instructions	ABR-ERL-ABSF	0.956			X		X	X
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Absentee Ballot Request Forms and Instructions	ABR-ERT-TABR	0.782			X		X	X
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Completed Absentee Ballot Request Packets	ABR-ERT-TCAP	0.871	X	X	X		X	
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Rejections of Absentee Ballot Requests	ABR-ERT-TRAP	0.869			X			
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	ABR-ERV-ACCS	2.032						X
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	ABR-ERV-ASST	1.678			X			
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Absentee Ballot Requests	ABR-ERV-ABRF	1.878			X		X	
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ABR-DIS-NATL	0.481					X	X
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ABR-DIS-NVRO	0.511					X	X
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ABR-DIS-HUMN	0.459					X	X
Absentee Ballot Delivery	Attacks	Insider Attacks	Attacks by Denial of Service	ABD-INS-DOSV	1.327						X
Absentee Ballot Delivery	Attacks	Insider Attacks	Attacks During Transmission of Absentee Ballot and Instructions	ABD-INS-TABS	0.758			X		X	X
Absentee Ballot Delivery	Attacks	Outsider Attacks	Attacks Against Voting Access	ABD-OUT-ACCS	2.199	X	X	X		X	X

SECURITY RISK ASSIGNMENT MATRIX - REMOTE ELECTRONIC ABSENTEE VOTING SYSTEM

VOTING STEP	THREAT VECTORS				RISK ESTIMATES	SECURITY RISK OBJECTIVES					
	Level 1	Level 2	Level 3	Threat ID	Remote Electronic Absentee Voting System	Voter Authentication	Vote Secrecy	Vote Integrity	Vote Privacy	Auditability	Service Availability
Absentee Ballot Delivery	Attacks	Outsider Attacks	Attacks by Denial of Service	ABD-OUT-DOSV	2.494						X
Absentee Ballot Delivery	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Absentee Ballot and Instructions	ABD-ERT-TABS	0.747			X		X	X
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ABD-DIS-NATL	0.332						X
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ABD-DIS-NVRO	0.383						X
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ABD-DIS-HUMN	0.351						X
Ballot Marking	Attacks	Insider Attacks	Attacks Against Marking Absentee Ballots and Forms	BMK-INS-MABS	1.088	X	X	X	X	X	
Ballot Marking	Attacks	Outsider Attacks	Attacks Against Marking Absentee Ballots and Forms	BMK-OUT-MABS	1.493	X	X	X	X	X	
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	BMK-ERV-ACCS	1.740						X
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	BMK-ERV-ASST	1.185			X			
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Absentee Ballot Marking	BMK-ERV-MABS	1.681	X		X		X	
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	BMK-DIS-NATL	0.564					X	X
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	BMK-DIS-NVRO	0.607					X	X
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	BMK-DIS-HUMN	0.598					X	X
Marked Ballot Return	Attacks	Insider Attacks	Attacks by Denial of Service	MBR-INS-DOSV	1.101						X
Marked Ballot Return	Attacks	Insider Attacks	Attacks During Transmission of Marked Ballot Packets	MBR-INS-TMBP	0.966	X	X	X	X	X	
Marked Ballot Return	Attacks	Outsider Attacks	Attacks Against Voting Access	MBR-OUT-ACCS	1.740	X	X	X	X	X	X
Marked Ballot Return	Attacks	Outsider Attacks	Attacks by Denial of Service	MBR-OUT-DOSV	1.907						X
Marked Ballot Return	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Marked Ballot Packets	MBR-ERT-TMBP	0.848			X		X	
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	MBR-DIS-NATL	0.365			X		X	X
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	MBR-DIS-NVRO	0.430			X		X	X
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	MBR-DIS-HUMN	0.409			X		X	X
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against VRDB	RBP-INS-VRDB	0.820	X		X		X	X
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks by Denial of Service	RBP-INS-DOSV	0.697						X
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Processing of Returned Ballots	RBP-INS-PRBT	0.767	X	X	X	X	X	X
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Tabulation	RBP-INS-TABN	0.755			X		X	
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Adjudication	RBP-INS-ADJN	0.831			X		X	
Returned Ballot Processing and Tabulation	Attacks	Outsider Attacks	Attacks by Denial of Service	RBP-OUT-DOSV	2.141						X
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in VRDB	RBP-ERL-VRDB	1.053	X		X		X	X
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Processing of Returned Ballots	RBP-ERL-PRBT	0.937			X		X	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Tabulation	RBP-ERL-TABN	0.991			X		X	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Adjudication	RBP-ERL-ADJN	0.845			X		X	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	RBP-DIS-NATL	0.464			X		X	X
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	RBP-DIS-NVRO	0.521			X		X	X
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	RBP-DIS-HUMN	0.465			X		X	X
Post-Election Audit	Attacks	Insider Attacks	Attacks Against VRDB	ADT-INS-VRDB	0.754	X		X		X	X
Post-Election Audit	Attacks	Insider Attacks	Attacks Against Post-Election Audit	ADT-INS-PADT	0.788	X	X	X	X	X	X
Post-Election Audit	Unintentional Disruptions	Error at the LEO	Errors in VRDB	ADT-ERL-VRDB	0.968	X		X		X	X
Post-Election Audit	Unintentional Disruptions	Error at the LEO	Errors in Post-Election Audit	ADT-ERL-PADT	0.815			X			
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ADT-DIS-NATL	0.307			X			X
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ADT-DIS-NVRO	0.369			X			X
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ADT-DIS-HUMN	0.321			X			X

Specific to a remote absentee electronic voting environment

SECURITY RISK ESTIMATES - CURRENT UOCAVA VOTING SYSTEM

VOTING STEP	THREAT VECTORS				SECURITY RISK OBJECTIVES					
	Level 1	Level 2	Level 3	Threat ID	Voter Authentication	Vote Secrecy	Vote Integrity	Vote Privacy	Auditability	Service Availability
Registration	Attacks	Insider Attacks	Attacks Against VRDB	REG-INS-VRDB	1.061		1.061		1.061	1.061
Registration	Attacks	Insider Attacks	Attacks to Voter's Assistance	REG-INS-ASST			0.859			
Registration	Attacks	Insider Attacks	Attacks to Voting Access	REG-INS-ACCS			1.045			1.045
Registration	Attacks	Insider Attacks	Attacks by Denial of Service	REG-INS-DOSV						0.814
Registration	Attacks	Insider Attacks	Attacks Against Registration Forms and Instructions	REG-INS-REGF			0.839		0.839	0.839
Registration	Attacks	Insider Attacks	Attacks During Transmission of Registration Forms and Instructions	REG-INS-TREG			0.838		0.838	0.838
Registration	Attacks	Insider Attacks	Attacks During Transmission of Completed Registration Packets	REG-INS-TCRP	1.042	1.042	1.042		1.042	
Registration	Attacks	Insider Attacks	Attacks Against Processing of Completed Registration Packets	REG-INS-PCRP	1.108	1.108	1.108		1.108	
Registration	Attacks	Insider Attacks	Attacks During Transmission of Registration Rejections	REG-INS-TRRP		0.826				
Registration	Attacks	Outsider Attacks	Attacks Against Voter's Assistance	REG-OUT-ASST			1.039			
Registration	Attacks	Outsider Attacks	Attacks Against Marking of Registration Forms	REG-OUT-MREG	1.471	1.471	1.471		1.471	
Registration	Unintentional Disruptions	Error at the LEO	Errors in VRDB	REG-ERL-VRDB	1.131		1.131		1.131	1.131
Registration	Unintentional Disruptions	Error at the LEO	Errors in Voter's Assistance	REG-ERL-ASST			2.228			
Registration	Unintentional Disruptions	Error at the LEO	Errors in Registration Forms and Instructions	REG-ERL-REGF			1.125		1.125	1.125
Registration	Unintentional Disruptions	Error at the LEO	Errors in Processing Completed Registration Packets	REG-ERL-PCRP	1.176	1.176	1.176		1.176	
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Registration Forms and Instructions	REG-ERT-TREG			1.389		1.389	1.389
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Completed Registration Packets	REG-ERT-TCRP	1.171	1.171	1.171		1.171	
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Registration Rejections	REG-ERT-TRRP		1.036				
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	REG-ERV-ACCS						2.985
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	REG-ERV-ASST			2.035			
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Registration Application	REG-ERV-REGF			2.959		2.959	
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	REG-DIS-NATL					1.360	1.360
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	REG-DIS-NVRO					0.797	0.797
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	REG-DIS-HUMN					0.797	0.797
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against VRDB	ABR-INS-VRDB	1.128		1.128		1.128	1.128
Absentee Ballot Request	Attacks	Insider Attacks	Attacks to Voter's Assistance	ABR-INS-ASST			0.875			
Absentee Ballot Request	Attacks	Insider Attacks	Attacks to Voting Access	ABR-INS-ACCS			0.914			0.914
Absentee Ballot Request	Attacks	Insider Attacks	Attacks by Denial of Service	ABR-INS-DOSV						0.796
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Absentee Ballot Request Forms and Instructions	ABR-INS-ABRF			0.859			0.859
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Absentee Ballot Request Forms and Instructions	ABR-INS-TABR			0.769		0.769	0.769
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Completed Absentee Ballot Request Packets	ABR-INS-TCAP	0.954	0.954	0.954		0.954	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Processing of Completed Absentee Ballot Request Packets	ABR-INS-PCAP	1.001	1.001	1.001		1.001	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Rejections of Absentee Ballot Requests	ABR-INS-TRAP		0.843				
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Absentee Ballots and Instructions	ABR-INS-ABSF			0.826		0.826	0.826
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Voter's Assistance	ABR-OUT-ASST			1.192			
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks by Denial of Service	ABR-OUT-DOSV						0.901
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Marking of Absentee Ballot Requests	ABR-OUT-MABR	1.344	1.344	1.344		1.344	
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in VRDB	ABR-ERL-VRDB	1.098		1.098		1.098	1.098
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Voter's Assistance	ABR-ERL-ASST			1.884			
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Absentee Ballot Request Forms and Instructions	ABR-ERL-ABRF			1.149		1.149	1.149
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Processing Completed Absentee Ballot Request Packets	ABR-ERL-PCAP	1.047	1.047	1.047		1.047	
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Absentee Ballots and Instructions	ABR-ERL-ABSF			1.365		1.365	1.365
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Absentee Ballot Request Forms and Instructions	ABR-ERT-TABR			1.157		1.157	1.157
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Completed Absentee Ballot Request Packets	ABR-ERT-TCAP	1.092	1.092	1.092		1.092	
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Rejections of Absentee Ballot Requests	ABR-ERT-TRAP		1.025				
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	ABR-ERV-ACCS						2.905
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	ABR-ERV-ASST			2.196			
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Absentee Ballot Requests	ABR-ERV-ABRF			2.689		2.689	
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ABR-DIS-NATL					1.039	1.039
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ABR-DIS-NVRO					0.732	0.732
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ABR-DIS-HUMN					1.113	1.113
Absentee Ballot Delivery	Attacks	Insider Attacks	Attacks by Denial of Service	ABD-INS-DOSV						0.924
Absentee Ballot Delivery	Attacks	Insider Attacks	Attacks During Transmission of Absentee Ballot and Instructions	ABD-INS-TABS			0.834		0.834	0.834
Absentee Ballot Delivery	Attacks	Outsider Attacks	Attacks by Denial of Service	ABD-OUT-DOSV						0.912
Absentee Ballot Delivery	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Absentee Ballot and Instructions	ABD-ERT-TABS			1.700		1.700	1.700
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ABD-DIS-NATL						0.570
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ABD-DIS-NVRO						0.607
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ABD-DIS-HUMN						0.568
Ballot Marking	Attacks	Outsider Attacks	Attacks Against Marking Absentee Ballots and Forms	BMK-OUT-MABS	1.271	1.271	1.271	1.271	1.271	
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	BMK-ERV-ACCS						2.507

SECURITY RISK ESTIMATES - CURRENT UOCAVA VOTING SYSTEM

VOTING STEP	THREAT VECTORS				SECURITY RISK OBJECTIVES					
	Level 1	Level 2	Level 3	Threat ID	Voter Authentication	Vote Secrecy	Vote Integrity	Vote Privacy	Auditability	Service Availability
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	BMK-ERV-ASST			2.442			
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Absentee Ballot Marking	BMK-ERV-MABS	2.874		2.874		2.874	
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	BMK-DIS-NATL					0.568	0.568
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	BMK-DIS-NVRO					0.563	0.563
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	BMK-DIS-HUMN					0.535	0.535
Marked Ballot Return	Attacks	Insider Attacks	Attacks by Denial of Service	MBR-INS-DOSV						1.001
Marked Ballot Return	Attacks	Insider Attacks	Attacks During Transmission of Marked Ballot Packets	MBR-INS-TMBP	0.907	0.907	0.907	0.907	0.907	
Marked Ballot Return	Attacks	Outsider Attacks	Attacks by Denial of Service	MBR-OUT-DOSV						0.972
Marked Ballot Return	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Marked Ballot Packets	MBR-ERT-TMBP			2.371		2.371	
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	MBR-DIS-NATL			0.525		0.525	0.525
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	MBR-DIS-NVRO			0.511		0.511	0.511
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	MBR-DIS-HUMN			0.469		0.469	0.469
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against VRDB	RBP-INS-VRDB	0.843		0.843		0.843	0.843
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks by Denial of Service	RBP-INS-DOSV						0.823
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Processing of Returned Ballots	RBP-INS-PRBT	0.938	0.938	0.938	0.938	0.938	0.938
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Tabulation	RBP-INS-TABN			0.812		0.812	0.812
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Adjudication	RBP-INS-ADJN			1.127		1.127	1.127
Returned Ballot Processing and Tabulation	Attacks	Outsider Attacks	Attacks by Denial of Service	RBP-OUT-DOSV						0.836
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in VRDB	RBP-ERL-VRDB	1.108		1.108		1.108	1.108
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Processing of Returned Ballots	RBP-ERL-PRBT			1.110		1.110	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Tabulation	RBP-ERL-TABN			1.002		1.002	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Adjudication	RBP-ERL-ADJN			1.373		1.373	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	RBP-DIS-NATL			0.473		0.473	0.473
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	RBP-DIS-NVRO			0.529		0.529	0.529
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	RBP-DIS-HUMN			0.495		0.495	0.495
Post-Election Audit	Attacks	Insider Attacks	Attacks Against VRDB	ADT-INS-VRDB	1.073		1.073		1.073	1.073
Post-Election Audit	Attacks	Insider Attacks	Attacks Against Post-Election Audit	ADT-INS-PADT	1.113	1.113	1.113	1.113	1.113	1.113
Post-Election Audit	Unintentional Disruptions	Error at the LEO	Errors in VRDB	ADT-ERL-VRDB	1.239		1.239		1.239	1.239
Post-Election Audit	Unintentional Disruptions	Error at the LEO	Errors in Post-Election Audit	ADT-ERL-PADT			1.094			
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ADT-DIS-NATL			0.352			0.352
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ADT-DIS-NVRO			0.404			0.404
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ADT-DIS-HUMN			0.356			0.356

SECURITY RISK ESTIMATES - REMOTE ELECTRONIC ABSENTEE VOTING SYSTEM

VOTING STEP	THREAT VECTORS				SECURITY RISK OBJECTIVES					
	Level 1	Level 2	Level 3	Threat ID	Voter Authentication	Vote Secrecy	Vote Integrity	Vote Privacy	Auditability	Service Availability
Registration	Attacks	Insider Attacks	Attacks Against VRDB	REG-INS-VRDB	1.114		1.114		1.114	1.114
Registration	Attacks	Insider Attacks	Attacks to Voter's Assistance	REG-INS-ASST			0.944			
Registration	Attacks	Insider Attacks	Attacks to Voting Access	REG-INS-ACCS			1.067			1.067
Registration	Attacks	Insider Attacks	Attacks by Denial of Service	REG-INS-DOSV						1.517
Registration	Attacks	Insider Attacks	Attacks Against Registration Forms and Instructions	REG-INS-REGF			0.921		0.921	0.921
Registration	Attacks	Insider Attacks	Attacks During Transmission of Registration Forms and Instructions	REG-INS-TREG			0.908		0.908	0.908
Registration	Attacks	Insider Attacks	Attacks Against Marking of Registration Forms	REG-INS-MREG	1.276	1.276	1.276		1.276	
Registration	Attacks	Insider Attacks	Attacks During Transmission of Completed Registration Packets	REG-INS-TCRP	1.174	1.174	1.174		1.174	
Registration	Attacks	Insider Attacks	Attacks Against Processing of Completed Registration Packets	REG-INS-PCRP	0.867	0.867	0.867		0.867	
Registration	Attacks	Insider Attacks	Attacks During Transmission of Registration Rejections	REG-INS-TRRP		0.945				
Registration	Attacks	Outsider Attacks	Attacks Against Voter's Assistance	REG-OUT-ASST			1.638			
Registration	Attacks	Outsider Attacks	Attacks Against Voting Access	REG-OUT-ACCS	1.476	1.476	1.476		1.476	1.476
Registration	Attacks	Outsider Attacks	Attacks Against Marking of Registration Forms	REG-OUT-MREG	2.016	2.016	2.016		2.016	
Registration	Unintentional Disruptions	Error at the LEO	Errors in VRDB	REG-ERL-VRDB	1.134		1.134		1.134	1.134
Registration	Unintentional Disruptions	Error at the LEO	Errors in Voter's Assistance	REG-ERL-ASST			1.447			
Registration	Unintentional Disruptions	Error at the LEO	Errors in Registration Forms and Instructions	REG-ERL-REGF			1.718		1.718	1.718
Registration	Unintentional Disruptions	Error at the LEO	Errors in Processing Completed Registration Packets	REG-ERL-PCRP	1.347	1.347	1.347		1.347	
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Registration Forms and Instructions	REG-ERT-TREG			1.311		1.311	1.311
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Completed Registration Packets	REG-ERT-TCRP	1.605	1.605	1.605		1.605	
Registration	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Registration Rejections	REG-ERT-TRRP		0.925				
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	REG-ERV-ACCS						2.177
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	REG-ERV-ASST			1.824			
Registration	Unintentional Disruptions	Error at the Voter's Location	Errors in Registration Application	REG-ERV-REGF			2.108		2.108	
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	REG-DIS-NATL					0.507	0.507
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	REG-DIS-NVRO					0.552	0.552
Registration	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	REG-DIS-HUMN					0.739	0.739
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against VRDB	ABR-INS-VRDB	1.125		1.125		1.125	1.125
Absentee Ballot Request	Attacks	Insider Attacks	Attacks to Voter's Assistance	ABR-INS-ASST			0.793			
Absentee Ballot Request	Attacks	Insider Attacks	Attacks to Voting Access	ABR-INS-ACCS			0.933			0.933
Absentee Ballot Request	Attacks	Insider Attacks	Attacks by Denial of Service	ABR-INS-DOSV						1.491
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Absentee Ballot Request Forms and Instructions	ABR-INS-ABRF			0.868			0.868
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Absentee Ballot Request Forms and Instructions	ABR-INS-TABR			0.850		0.850	0.850
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Marking of Absentee Ballot Requests	ABR-INS-MABR	1.599	1.599	1.599		1.599	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Completed Absentee Ballot Request Packets	ABR-INS-TCAP	0.978	0.978	0.978		0.978	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Processing of Completed Absentee Ballot Request Packets	ABR-INS-PCAP	0.837	0.837	0.837		0.837	
Absentee Ballot Request	Attacks	Insider Attacks	Attacks During Transmission of Rejections of Absentee Ballot Requests	ABR-INS-TRAP		0.863				
Absentee Ballot Request	Attacks	Insider Attacks	Attacks Against Absentee Ballots and Instructions	ABR-INS-ABSF			0.924		0.924	0.924
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Voter's Assistance	ABR-OUT-ASST			1.245			
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Voting Access	ABR-OUT-ACCS	2.100	2.100	2.100		2.100	2.100
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks by Denial of Service	ABR-OUT-DOSV						2.312
Absentee Ballot Request	Attacks	Outsider Attacks	Attacks Against Marking of Absentee Ballot Requests	ABR-OUT-MABR	1.254	1.254	1.254		1.254	
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in VRDB	ABR-ERL-VRDB	1.129		1.129		1.129	1.129
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Voter's Assistance	ABR-ERL-ASST			1.466			
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Absentee Ballot Request Forms and Instructions	ABR-ERL-ABRF			1.026		1.026	1.026
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Processing Completed Absentee Ballot Request Packets	ABR-ERL-PCAP	1.150	1.150	1.150		1.150	
Absentee Ballot Request	Unintentional Disruptions	Error at the LEO	Errors in Absentee Ballots and Instructions	ABR-ERL-ABSF			0.956		0.956	0.956
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Absentee Ballot Request Forms and Instructions	ABR-ERT-TABR			0.782		0.782	0.782
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Completed Absentee Ballot Request Packets	ABR-ERT-TCAP	0.871	0.871	0.871		0.871	
Absentee Ballot Request	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Rejections of Absentee Ballot Requests	ABR-ERT-TRAP		0.869				
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	ABR-ERV-ACCS						2.032
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	ABR-ERV-ASST			1.678			
Absentee Ballot Request	Unintentional Disruptions	Error at the Voter's Location	Errors in Absentee Ballot Requests	ABR-ERV-ABRF			1.878		1.878	
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ABR-DIS-NATL					0.481	0.481
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ABR-DIS-NVRO					0.511	0.511
Absentee Ballot Request	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ABR-DIS-HUMN					0.459	0.459
Absentee Ballot Delivery	Attacks	Insider Attacks	Attacks by Denial of Service	ABD-INS-DOSV						1.353
Absentee Ballot Delivery	Attacks	Insider Attacks	Attacks During Transmission of Absentee Ballot and Instructions	ABD-INS-TABS			0.782		0.782	0.782

SECURITY RISK ESTIMATES - REMOTE ELECTRONIC ABSENTEE VOTING SYSTEM

VOTING STEP	THREAT VECTORS			Threat ID	SECURITY RISK OBJECTIVES					
	Level 1	Level 2	Level 3		Voter Authentication	Vote Secrecy	Vote Integrity	Vote Privacy	Auditability	Service Availability
Absentee Ballot Delivery	Attacks	Outsider Attacks	Attacks Against Voting Access	ABD-OUT-ACCS	2.225	2.225	2.225		2.225	2.225
Absentee Ballot Delivery	Attacks	Outsider Attacks	Attacks by Denial of Service	ABD-OUT-DOSV						2.518
Absentee Ballot Delivery	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Absentee Ballot and Instructions	ABD-ERT-TABS			0.780		0.780	0.780
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ABD-DIS-NATL						0.342
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ABD-DIS-NVRO						0.395
Absentee Ballot Delivery	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ABD-DIS-HUMN						0.362
Ballot Marking	Attacks	Insider Attacks	Attacks Against Marking Absentee Ballots and Forms	BMK-INS-MABS	1.114	1.114	1.114	1.114	1.114	
Ballot Marking	Attacks	Outsider Attacks	Attacks Against Marking Absentee Ballots and Forms	BMK-OUT-MABS	1.524	1.524	1.524	1.524	1.524	
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Voting Access	BMK-ERV-ACCS						1.779
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Obtaining Voter's Assistance	BMK-ERV-ASST			1.222			
Ballot Marking	Unintentional Disruptions	Error at the Voter's Location	Errors in Absentee Ballot Marking	BMK-ERV-MABS	1.697		1.697		1.697	
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	BMK-DIS-NATL					0.574	0.574
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	BMK-DIS-NVRO					0.617	0.617
Ballot Marking	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	BMK-DIS-HUMN					0.609	0.609
Marked Ballot Return	Attacks	Insider Attacks	Attacks by Denial of Service	MBR-INS-DOSV						1.127
Marked Ballot Return	Attacks	Insider Attacks	Attacks During Transmission of Marked Ballot Packets	MBR-INS-TMBP	0.998	0.998	0.998	0.998	0.998	
Marked Ballot Return	Attacks	Outsider Attacks	Attacks Against Voting Access	MBR-OUT-ACCS	1.759	1.759	1.759	1.759	1.759	1.759
Marked Ballot Return	Attacks	Outsider Attacks	Attacks by Denial of Service	MBR-OUT-DOSV						1.924
Marked Ballot Return	Unintentional Disruptions	Error in Transmission	Errors in Transmission of Marked Ballot Packets	MBR-ERT-TMBP			0.859		0.859	
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	MBR-DIS-NATL			0.376		0.376	0.376
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	MBR-DIS-NVRO			0.440		0.440	0.440
Marked Ballot Return	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	MBR-DIS-HUMN			0.420		0.420	0.420
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against VRDB	RBP-INS-VRDB	0.820		0.820		0.820	0.820
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks by Denial of Service	RBP-INS-DOSV						0.697
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Processing of Returned Ballots	RBP-INS-PRBT	0.767	0.767	0.767	0.767	0.767	0.767
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Tabulation	RBP-INS-TABN			0.755		0.755	
Returned Ballot Processing and Tabulation	Attacks	Insider Attacks	Attacks Against Adjudication	RBP-INS-ADJN			0.831		0.831	
Returned Ballot Processing and Tabulation	Attacks	Outsider Attacks	Attacks by Denial of Service	RBP-OUT-DOSV						2.141
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in VRDB	RBP-ERL-VRDB	1.053		1.053		1.053	1.053
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Processing of Returned Ballots	RBP-ERL-PRBT			0.937		0.937	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Tabulation	RBP-ERL-TABN			0.991		0.991	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Error at the LEO	Errors in Adjudication	RBP-ERL-ADJN			0.845		0.845	
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	RBP-DIS-NATL			0.464		0.464	0.464
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	RBP-DIS-NVRO			0.521		0.521	0.521
Returned Ballot Processing and Tabulation	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	RBP-DIS-HUMN			0.465		0.465	0.465
Post-Election Audit	Attacks	Insider Attacks	Attacks Against VRDB	ADT-INS-VRDB	0.754		0.754		0.754	0.754
Post-Election Audit	Attacks	Insider Attacks	Attacks Against Post-Election Audit	ADT-INS-PADT	0.788	0.788	0.788	0.788	0.788	0.788
Post-Election Audit	Unintentional Disruptions	Error at the LEO	Errors in VRDB	ADT-ERL-VRDB	0.968		0.968		0.968	0.968
Post-Election Audit	Unintentional Disruptions	Error at the LEO	Errors in Post-Election Audit	ADT-ERL-PADT			0.815			
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Natural Events	ADT-DIS-NATL			0.307			0.307
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Environmental Events	ADT-DIS-NVRO			0.369			0.369
Post-Election Audit	Unintentional Disruptions	Accidental Disruptions	Disruptions by Human-Created Collateral Events	ADT-DIS-HUMN			0.321			0.321

Specific to a remote absentee electronic voting environment