

BALLOT PAPER SUPPLY CHAIN RISK MANAGEMENT

Working Group: Threats, Vulnerabilities, Risks and Mitigation

February 2022



Government Facilities Sector
Election Infrastructure
Subsector Coordinating Council

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EXECUTIVE SUMMARY

Ballot Paper Supply Chain Risk Management (BP-SCRM) is the process of identifying, assessing, preventing, and mitigating the risks associated with the distributed and interconnected nature of the manufacturing of blank ballot paper stock and its respective service supply chains that deliver to the ballot printers and ballot manufacturers. BP-SCRM addresses critical parts of the life cycle of the ballot paper supply chain and encompasses traditional supply chain management and supply chain security considerations. It is important to note this document is a snapshot in time (February 2022) and represents the supply chain as it exists today and for the foreseeable future through the 2022 election cycle.

In June of 2021, the Election Infrastructure Subsector Coordinating Council decided to explore establishment of an SCC Supply Chain Risk Management Working Group with general purpose to explore potential SCRM risks to the EI Subsector partnership. In September 2021, it established SCRM Subgroups to develop SCRM risks in the HW, SW, Services and Ballot Paper areas. The “Ballot Paper” WG subsequently focused on assessing risks associated with the BP SC and develop recommendations on how to manage those risks for Subsector Partners.

The Working Group (WG) membership was tasked with identifying a representative sample of the top BP-SCRM assets and threats specifically focused on suppliers, raw materials, manufacturing, and fulfillment. Once the main threats were identified, the WG proceeded to build and identify additional issues to capture and refine risk mitigation.

The groupings and descriptive titles were shared with the WG membership for review and comment. The WG determined a list of eight (8) asset categories that represented a reasonable model for this work product. These asset groupings served to guide the development of the threats and related events for conducting supply chain threat and risk assessment.

For each asset category, the WG developed a threat and mitigation model that included background information on the threat itself, the importance of this threat, and the potential risks and impacts it has on the supply chain. If found appropriate by the team, multiple issues were developed for the threat in each asset category.

The process and resulting narratives not only serve as a baseline evaluation of specific BP-SCRM threats but can be used as guidance for risk mitigation.

*Note: New redistricting efforts may impact the recommendations in this report. As redistricting plans are approved, changed and sometimes challenged in court, in the past, this has led to delays in the availability of final ballot content for election administrators as well as last minute court rulings that can result in ballot reprints or other mitigations.

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1.0 WORKING GROUP TEAM MEMBERS

Leadership team for Working Group:

TABLE 1—LEADERSHIP AND ADMINISTRATIVE SUPPORT FOR WORKING GROUP

Co-Chairs:	Chris Wlaschin	ES&S
	Jim Suver	Runbeck

Working Group consists of the members listed below:

TABLE 2—BALLOT PAPER SUPPLY CHAIN WORKING GROUP MEMBERS

Name	Company
Brad Moorhouse	K&H Print
Dave Haines	K&H Print
Doug Sunde	SeaChange
Edwin Smith	Smartmatic
Kimberly Waltz	Cathedral
Kristy Ericson	ES&S
Matt Bernhard	VotingWorks
Roberta Shoemaker	ES&S
Sean McCully	VoteShield

2.0 BACKGROUND

In June of 2021, the Election Infrastructure Subsector Coordinating Council decided to explore establishment of an SCC Supply Chain Risk Management Working Group with general purpose to explore potential SCRM risks to the EI Subsector partnership. In September 2021, it established SCRM Subgroups to develop SCRM risks in the HW, SW, Services and Ballot Paper areas. The “Ballot Paper” WG subsequently focused on assessing risks associated with the BP SC and develop recommendations on how to manage those risks for Subsector Partners. Outlined below are the relationships between the respective risks and the relevant definitions used throughout this document.

2.1 Relationship between Threat, Vulnerability, and Risk

A threat is something (threat source) that interacts with a weakness (vulnerability), resulting in something bad happening (threat event). A vulnerability is a shortcoming in the *sustainability, security, or reliability* of an asset. Risk represents the potential for loss, injury, or destruction of an asset because of a threat exploiting a vulnerability. Risk is also the intersection of assets, threats, and vulnerabilities.

2.2 Relevant Definitions

Asset: A critical element of the supply chain. Assets can include manufacturing capabilities, raw materials, labor, fulfillment, or the ability to provide urgent services.

Vulnerability: A weakness that can be exploited or triggered by a threat.

Threat: Any circumstance or event with the potential to adversely impact organizational operations (including mission, functions, perception, or reputation), organizational assets, or individuals. A threat to the vulnerability of an asset creates the largest risk for the election process.

Issue: An example of a past or current circumstance adversely impacting organizational operations (including mission, functions, perception, or reputation), organizational assets, or individuals.

Risk: The potential for loss or inability to fulfill service commitments because of a threat exploiting a vulnerability.

Mitigation: The planning, activity or action that is suggested to minimize the risk to an entity or organization.

3.0 OBJECTIVE, SCOPE, AND METHODOLOGY

This Working Group is focused on identifying the supply chain-related threat and conducting a risk assessment.

3.1 Objective

To produce a set of processes and criteria for conducting supplier, product, and service threat assessments and risk mitigations.

3.2 Scope

Challenges and strategies addressing the suppliers of raw material, labor, fulfillment, transportation, and traditional supply chain management practices.

3.3 Methodology

The Working Group initially conducted many meetings to build asset and threat categories from the diverse WG membership. There were no constraint parameters given to the identification of assets and threats, which is why the scope includes a wide representation of manufacturers products, labor, and services.

4.0 ASSET AND THREAT CATEGORIES

4.1 Asset Category 1: Pulp/Paper Mills

4.1.1 Threat Category 1: Pulp/Paper Mills Have Closed/Consolidated

- Issue 1: Mills are closing
- Issue 2: Paper mills are converting operations to corrugated boxes and board stock
- Issue 3: Mills are not allowing ballot printers to order as much as the previous order
- Issue 4: Very long order lead times are now required for blank ballot paper
- Issue 5: Lack of inventory--less and less paper available to store
- Issue 6: Paper suppliers are periodically cancelling their commitment or reducing the order to the print and mail vendors
- Issue 7: Paper mill equipment is aging
- Issue 8: Paper mill operators are retiring

Background:

The trend in the lack of raw material and paper supply has been due to mills closing over the last few decades. With the Covid-19 pandemic and various supply chain challenges, the print and mail industry has experienced some of the worst supply chain disruptions and price volatility in many decades. Prior to the pandemic, paper mills could produce and deliver up to ten truckloads of paper in as few as four weeks. In February 2022, print and mail vendors are not always guaranteed the full quantity of paper forecasted months in advance. Lead times are stated in months rather than weeks or days. We do not anticipate this market dynamic to last, but we must succeed in 2022 and plan through the upcoming presidential election cycle of 2024.

Vulnerability

The number of pulp and paper mills is decreasing, resulting in fewer supply options for ballot printers and envelope manufacturers.

Risks

- Less paper production means fewer options for ballot printers to fulfill orders
- Less paper production means fewer options for ballot printers to fulfill election jurisdictions' last minute ballot orders changes and/or reprints.
- Less paper production and less supply which is translating to higher prices

Potential Mitigating Strategies for the Election Jurisdiction

- Secure contracts or service agreements immediately, as most printers will not be able to procure paper needed for requests outside of their present commitments
- Discuss the anticipated paper needs with print and mail vendor at least 180 days prior to the associated election
- Focus on reducing paper waste. Ballot proofing needs to be at its best to prevent reprints. Reprints will be costly or potentially difficult to fulfill since ballot printers have less 'back-up' ballot stock. Order the correct amount "up front" to avoid incurring additional costs or being unable to fulfill 'add-on' orders.

4.2 Asset Category 2: Raw Materials

4.2.1 Threat Category 2: Raw Materials, Envelopes and other supplies - Lack of Availability

- Issue 1: Envelope suppliers are requiring 3 - 4+ month lead time to order
- Issue 2: Envelope producers are 'rationed' to their previous order volume
- Issue 3: Envelope suppliers are breaking their price contracts with ballot printers because the envelope suppliers cannot hold their prices
- Issue 4: Other envelope consumers (banks, healthcare) are overordering which 'consumes' press time for election envelope manufacturing
- Issue 5: Toner, ink and drum reserves are lower, and suppliers are rationing orders to ballot printers which have less backstock
- Issue 6: Outside buys for "I Voted" stickers are 3 - 4+ month lead time

Background:

The issues and challenges with the paper supply chain impacts the envelope industry and other materials used in the ballot mail packets. Shortages in labor impact the ability for these supplies to be manufactured. Lead time to order raw materials has been longer than we have seen in decades.

Vulnerability

- Lack of backstock for paper
- Lack of envelope producers
- Lower or depleted back stock of toner, ink, and drums

Risks

- Less paper production means fewer options for ballot printers to fulfill orders
- Less envelope production means fewer options for ballot printers for last minute paper
- The lead time for orders is getting very long, risking last minute ballot print needs
- Orders without sufficient lead time may not be able to be fulfilled risking compliance with constitutional or statutory election requirements
- Other industries creating demand for the same products

Potential Mitigating Strategies for the Election Jurisdiction

- Cannot waste paper – Better proofing and ownership of the proofing
- Cannot waste paper – Order the correct amount up front and avoid wasting time in order fulfillment
- Order early to avoid placement at the back of the line with the ballot printer. Make sure to stay ahead of the line for production and fulfillment

Questions to Consider:

- Have you decided your poll ballot versus absentee/vote by mail plan?
- Are you forecasting your ballot and envelope orders as early as you can?
- Are you, in turn, placing your ballot and envelope order to your print vendors?
- Are you or the state requiring 'one off' print solutions unique to your jurisdiction causing undue risk to fulfill – undue risk you may not know about?
- Do you have a contingency budget for raw material pricing increases due to supply chain shortages?
- Do you have a plan to ask for more money/budget allocation from your respective Board/s?
- Are your inserts unique in size and paper weight?
- Are you ordering 'I voted' stickers as early as possible?
- Are you going to easily meet your UOCAVA deadline, or will it require 'last minute' activity for you and your ballot printer?

4.3 Asset Category 3: Ballot Printers and Mail Fulfillment vendors

4.3.1 Threat Category 3: New or Inexperienced Ballot Printers and/or Mail Fulfillment Providers Entering the Election Market

- Issue 1: Market entry of new or inexperienced ballot printers in 2020
- Issue 2: New or inexperienced printers can unintentionally bring unnecessary risks and political exposure in this election cycle
- Issue 3: Lack of defined RFP specifications for hiring ballot print vendors
- Issue 4: Last minute RFPs for election services may draw inexperienced printers to the market, as existing election print and mail providers may choose not to respond in a rushed procurement timeline

Background:

The Covid-19 pandemic during the 2020 election cycle introduced many new challenges to the election process, challenges we had not faced in the last 100 years. One voting option that grew during this cycle was absentee voting and/or vote by mail. Because of the increased demand for this voting option, we saw new ballot and mail vendors looking for opportunities to enter the election market. Some had success, others did not. Those that were not as successful may not have understand the gravity, the complexity, and the expectation this market needs from their print and mail vendors.

Vulnerability

- Potential for the lack of industry knowledge by the new print vendors in the election market
- Potential for the lack of industry knowledge around the USPS election mail guidelines and processing
- The potential for a lack of manufacturing knowledge by the jurisdiction doing the hiring. Jurisdictions must know the correct criteria and skills needed by their manufacturers when hiring a ballot printer or election mail fulfillment vendor

Risks

- Inexperienced ballot printers to the election marketplace may introduce other risks to the jurisdiction
- Inexperienced envelope printers to the election marketplace may introduce other risks to the jurisdiction
- Inexperienced election mail fulfillment vendors may send incorrect ballots to voters.

Potential Mitigating Strategies for the Election Jurisdiction

- Consider soliciting for value added proposals, not only the lowest price
- Contract sooner with your print vendor so they can provide the jurisdiction more lead time to order paper for future elections.
- Longer term contracts allow the print vendor the ability to understand the jurisdiction's needs and anticipate paper needs in the future.

Questions to Consider:

- Do you have 'back up' ballot printers?
- Can a new vendor get the ballot paper needed?
- Can a new vendor get envelopes needed?
- Is the vendor aware of the testing needed for ballots?
- Does the vendor have a defined manufacturing quality process in place?
- What quality and accuracy verification processes does the vendor use?
- Does your print and mail vendor have reserve capacity?
- Does your print and mail vendor have access to certified materials?
- Are you using a defined ballot print/mail RFP process?
- Is your ballot print company 'audited' or experienced in elections?
- Does your printer have any third-party audit and/or accreditation?
- Does your printer have a disaster recovery plan?
- What is your printer's security process?

- What are your printer's election compliance regulations?
- Is the print and mail vendor taking on too much?
- Is the print and mail vendor experienced with elections?
- Is the print and mail vendor able to scale up for other election demands?
- Is the printer committed to "responsible growth" versus chasing new revenue?
- Can your current printer fulfill your needs for the 2022 election cycle?
- Are your printers dedicated to the election industry work or is election work 'part time' for them?
- A commercial print and mail order and an election print and mail order can be very different. Make sure election material order definitions and expectations are reviewed many times to eliminate surprises
- Is election printing sustainable for the print and mail vendor or do they need supplemental work in the off year (or odd numbered i.e., 2019, 2021, 2023)?
- Is your new print and mail vendor a commercial printer first – and an election printer second? If they are a commercial print vendor first, do they understand the need for 100% accuracy?

4.4 Asset Category 4: Transportation

4.4.1 Threat Category 4: Transportation Inefficiencies

- Issue 1: Difficult to have “on demand” tractor/trailer combinations to move product. Short notice for transportation needs is no longer an option
- Issue 2: Promised deliveries by suppliers are not being fulfilled, putting more pressure on ballot printers to fulfill orders to the jurisdictions
- Issue 3: It is difficult to “buy your way out” of the transportation supply chain problem
- Issue 4: Other industries are using and maintaining custody of the trailer and using the trailer for storage to gain efficiencies in their supply chain, but this impacts the supply of trailers for other industries
- Issue 5: All delivery mechanisms for the printers/mail fulfillment vendors are impacted including; trucks, trailers, drivers, UPS, FEDEX and USPS

Background:

Transportation challenges are global, but they are impacting the election market domestically in specific ways. The shortage in labor reduces the availability of tractor/trailer combinations and their ability to deliver the necessary material to the print and mail vendors. In turn, this impacts the ability to easily deliver ballots and mail packets to the jurisdictions. These issues require more planning and lead time to accommodate the shortcomings in supply.

Vulnerability

- Shortage of trailers
- Shortage of labor
- USPS facilities are closing

Risks

- Delivery of raw material to printers
- Delivery of materials to election jurisdictions
- Delivery of materials to USPS

Potential Mitigating Strategies for the Election Jurisdiction

- Communicating reasonable messages and expectations
- Confirm vendors are not overpromising
- Develop a USPS strategy on where to execute mail entry
- Schedule for mail drops that are critical to election standards
- State-specific: Some states have an expectation that sample ballot material must be mailed at the same time as the official absentee/vote-by-mail packet. The transportation and logistical challenge occur when the sample ballot material is late, and it falsely delays the mailing of the official absentee/vote-by-mail packets. Explore if this expectation can be relaxed to allow the official absentee/vote-by-mail packets to be mailed through USPS when the packets are ready.
- USPS messaging is conflicting and not as timely
- There are different entry timing/days for the UPSP. Work with your USPS representative early to develop the strategies and processes for delivering and receiving your election mail.
- Plan for USPS facility shutdowns or abbreviated schedules due to Covid-19 and/or labor shortage

4.5 Asset Category 5: Warehousing

4.5.1 Threat Category 5: Reduction in Warehousing

- Issue 1: General warehousing is becoming limited in some areas of the country
- Issue 2: Print vendors are needing to store/warehouse more product
- Issue 3: Print and mail storage by suppliers and the availability of that storage is also limited
- Issue 4: Paper suppliers of ballot stock are storing less inventory for the print and mail vendors

Background:

The inventory of warehouse space has diminished in larger metropolitan markets. Labor shortages have contributed to the cost of these services increasing while the general supply chain of leasable square footage is reduced. Because of the reduction in supply, the price for warehouse storage and services has also increased.

Vulnerability

- Lack of storage around the U.S.
- Lack of labor for warehousing tasks to be performed

Risks

- Delivery of final product
- Other industries are still creating demand for this warehousing service

Potential Mitigating Strategies for The Election Jurisdiction

- Consider if your jurisdiction can take an early delivery of ballots/mail packets to hold and store before it needs to be presented at the USPS
- Consider or plan on a warehousing budget in your future election plan

4.6 Asset Category 6: Labor

4.6.1 Threat Category 6: Labor shortages

- Issue 1: Labor shortages limit ability for mills to scale up
- Issue 2: Labor shortages limits increases in blank ballot paper
- Issue 3: Labor shortages negatively impact warehousing and transportation services
- Issue 4: Pandemic related absences and “employee leave laws” may impact labor availability with little or no advance notice
- Issue 5: More effort and resource demands are needed by ballot print vendors for recruiting and hiring FTEs and temporary labor
- Issue 6: Wage increases – this is a ‘never ending’ issue
- Issue 7: Hiring skilled and unskilled labor and its retention

Background:

Labor shortages have impacted all elements of the supply chain and will continue through the 2022 election cycle. Print and mail vendors are seeing shortages in skilled and unskilled labor. Successful production outcomes require renewed advance planning for sustained labor throughout the year. Additionally, wage increases are continuing, and influencing the behavior of the labor force. Labor retention has become an emphasis in a less predictable labor market.

Vulnerability

- Lack of labor reduces production ability and certainty

Risks

- Delivery of final product
- Other industries creating demand for labor (e.g., McDonalds pays \$21/hour)
- Labor costs are going up and these labor rates need to be matched to retain the workforce

Potential Mitigating Strategies for the Election Jurisdiction

- Consider if the print vendor has labor issues addressed or solved
- Due to labor shortages, costs will increase which may impact your jurisdiction’s budget

Questions to Consider:

- Is your print and mail vendor paying ‘par’ or better wages to keep labor to fulfil the jurisdiction’s orders?
- If your print and mail vendor is not keeping up with the needed labor supply will your election order be finished and completed accurately?
- Does your print and mail vendor have back up labor sources?

4.7 Asset Category 7: Packaging

4.7.1 Threat Category 7: Reduction in Packaging Availability

- Issue 1: Non cardboard packaging requires longer ordering lead times
- Issue 2: Less availability of cardboard boxes and longer ordering lead times
- Issue 3: Substantial price increases of cardboard boxes

Background:

The reduction in raw materials and labor shortages has also impacted the cost and availability of packaging and packaging supplies. These issues are real threats as the print and mail vendors rely on these resources to safely package, label, inventory and transport ballots and election material to the jurisdictions. Print and mail providers cannot be without packaging as this is an important element in the chain of custody process provided to the jurisdictions.

Vulnerability

- Lack of materials
- Lack of labor
- Increased lead time to order

Risks

- If there is no packaging, the safety of ballot and mail packet content is at risk
- It can delay the delivery of final product
- Other industries creating demand for cardboard packaging

Potential Questions for the Election Jurisdiction

- Does your print vendor have back up packaging?
- Can an election jurisdiction be flexible to packaging alternatives?
- Can order fulfillment be different and still meet the jurisdiction's needs?

4.8 Asset Category 8: The ability of Print and Mail Vendors to Successfully Fulfill or Address Unknown, Urgent Requests or Issues Closer to Election Day

4.8.1 Threat Category 8: Supply Chain Constraints Reduce the Ability of Print and Mail Vendors to Successfully Fulfill or Address Unknown, Urgent Requests, or Issues Closer to Election Day

- Issue 1: Ballot changes that happen after proofing
- Issue 2: Envelope changes that happen after proofing
- Issue 3: Late or custom envelope orders
- Issue 4: Constant announcements by USPS of fewer hours to be open--USPS never or rarely announces they will offer longer hours of service
- Issue 5: USPS announces new delays and new revised delivery schedules
- Issue 6: Last minute ballot orders and absentee mail packets orders

Background:

Historically, it has been an asset that jurisdictions rely on and receive quick fulfillment of their urgent ballot and mail requests the closer and closer it gets to Election Day. It has also been an asset that the print and mail vendors can successfully react and overcome unknown, urgent challenges (i.e., transportation, warehousing) that are not directly related to a jurisdiction's order. Additionally, as new redistricting plans are approved, changed and sometimes challenged in court with last minute court rulings these variables result in delays of final ballot content. This forces election administrators, jurisdictions, and ballot and envelope vendors to emergently manage late ballot reprints which will further strain this critical supply chain challenge. In 2022, with the current supply chain issues, the asset of successful 'expedited services' will be more difficult to provide.

Vulnerability

- Availability of paper resources is less
- Availability of transportation resources is less
- Lack of labor resources
- Lack of all resources to react like we have been able to in the past

Risks

- Inability for print and mail vendors to fulfill last minute orders
- Delivery of final product

Potential Mitigating Strategies for the Election Jurisdiction

- Consider and work with your vendor to discuss paper and envelope inventory and how they could or could not fulfill a request in an emergency
- Confirm your print and mail vendor has reserve manufacturing capacity to handle an emergency.
- Manage expectation — when the lawsuits happen after candidate filing, print and mail vendors will NOT have the same flexibility and latitude to react as in the past
- If and when ballot access litigation occurs, confer with the print vendors and advise the court about practical deadlines to meet statutory requirements
- Consider changes to law providing for longer election lead times
- Consider your jurisdiction's decision process and how it impacts your vendor's manufacturing ability to fulfill your request in the current supply chain environment

Questions to Consider:

- What do you anticipate your print and mail emergency to be and what are the dependencies on paper and envelope supply chain issues?
- What do you anticipate your print and mail emergency to be and what are its dependencies on transportation?
- What is your county's print and mail contingency plan?
- The election timeline needs to be understood and met by the election jurisdiction. We all know lost days cannot be recovered by the jurisdiction or the print and mail vendors.

5.0 CONCLUSION

Successful elections require good partnerships from all parties. As we learn and understand these threats and issues, we need to work together to overcome them. Election planning, communication and extended lead times are the most important factors in this current supply chain environment. The guidance outlined in this document is an artifact intended to benefit all the respective stakeholders through the 2022 election cycle. The BP SCRM will continue to monitor these documented risks and will be glad to share these recommendations with Subsector partners as appropriate.