An Analysis of Convenience Voting Programs for Virginia

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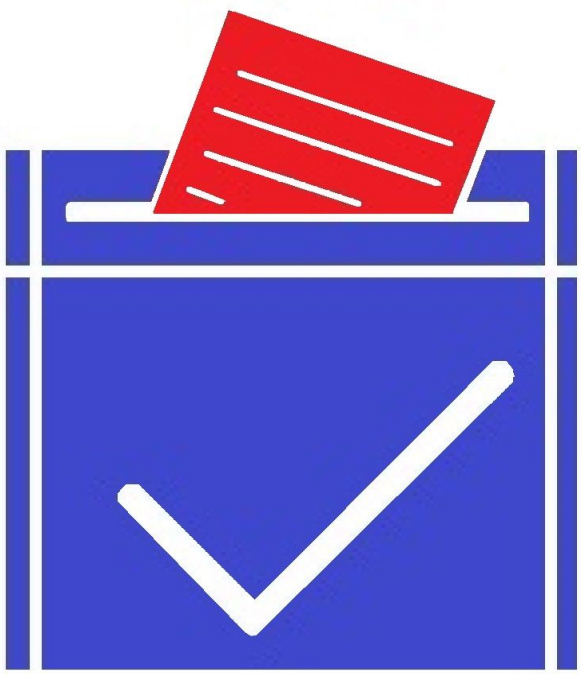

Prepared for:
Delegate David Toscano & Senator Creigh Deeds

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Disclaimer

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Acronyms

VBM:

Vote-by-Mail

EIP:

Early In-Person Voting

DOE:

Virginia Department of Elections

NCSL:

National Conference of State Legislatures

VERIS:

Virginia Election and Registration Information System

CAP:

Central Absentee Precinct

JLARC:

Joint Legislative Audit & Review Commission

Executive Summary

At 51% average voter turnout across a four year election cycle, Virginia's voter participation in state and federal elections is too low. This low turnout rate is primarily a result of Virginia's unique odd-year elections for governor and the General Assembly. In these years, particularly in elections the year before presidential elections when only the General Assembly is on the ballot, Virginia has turnout as low as 29%. Low turnout disproportionately affects minorities and youth voters. Furthermore, this system creates an above average incumbency rate in the General Assembly. As a result of these effects, Virginia's elections create a system where elected officials are less representative and less responsive on average. Virginia should pursue policies to increase voter turnout in all elections with an emphasis on odd-year elections.

In order to increase turnout across elections, this analysis evaluates the efficacy of convenience voting programs for Virginia. Convenience voting policies decrease the cost of voting for registered voters by increasing the available options for time, place and manner to cast a ballot. Most commonly, these policies include early in-person voting, absentee voting, and Vote-by-Mail. This analysis looks at five options for Virginia:

1. Vote-by-Mail
2. Odd-year Vote-by-Mail
3. Locality Vote-by-Mail under the Dillon Rule
4. No-excuse early in-person voting
5. Full in-person and by mail absentee system

Criteria considered include effectiveness, cost to Virginia and localities, cost per vote, administrative feasibility, election integrity, and political feasibility.

This analysis recommends that Delegate Toscano and Senator Deeds pursue a Dillon Rule implementation of Vote-by-Mail. The Dillon Rule option will increase overall voter turnout by 2,900,000 over the first twelve years of implementation and by as much as 20% in off-year elections when adopted by localities. While this is the third most effective among the considered options, the other Vote-by-Mail policies' low political feasibility ultimately reduces their efficacy. Early in-person and absentee voting show no evidence of increasing overall voter turnout despite often being adopted for that purpose. A Dillon Rule option will give the Commonwealth an opportunity to observe localities experimenting with best practices before investing in a broader Vote-by-Mail system for the rest of the state.

Problem Definition

At an average of 51% turnout over a four year election cycle, voter turnout in Virginia's elections is too low. Despite having relatively competitive turnout in national elections compared to other states, the Commonwealth's unusual odd-year elections for state level offices have notably low turnout. This is particularly pronounced in Virginia's off-year elections without either a national or gubernatorial race. In these years, immediately prior to presidential election years, turnout is frequently lower than 30% statewide. As the birthplace of American democracy, Virginia should strive to increase participation and substantive representation of all citizens in our democracy.

Low turnout affects all Virginians. However, low turnout in odd-year elections tends to suppress some groups of Virginians more than others. Compared to presidential election years, racial minorities, low income individuals, those without a college degree, and young voters tend to have low voter turnout. Wealthy voters and Virginians with higher than a bachelor's degree tend to vote at higher rates than average presidential years in odd-year elections ("Voter Retention," 2018). Consequently, Virginia's electorate, and the General Assembly, tends to be better educated, richer and whiter than the population of the Commonwealth as a whole.

Beyond the suppression of historically disadvantaged voting groups, Virginia's odd-year election structure creates an especially high rate of reelection for incumbent Delegates and Senators. Although incumbent state legislators tend to enjoy a high reelection rates nationally, Virginia's General Assembly routinely experiences well over a 90% incumbent reelection rate. The University of Virginia's Center for Politics found that the General Assembly, in the 10 regular election cycles between 1997 and 2015, had a 97% reelection rate of incumbents (Skelley 2017). In the 2015 cycle, a year with no national or gubernatorial races, the General Assembly experienced a 100% reelection rate for incumbents (Wilson 2015). However, incumbents' success does not stem from near universal agreement that the Assembly is doing a good job. A 2017 poll from Quinnipiac University found that only 38% of Virginians approved of the General Assembly's approach to its job (Brown & Rubenstein, 2017). Instead, incumbents owe their advantage to gerrymandering, fundraising, and suppressed turnout from Virginia's peculiar offset election cycles. Virginia's low turnout disenfranchises voters and perpetuates high incumbency; consequently, action is necessary for fair and representative elections.

Background

Background of Virginia Elections and Turnout:

Virginia is one of only a handful of states to hold elections every year; the Commonwealth's gubernatorial and General Assembly elections occur in odd numbered years (Peaslee & Schwartz 2013). This offset occurred by accident. The ratification of the Commonwealth's post-Civil War Constitution was intended to occur in the summer of 1868; consequently, the gubernatorial elections would have been in-line with the presidential contest that November. Instead, debate forced ratification into the following year, thus permanently offsetting Virginia's electoral schedule (Austermuhle 2017). As a result, Virginia's elections follow a four year cycle, in order: presidential year, gubernatorial year, midterm year, and off-year elections. In these odd-year cycles, Virginia holds elections with relatively less attention from the media, political parties and citizens. Unsurprisingly, these contests receive considerably less turnout than typical elections. While Virginia has relatively higher turnout in presidential years, 72% in 2016, off-year elections suffer from low turnout of registered voters. Gubernatorial years share similar turnout to midterm national elections; however, years with only General Assembly seats on the ballot often have turnout below 30% ("Registration/Turnout," 2018). Low turnout perpetuates an incumbent advantage for politicians in Richmond of 97%, one of the highest rates for state legislatures in the country (Skelley 2017).

Virginia Electoral Structure:

The Virginia State Constitution establishes requirements for the state's executive, legislative, and judicial elections. As a response to the restrictions of earlier iterations of the state constitution, the current version includes protections against legal restrictions on the right to vote like poll taxes or property taxes (Peaslee & Schwartz 2013). The Constitution also requires regular elections be held without interference. Finally, the Constitution entrusts the Virginia General Assembly with the ability to manage the operation and administration of the Commonwealth's elections ("Constitution"). Under this authority, the General Assembly created the Department of Elections and its ruling body, the State Board of Elections. The General Assembly empowers the board to "supervise and coordinate" the operation of local electoral boards and local registrars ("Code of Virginia").

Convenience Voting and Comparison to Other States:

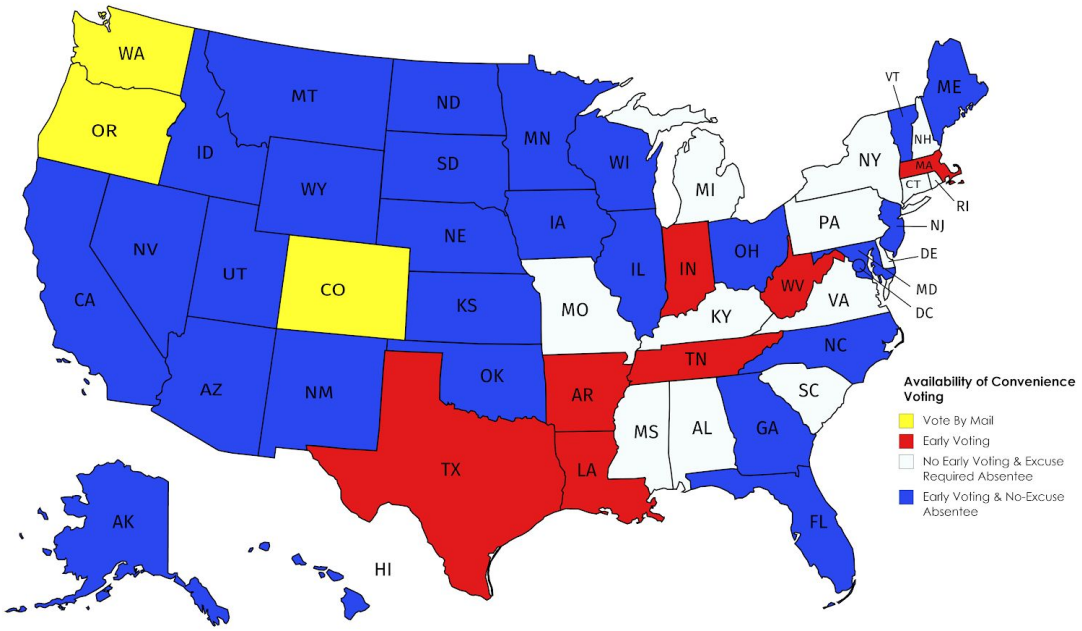
Convenience Voting programs are a combination of policy alternatives designed to reduce the burden on voters on and before election day, in order to increase voter turnout in those elections. Most commonly, the term refers to early in-person voting, no-excuse absentee voting, and Vote-by-Mail programs (Gronke, Galanes-Rosenbaum, & Miller, 2007).

Early In-Person Voting (EIP) or in-person absentee balloting allows citizens to vote prior to the scheduled election either at a satellite location or at a central elections office, typically the county seat (Gronke, Galanes-Rosenbaum, & Miller, 2007). 37 states and the District of Columbia offer some form of EIP voting with varying lengths and locations. While many non-EIP states allow some early voting to occur in person, like Virginia, EIP states require no excuse to participate in their early voting programs. Furthermore, unlike a standard absentee ballot, the state does not require any prior notification to vote early in traditional EIP states (“Absentee and Early," 2018). Virginia does not allow for no-excuse early in-person voting (Thomasson).

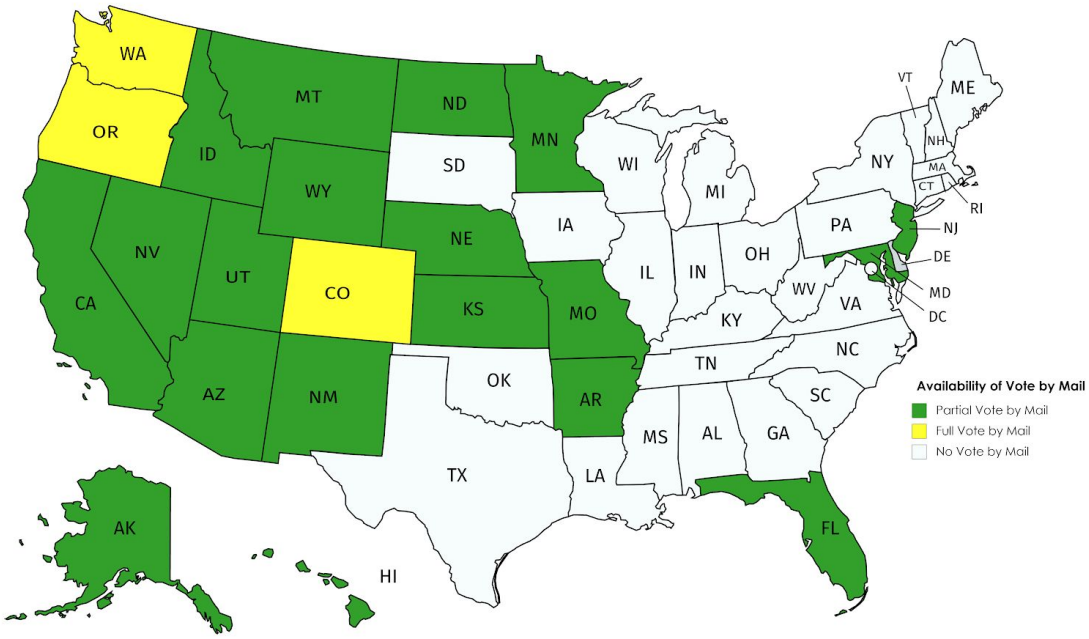
Absentee Voting is the most common form of convenience voting; all 47 states which do not allow for postal voting, permit absentee balloting (“Absentee and Early," 2018). 27 states allow voters to request a ballot without excuse (“Absentee and Early," 2018). The remaining 20 states require voters to provide a reason why voting on election day is impossible; acceptable excuses vary by state (Merrill;Thomasson). Nine states allow individuals to opt in to “permanent” absentee status, becoming de facto VBM voters (Gronke, Galanes-Rosenbaum, & Miller, 2007 | “All-Mail," 2018). Virginia does not allow for no-excuse absentee voting (Thomasson).

Vote-by-Mail (VBM) or postal voting programs replace traditional in-person polling stations with a postal vote for registered voters. Prior to an election, state officials mail each registered voter a ballot which corresponds to their precinct. Voters complete their ballots and return them in a secure envelope to the state or drop them off at the local municipal clerk. This program is designed to increase voter turnout by reducing transportation and time costs on election day. Oregon, Washington and Colorado are the only states to employ a VBM system for all elections; California will adopt VBM for all elections in 2018 (“All-Mail," 2018). However, 18 additional states use VBM in some elections (“All-Mail," 2018). Virginia does not allow postal voting (Thomasson).

Policy Diffusion of Convenience Voting ("Absentee and Early," 2018):



Policy Diffusion of Vote-by-Mail ("All-Mail," 2018):



Evaluative Criteria

To evaluate convenience voting programs in Virginia, this analysis focuses on six criteria: effectiveness, cost to the state and localities, cost effectiveness, administrative feasibility, election integrity, and political feasibility. These criteria were chosen to best represent the complete academic and political debate around the issue of convenience voting programs. These criteria are not evaluated with equal value. Effectiveness, which most directly relates to the problem of low voter turnout, is the primary evaluative measure of possible alternatives. All other criteria are considered in context to select the best possible solution for Virginia.

Criterion 1: Effectiveness

This analysis will consider the potential change in total votes caused by convenience voting alternatives. This will be the primary evaluation of the program's efficacy in addressing the core problem of low voter turnout. The overall differential in voting between elections will be measured as a function of the votes added over three complete four year voting cycles (i.e. presidential year, gubernatorial year, midterm year and off-year elections). This criterion will be operationalized with a quantitative estimate of the change in voter turnout after implementation utilizing data from academic studies of these programs' efficacy in other states and regions.

Criterion 2: Cost to the Commonwealth of Virginia and Localities

This analysis will consider the cost to the Commonwealth of Virginia in the form of appropriations from the General Assembly. Given the need for a balanced budget, direct costs and benefits to the state government of the Commonwealth will be a key measure in the feasibility of any program to be implemented. This criterion will focus on budget effects to the state budget; however, substantial changes in costs and benefits to localities and individuals will be noted. The data in this criterion is collected from both academic sources and election officials within the Commonwealth of Virginia.

Criterion 3: Cost Effectiveness Analysis

This analysis utilizes a cost effectiveness analysis to compare the cost-per-vote added between convenience voting alternatives. This criterion utilizes the outcomes of Criterion 1 and Criterion 2 to determine the cost effectiveness score of each option. Assumptions regarding costs and benefits of each option are derived from academic literature and interviews; they are

outlined in Appendix A. This cost effectiveness analysis employs a 12-year time horizon, to cover three complete cycles of Virginia elections, and a standard 7% discounting rate to compare the value of current and future dollars.

Criterion 4: Administrative Feasibility

These options intentionally alter the operation of Virginia's elections. They may create substantial administrative challenges for local elections officials across Virginia. As a result, it is key to evaluate whether it is possible to alter these voting systems in a timely and efficient fashion. This criterion evaluates the benefits and costs of convenience voting on the logistic challenge faced by local registrars and election boards. This includes the accuracy and speed of vote counting, training requirements, staffing requirements, voter interactions and interagency interactions. This criterion is evaluated qualitatively based on academic research and interviews with Virginia elections officials.

Criterion 5: Election Integrity

This criterion overlaps somewhat with political feasibility, but is important to differentiate given the political climate of the General Assembly and nation regarding the risk of voter fraud. Each of these programs will be evaluated based on similar programs enacted nationally and academic research on their effectiveness at preventing voter fraud, impact on voter perceptions of the election integrity and the change in the risk of lost or residual votes. While the efficacy of these options in increasing voter participation is critical, any gains would be largely made irrelevant if the election of the integrity is either reduced or is perceived to have been damaged by the implementation of any convenience voting program in Virginia.

Criterion 6: Political Feasibility

This evaluation will take into account the political feasibility of all options. This criterion is key because without political will in Virginia's legislature the efficacy of any convenience voting program is irrelevant. This analysis focuses only on the General Assembly and its members rather than the wider political conversation, because the Assembly has complete jurisdiction over this issue. While political feasibility can be difficult to operationalize, this analysis considers the cost of each program to the state of Virginia, the risk to incumbency caused by changes in turnout, the scope of policy diffusion in other states, and the presence of legislation introduced

in prior sessions of the General Assembly. These factors are utilized to create a qualitative measure of political efficacy.

Alternatives

Option 1: Vote-by-Mail

The Commonwealth could adopt a complete Vote-by-Mail program. As stated above, Vote-by-Mail (VBM) or postal voting programs replace traditional in-person polling stations with a postal vote for all registered citizens. Registered voters receive ballots via the postal service for all elections managed under Virginia's Department of Elections by localities. Rather than fill out a ballot at a polling place, voters only need to fill out a ballot, sign it and have a witness sign it. Once sealed, the ballot can be dropped off at secure balloting boxes, similar to USPS mailboxes, or mail it back in with a pre-paid envelope included with the ballot. This program primarily increases turnout in under-advertised off-year elections.

Effectiveness:

Although there is some academic dispute, the majority of research finds that VBM programs increase voter turnout by a statistically significant margin. Early investigations of VBM's turnout effect were completed after Oregon introduced the program in 1996 for a special election. When comparing against all statewide contests in Oregon, researchers found that postal voting accounted for over a 10% increase in voter participation statewide (Southwell & Burchett, 2000). However, this finding sampled only elections immediately following the adoption of VPM; consequently, no other major research on VBM has demonstrated a sustained substantively significant effect this large on overall voter turnout (Southwell & Burchett, 2000). Follow up research found that the long-term turnout improvement across all statewide elections was 4.7% in the absence of a "novelty effect" (Gronke, Galanes-Rosenbaum, & Miller, 2007).

While the effects on general elections are modest, researchers consistently observe a large effect on local and special elections. Such elections often experience large gaps in turnout when compared to general elections. Unlike traditional voting methods, postal voting increases awareness of elections by sending all registered voters ballots. In poorly advertised elections, this serves to activate voter participation. Studies have found that this mechanism resulted in a 7% increase in turnout for local elections (Kousser & Mullin 2007). Similarly, an analysis of special elections found that VBM reduced the turnout gap from 22 percentage points to 11 percentage points below the average for general election turnout (Gronke & Miller, 2012). Finally, a meta-analysis of all Oregon state postal elections found that in off-year and special

elections, VBM was responsible for a 20.1% increase in overall turnout of registered voters (Southwell 2007).

For Virginia, a full non-precinct VBM program would substantially increase turnout across a four year election cycle. Using a 4.7% rate increase for presidential, gubernatorial and midterm years and a 20.1% rate increase for odd-year and special elections, which the literature suggests should be representative of the impact of VBM, Virginia would experience approximately a *3,900,000* increase in total votes over a three complete four year election cycles (Southwell 2007 | Gronke, Galanes-Rosenbaum, & Miller, 2007). This is an average of 330,000 additional votes per year, although off-year elections disproportionately contribute to this number. Utilizing low estimates of voter turnout, 2% in presidential, gubernatorial and midterm years and 7% in odd-year elections, Virginia would still experience *1,500,000* additional votes over the same 12 year period (Southwell 2007 | Gronke, Galanes-Rosenbaum, & Miller, 2007).

Cost to the Commonwealth of Virginia and Localities:

A complete postal voting system adopted by the Virginia General Assembly would cost the state of Virginia approximately $3,000,000 over the first two years of implementation; however, localities would benefit from substantial cost savings (Flaxman et. al 2013). In Virginia, the state government is only legally responsible for limited costs in elections. Notably, they cost-share the state mandated salaries for all General Registrars, the salaries of local Electoral Board members, the full cost of presidential primaries, and the full cost of the Virginia Election and Registration Information System (VERIS). However, states do not cost-share any of the actual required functions of most state elections operation (Bencoach 2018). Consequently, the implementation of a full non-precinct postal voting system would not change the long run costs of the state in maintaining its electoral system. The only cost to the Commonwealth would come in updating VERIS to accommodate a more stringent verification system for ballots cast by mail, like the system adopted by Oregon which verifies all ballots against a database of voter signatures (Minnite 2017, Page 75). Virginia's upfront costs to improve and replace the VERIS system should parallel the state of Colorado which adopted full postal voting in 2013, the most recent state to do so. Updating the registration systems cost an estimated $1.5 million over the first two years of adoption, but fell to zero after the system was fully in place (Flaxman et. al

2013). For Virginia, additional capital and labor required to replicate these systems should cost approximately the same amount.

The most substantial change to costs is for localities. Studies of localities in states which have already adopted postal voting estimate cost savings on elections of between 33% and 50%. While the localities are subject to some upfront cost like secure ballot drop points, these costs are covered by savings from substantially reduced need for trained election officers and the rental of precincts (Southwell 2007). Colorado experienced a cost savings to counties of approximately $5,000,000 total in the years immediately following the implementation of Vote-by-Mail (Flaxman et. al 2013). These savings would of course be asymmetric across localities due to regional minimum wages and varying sizes of locality populations. For example, Charlottesville budgets $54,800 for the 2018 midterm election for a registered voter population of approximately 31,000 (Bencoach 2018). A Vote-by-Mail system in the city could save the local government between $18,000 and $27,400 during the 2018 midterms. However, Charlottesville represents only a small proportion of Virginia's registered voters. At the same cost per registered voter rate, Virginia counties could save in total between $3,200,000 and $4,750,000 each year after full implementation of a postal voting system.

Cost Effectiveness:

The cost effectiveness or cost per additional vote gained over historical trends can be analyzed for the state, localities and individuals. Assuming an implementation cost to the state of $1.5 million over the first two years and an increase of 3,900,000 votes over a three full election cycles (or 12 years), a full non-precinct VBM system would cost the state only $.69 per vote. This total does not consider the substantial cost savings experienced by localities. When the budget savings for localities are included, each additional vote in Virginia elections over a 12 year period saves the Commonwealth and its localities an estimated $9. Finally, while it is beyond the scope of this analysis, Vote-by-Mail also serves to substantially decrease transportation and time costs incurred by Virginia voters who will no longer need to go to a physical precinct on election day to cast their vote. This value is more difficult to quantify, but even a modest estimate of the average wait in line at a Virginia voting precinct amounts to tens of millions in cost savings for citizens of the Commonwealth. These cost efficiency measures

account for a discounted value of future expenditures and savings at a standard 7% rate, as explained in Appendix A.

Administrative Feasibility:

The ease with which local registrars and election boards can transition to and operate within new systems is foundational to the success of the program. Compared to the other options evaluated in this analysis, a complete Vote-by-Mail program has moderate administrative feasibility. Benefits of adoption include more accurate counting with more flexible deadlines for registrars and smaller staffs to oversee; however, increased voter error, more training, slower certification of elections and the necessity of increased coordination with third parties decrease the administrative feasibility of this option.

VBM increases the accuracy of the vote because election officers are able to count incoming ballots prior to election day, which decreases the need for recounts after the election (Gronke, Galanes-Rosenbaum, & Miller, 2007). While a lengthier voting period aids registrars before election day, ballots received after election day, but postmarked before deadlines create administrative friction for elections officials determining the outcome of races. It can take substantially longer to count incoming ballots and certify election, sometimes delaying a decision in elections for days or weeks (“All-Mail," 2018). Although delays are undesirable and could negatively affect perceptions of election integrity, any additional time in which ballots can still be received and tallied will reduce confusion for voters. Currently, Virginia absentee mail votes must be received by the local registrar before the end of voting at 7pm on election day. A longer post-election counting period will reduce the number of uncounted votes by mail voters unaware of the deadline or delayed by USPS (Bencoach 2018).

A VBM program increases the possibility of incorrectly completed ballots and raises the total number of residual votes. These lost votes arise primarily from voters who misunderstand the mail ballot’s certification of citizenship, signature and witness signature sections and thus fail to complete the legal requirements of their absentee vote (Bencoach 2018). While lost or residual votes are evaluated further under this analysis’ Election Integrity section, an increased total of ballot errors creates more work for central precinct absentee workers who will have to contact the voter to fix their ballot in-person (Flaxman et. al 2013). This represents a substantial increase in responsibilities for central precinct officers who are not currently tasked with

contacting voters to fix incomplete ballots (Bencoach 2018). The adoption of VBM could work to amend mail ballots to reduce the frequency of this problem. A more intuitive ballot with fewer required sections could alleviate some voter confusion. For example, Virginia's military absentee ballot eliminates the signature verification for citizenship and results in fewer incomplete ballots overall (Bencoach 2018). With the adoption of any form of VBM, Virginia localities must evaluate best practices of VBM states like Oregon to reduce the administrative burden of voter error (Minnite 2017, Page 75).

Under a postal voting system, registrars and local electoral boards must consider changes in benefits and costs to staffing and training. VBM eliminates the need for a large number of election officers to operate multiple precincts (Gronke, Galanes-Rosenbaum, & Miller, 2007). Lower staffing combined with limited locations ease the logistical strains on local registrars substantially. Instead, they would be responsible for only a moderately increased staff within the central precinct to tally the much higher number of mail ballots with a high-speed scanner (Bencoach 2018). The central precinct staff would require renewed training to operate the new VBM programs, but the time and financial costs of these trainings would likely mirror the already implemented training programs for election officers (Bencoach 2018).

Finally, interagency cooperation with the adoption of a complete non-precinct postal voting system will necessitate more robust cooperation between local registrars and the postal service. While informal relationships currently exist between Virginia's election and postal officials to secure the timely delivery of ballots, VBM will require a streamlined relationship. Under Virginia's current system, ballots must be relayed through central processing in Richmond rather than sent directly to local registrars. This can create multi-day delays and has disenfranchised mail voters who were otherwise in compliance. A new system should allow the direct transfer of ballot envelopes from local post offices to registrars (Bencoach 2018). Additionally, to improve both transparency and efficiency of the system, registrars should adopted smart barcodes to track when ballots were received and where they are to reduce the friction of lost or delayed votes in the postal service (Flaxman et. al 2013). These additional relationships and programs will increase administrative burden on registrars while adopting a full postal voting system.

Election Integrity:

Vote integrity, the risk of voter coercion and voter fraud are a primary concern for both proponents and critics of a large scale VBM program. However, decades of data from VBM states demonstrates that there is no substantial change in the risk of voter fraud from the adoption of a VBM system with rigorous vote matching (Minnite 2017, Page 71). Oregon for example utilizes a signature matching program overseen by local registrars. Over the first 12 years of the state's VBM program, the state investigated 5,400 election law complaints covering a large variety of possible infractions. There were only 26 criminal convictions relating to the VBM: including "non-qualified" voting, illegal signatures, and double voting. Oregon's rates of voter fraud prevention are actually better than average state elections due to a focus on verifying the legitimacy of individual ballots (Minnite 2017, Page 75).

Beyond the risk of actual voter fraud, loss of voter confidence in the integrity of the vote is a serious consideration in the adoption of a Vote-by-Mail option. There is substantial evidence that citizens are less likely to trust the integrity of the vote for non-precinct voting like VBM or absentee voting by mail. Studies suggest that voters within these systems are the least likely to believe that their vote is being counted (Alvarez, Hall, & Llewellyn 2008). Citizens of early adopting states like Oregon and Washington have among the least confidence in the integrity of their vote when compared to a national survey (Stewart 2011). Finally, citizens in VBM states perceive multiple voting, voter impersonation, and non-citizen voting as more significant problems than average voters nationally (Burden & Gaines 2015). While the evidence of actual fraud is limited, the perception of fraud should be addressed in parallel with the adoption of any new VBM system. This is especially important given evidence that racial minorities may be more subject to low confidence in the integrity of their vote and thus, at a higher risk of suppression under a non-precinct voting system (Alvarez, Hall, & Llewellyn 2008).

Finally, Vote-by-Mail and other non-precinct voting systems are subject to higher rates of lost or residual votes than traditional voting schemes. Residual votes include all ballots which are requested but not received by voters, sent back to the state but not received, or received by the state (by mail or in person) but ultimately not counted. Due to the intermediary actors in VBM, these systems are subject to more opportunities for a vote to be lost. It is estimated that mail voting programs experience approximately double the rate of lost votes of traditional precinct voting (Burden & Gaines 2015). While rates of loss vary in any given election, they

typically represent a small proportion of vote totals. However, there are instances of precincts experiencing residual vote totals, including both in-person and by mail voting, greater than the margin of victory in a given election (Stewart 2011). These instances are largely isolated and present in all forms of voting, but closing the residual gap between mail in votes and in person voting must be a focus of VBM implementation.

Political Feasibility:

The political feasibility of a fully adopted non-precinct postal voting system is low when compared to both the status quo and other convenience voting alternatives due to high costs, risk to incumbents, low levels of policy diffusion and lack of policy history. As stated in the Cost Criterion of Option 1, a VBM program in Virginia would require an initial investment of $3 million over two years to update the state's VERIS system (Flaxman et. al 2013 | Bencoach 2018). With a requirement for a balanced budget, this startup cost represents a substantial barrier to adoption in Virginia's General Assembly. Furthermore, this option will increase the risk of incumbent turnover which will reduce buy-in from members of the General Assembly. Incumbents who face low turnover, could face additional pressure, especially in off years, if voter turnout increases by substantively significant amounts (Skelley 2017 | Southwell 2007). Assembly members are equally likely to be deterred by the lack of policy diffusion. With only three states as examples of all-election VBM, Virginia would be a leader in the policy experiment without incremental policy steps ("All-Mail," 2018). Finally, Vote-by-Mail legislation with more limited scope has twice failed in the Virginia General Assembly (Rodman 2018 | Simon 2014). In totality, these factors suggest that a full non-precinct Vote-by-Mail system is unlikely to pass the General Assembly in the near future.

Option 2: Odd-Year Election Vote-by-Mail

This option targets Virginia's odd-year elections rather than all elections by mandating that the Department of Elections operate postal voting elections only in years with no federal elections. Virginia's low average turnout stems primarily from these elections and particularly the non-gubernatorial elections which occur in the year prior to presidential elections. Federal elections with Congressional and presidential races on the ballot would still be conducted through the standard precinct polling place model utilized today.

Effectiveness:

Under this proposed Vote-by-Mail program, the benefits to voter turnout would be the same as a complete non-precinct VBM program; however, the benefits would only be realized in odd-year elections. The research suggests that gubernatorial years, like midterm years and presidential years, should experience approximately 4.7% increase in overall turnout among registered voters after a novelty effect has worn off (Gronke, Galanes-Rosenbaum, & Miller, 2007). In off-year elections immediately prior to presidential years, the effects will be more profound. As in the Vote-by-Mail option, an all-postal election should increase the turnout of registered voters by approximately 20.1% overall (Southwell 2007). However, this program does not affect the operation of even-year elections when there are federal elections run in parallel with state and local elections; consequently, they have zero effect on turnout trends in these years.

For Virginia, the effect of an odd-year VBM program would also substantially increase the overall level of registered voter turnout; however, less so than with complete adoption of postal elections. Over three complete election cycles, Virginia can expect an increase of approximately *2,900,000* votes to the baseline or an average of *490,000* votes per year affected by the program. With low end estimates of postal voting efficacy in odd-years, the Commonwealth would still see increased voter turnout by *1,100,000* votes, approximately *180,000* votes per odd-year election.

Cost to Commonwealth of Virginia and Localities:

A partial postal voting system in Virginia's odd-year state elections would cost the Commonwealth the same initial investment cost as a full VBM program, at approximately $1,500,000 per year for a two year implementation period (Flaxman et. al 2013). There are no reduced cost under the partial system because the state would still need to update the VERIS program in order to accommodate the statewide adoption of VBM and assure a secure vote in gubernatorial and off-year elections. Localities, on the other hand, will have reduced benefits from the partial introduction of VBM when compared to Option 1. The differential is largely due to the continued operation of relatively high cost precinct based election in even-year elections with federal contests. Local governments can still expect to save between $3,200,000 and $4,750,000 across all electoral boards in odd-year elections. However, there is likely to be some

additional training costs for election officials to run a mixed system which changes year to year (Bencoach 2018).

Cost Effectiveness:

Like a full non-precinct VBM system, it is important to consider the cost differential per vote for the state, localities and individuals following the adoption of an odd-year partial Vote-by-Mail program. The initial estimated implementation expenditures by the General Assembly are identical between this option and a full VBM program; however, this option is less cost effective due to the nature of a partial VBM system. This program garners no additional votes in even-year elections which substantially cuts in to the votes per dollar measure. As a result, the direct cost to the state per vote gained is $.93. At the local level, this option creates cost savings similar to full VBM, but only every other year. As a result, the cost savings per vote for the state and its localities over a 12 year period are only approximately $5. Costs and benefits to individuals are beyond the scope of this analysis, but the adoption of partial Vote-by-Mail would create considerable time saved benefits to citizens in off-year elections, possibly totaling in the tens of millions of dollars. The assumptions and formulas for these cost effectiveness measures are located in Appendix A**.**

Administrative Feasibility:

A partial adoption of postal voting in only Virginia's odd-year elections would share similar administrative feasibility advantages and disadvantages to all-election postal voting; however, this option would have the increased administrative burden of operating both this new system, as well as, the old system in years with federal elections. With the implementation of this program, Virginia election officials should expect more accurate, but slower counting of ballots, possibly leading to delays in vote certification ("All-Mail," 2018 | Gronke, Galanes-Rosenbaum, & Miller, 2007). All mail balloting will increase the risk of voter error and require local officials to contact voters to correct incomplete ballots (Flaxman et. al 2013). These errors maybe more severe in a mixed system due to voter confusion in the odd-year postal elections. Benefits to staff size and training are reduced in this option by the need for election officer retention and training in both election types. Like full VBM, cooperation with USPS is necessary to operate elections with minimized lost votes (Bencoach 2018). Odd-year postal

voting limited benefits and increased costs to registrars due to the dual election system make the system less feasible when compared to the status quo or a full VBM system.

Election Integrity:

The risk of fraud and other election integrity concerns are largely the same for both all-election VBM and the odd-year election VBM options. The actual risk of voter fraud will remain unchanged or decrease from a standard precinct system given the adoption of best practices observed in early adopting states like Oregon (Minnite 2017, Page 75). However, citizens may perceive Virginian elections as more prone to voting violation following any scale adoption of a vote-by-mail program (Stewart 2011). In a partial VBM system, this effect may be magnified by the juxtaposition of precinct elections in even years and any decrease in incumbency advantage in off-year elections likely to result from higher turnout. Finally, lost or residual vote totals are likely to experience a statistically significant increase with the adoption of VBM (Burden & Gaines 2015). Both voter confidence and the increase in residual votes are important to address in implementation, but ultimately are unlikely to substantially affect the integrity of the Commonwealth's elections following a possible implementation of partial VBM.

Political Feasibility:

An adoption of odd-year postal voting in Virginia has low political feasibility in comparison to all alternatives other than a full adoption of the system. As noted above, a partial VBM program shares the same costs as a full adoption, $3 million; the necessity of a substantial appropriation makes the adoption of the program far more difficult in the General Assembly (Flaxman et. al 2013). Furthermore, the risk to incumbents remains essentially the same across Options 1 & 2. The most substantial change to incumbent insecurity is likely in Virginia's off-year elections which would still be covered by the partial VBM system (Skelley 2017 | Southwell 2007). Partial postal voting does have the advantage of greater levels of policy diffusion with 21 states utilizing some form of VBM ("All-Mail," 2018). However, this is still unlikely to create the political will to explore new substantive policies in Virginia. As stated above, all VBM legislation in the General Assembly has failed to pass either chamber (Rodman 2018 | Simon 2014). While more feasible than a full VBM system, the adoption of an odd-year partial postal voting program is very unlikely.

Option 3: Allow Municipalities Flexibility to Allow Vote-by-Mail

The General Assembly could give municipalities flexibility in their implementation of a Vote-by-Mail program. As a Dillon Rule state, Virginia's General Assembly must give municipalities permission to experiment with new policies in specific areas. To act as a low cost proof of concept, the General Assembly could pass legislation allowing the implementation of VBM elections for counties and independent cities which wish to transition. This policy allows state level officials to observe the impact of these programs within the state before considering a more substantial adoption of the policy. If municipality pilot programs prove to be as effective as they have been in other states adopting this program, then Virginia's General Assembly can consider a more substantial adoption of the program.

Effectiveness:

The efficacy of a Dillon Rule postal voting program is largely reliant on the rate of adoption. It is impossible to predict with significant accuracy the behavior of all 133 Virginia local electoral boards. However, an estimate of adoption rate can be made using other state adoption rates as case studies. In 1981, Oregon allowed localities to run local and special elections through VBM. Within six years, the majority of Oregon's counties utilized VBM and the program was made permanent (Richardson 2018). This option would allow for adoption of VBM by localities for all elections not just special and locals. Consequently, this analysis estimates a slower adoption rate of localities; specifically, a 10 year window to achieve 50% adoption rate or 5% per year. With this assumption, Virginia election officials could expect to add *2,400,000* votes over a twelve year period.

Cost to Commonwealth of Virginia and Localities:

A Dillon Rule allowance of VBM by localities should not cost the state of Virginia any additional funds to implement. Because the option itself is simply legislation changing the restrictions on localities, the Commonwealth does not need to change any other funding structures. Currently, the state's only expenditures are on partial cost sharing for the salaries of officials required by state law and the maintenance of the state's voter registration system, VERIS. The state does not cost share any other portion of election costs with localities (Bencoach 2018). As a result, localities that adopt some form of VBM after the passage of this legislation would be responsible for all costs and benefits associated with the program.

Localities should expect to save between 33% and 50% of expenditures on traditional precinct based election models, after an early investment in capital like secure vote dropboxes and ballot verification systems (Southwell 2007).

Cost Effectiveness:

For the Commonwealth of Virginia, it is impossible to evaluate a cost effectiveness score due to zero cost for the state government. At the local level, cost savings from a Dillon Rule options are substantial. Assuming a 5% adoption rate per year and a 50% savings rate in each locality which adopts the program, Virginia localities can expect to save approximately $4 for every vote gained over a 12 year program or a total of approximately $10.1 million. Assuming a more conservative 30% savings rate, localities still save $2.60 cents per vote for a total cost savings of $6 million. This cost effectiveness score makes Dillon Rule the third most cost effective option behind the other Vote-by-Mail options. The cost effectiveness analysis assumptions are described in Appendix A.

Administrative Feasibility:

A Dillon Rule adoption of VBM would have low administrative feasibility when compared to both the status quo and other forms of convenience voting. Localities which adopt a full non-precinct postal voting program will experience benefits and costs similar to a statewide adoption of the program. Registrars could expect slower but more accurate voting, smaller staffs to manage and an increased need to coordinate with local postal officials (Gronke, Galanes-Rosenbaum, & Miller, 2007 | Bencoach 2018). However, early adopting municipalities of Vote-by-Mail at any scale will have to introduce and run the program without any state investment. This is particularly noteworthy in voter registration. Localities will have to work with the current version of VERIS, the state's voter registration system, which is not designed for a secure and efficient use of all-mail balloting (Bencoach 2018). Without state buy-in or funds, registrars would be required to devise compliant balloting, but may be unable to replicate best practices like Colorado's signature verification system (Minnite 2017, Page 75). There are substantial benefits to local election officials who chose to adopt a VBM program under a Dillon Rule option; however, compared to other forms of convenience voting and the status quo, this option would be the most difficult for individual registrars and election boards to implement.

Election Integrity:

While the overall risk to election integrity remains inconsequential, this policy has a higher probability of violations than other scopes of VBM in Virginia. Unlike a policy crafted and scoped at a state level, the election integrity of a locally operated Vote-by-Mail program is less certain. Assuming equal funding for the localities elections board and registrar, the election operation would likely cost less (Gronke, Galanes-Rosenbaum, & Miller, 2007). Consequently, local election authorities could have more funding to assure a secure process for counting votes. However, without a state mandate, it is uncertain that all localities would utilize an effective system like the signature verification utilized in Oregon (Minnite 2017, Page 75). Under a Dillon Rule option, localities adopting VBM would still be subject to a higher risk of residual or lost votes due to the mail (Stewart 2011). These local experiments are likely to be subject to significant skepticism and perceptions of poor integrity given the lack of regional examples of successful Vote-by-Mail programs (Burden & Gaines 2015).

Political Feasibility:

A Dillon Rule postal voting option has moderate political feasibility in the Virginia General Assembly. Unlike Vote-by-Mail options with a greater scope, this exploratory option does not require an initial investment by the General Assembly. Other than the standard operating budget for the Virginia Board of Elections, which will remain unchanged, the implementation costs of this option fall completely on localities (Bencoach 2018). The narrower scope and limited implementation also decreases the risk to incumbents. Only a limited number of localities will experiment with postal voting and consequently, this option is unlikely to substantively lower Virginia's incumbency rate (Skelley 2017). While both have failed, the VBM bills introduced to the General Assembly in 2014 and 2018 were a limited adoption of VBM very similar to this option. Consequently, it is evident that there is, although fairly limited, a political will to approach this policy in the future (Rodman 2018 | Simon 2014). Although rapid adoption is unlikely, this option possess substantially higher political feasibility than either Options 1 or 2; however, it is still less feasible than other convenience voting options or the status quo.

Option 4: Extended Open Early Voting

The General Assembly could, through the Department of Elections, open a no-excuse in-person voting period for a 45 day period prior to the scheduled election day only at the central

precinct of each municipality, with some municipalities opting to offer additional satellite locations. Early In-Person Voting (EIP) or in-person absentee balloting is a nationally common form of convenience voting with 37 states and the District of Columbia offering some form of EIP voting with varying lengths and locations. Virginia's in person absentee program already operates a central precinct voting option for a 45 day window prior to an election. This option would require only marginally more staff to operate a higher population early voting window.

Effectiveness:

The effects of EIP voting programs on turnout are limited. There is some international evidence that municipalities that vote on weekends or holidays do experience substantially higher turnout (Blais, 2006). Some studies find, the presence of convenience voting, including EIP, share a strong positive correlation with turnout (Blais, Massicotte, & Dobrzynska, 2003). However, other domestic investigations frequently conclude that when accounting for state characteristics, convenience voting procedures, including time and place, demonstrate no statistically significant effect on turnout (Norris, 2004). A 1997 study found that any gains in voter turnout may have a partisan tilt toward Democrats, but are made irrelevant by adjusted campaign activities after initial elections (Stein & Garcia-Monet, 1997). Some studies find a small statistically significant relationship in their analysis of convenience voting techniques, but given the small size of the effect, the efficacy of EIP and other convenience voting in raising turnout rates is questionable. Researchers suggest these programs offer benefits beyond turnout effects including higher accessibility, cost savings in some cases, and more accurate vote counting which may still justify implementation (Gronke, Galanes-Rosenbaum, & Miller, 2007).

For Virginia, there is no evidence that an EIP voting system without excuses would alter the states voter turnout in any statistically significant way. With the implementation of such a program, the state could experience a novelty effect which temporarily increases the registered voter turnout in all elections; however, any effect would be limited and muted by the fact that Virginia already operates a long EIP system with a flexible excuse required. There are other benefits to adoption of an EIP program for Virginia, but policy makers should not anticipate any improvement to the core criteria of registered voter turnout.

Cost to Commonwealth of Virginia and Localities:

An early in-person voting program would require no additional appropriations by the Commonwealth of Virginia. Identical to the current administration of early in-person voting with excuse required, Virginia's localities will cover the whole cost of the voting administration (Bencoach 2018). An expanded EIP program may require additional staffing on high traffic days and consequently cost localities more to operate (Gronke, Galanes-Rosenbaum, & Miller, 2007). However, additional staffing requirements would be largely marginal, requiring only a few more staff members in the central precinct at most. These employees would cost between $200 and $300 per day presuming a minimum wage higher than the state average. More rural precincts could employee additional election officers for lower per day cost (Bencoach 2018). EIP would be relatively the lowest cost alternative to implement convenience voting in Virginia.

Cost Effectiveness:

An early in-person no excuse absentee program has zero effectiveness in this analysis. The adoption of EIP will increase costs for localities marginally. However, with zero statistical significance in improving voter turnout and zero cost to the Commonwealth of Virginia's state government, it is impossible to evaluate the cost per vote gained. It is possible that in-person absentee voting may change turnout on the margins, but it is unlikely to impact turnout enough to justify a cost-effectiveness score.

Administrative Feasibility:

The administrative feasibility of early in-person voting is high when compared to other convenience voting options and the status quo. The operation of the early voting period would occur essentially identically to the status quo. Per Virginia law, the early voting period would commence 45 days prior to the election in the locality's central precinct (Thomasson). There would be a need for an increased staff to accommodate higher volume especially on weekend voting days; however, this would represent an increase of only a handful of staffers who require no special training other than the base level election officer training (Bencoach 2018). Like VBM, EIP increases the accuracy of the count by starting ballot counting earlier. EIP does not carry the same risk of delayed certification and late ballots. Ballot counting and certification of the election would occur on the same schedule as the status quo (Gronke, Galanes-Rosenbaum, & Miller, 2007). EIP voting is minimally disruptive to the current electoral

system while increasing the accuracy of ballot counting; consequently, this option has the highest administrative feasibility of possible alternatives to the status quo.

Election Integrity:

The risk of endangering election integrity in an early voting system is almost identical to a standard election day precinct system (Minnite 2017, page 36). In any presidential election year, tens of millions of Americans vote, but only a few hundred ballots are determined to be possibly fraudulent (Minnite 2017, page 12). For Virginia, this accounts for only a handful of votes. Adopting an option for no excuse early voting is unlikely to have any effect on the likelihood of in-person voter fraud. Unlike other convenience options, early in-person voting does not affect the likelihood of lost or residual ballots (Stewart 2011). However, voter confidence in the integrity of elections may be reduced, similar to other forms of convenience voting. National surveys demonstrate that more voters in states with higher proportions of early voting believe that voter impersonation, non-citizen voting and absentee fraud are “very common” than voters in average systems (Burden & Gaines 2015).

Political Feasibility:

Early in-person voting has the highest political feasibility of any alternative in this analysis. This option relies purely on changed requirements for how localities operate their elections. As a result, it carries no need for appropriations from the General Assembly, only an amendment to the existing code on early voting (Bencoach 2018). Because there is little evidence of the efficacy of EIP to raise voter turnout, this option poses essentially no threat to incumbents (Gronke, Galanes-Rosenbaum, & Miller, 2007). Similar legislation has been consistently introduced, but has garnered little momentum. The most recent version was left in Privileges and Elections in 2018 (Sullivan 2018). With substantial policy diffusion, 37 states have EIP, Virginia’s General Assembly has adequate information to adopt EIP with little uncertainty of its effects (“Absentee and Early," 2018). Together, these factors make the adoption of early in-person absentee voting relatively feasible in comparison to all other convenience voting alternatives.

Option 5: No-excuse Mail and In-Person Absentee Voting

The Department of Elections could remove the excuse requirement for participating in an election via an absentee mail ballot or in-person voting. As stated above, absentee voting is the most common form of convenience voting; all 47 states which do not allow for VBM permit absentee balloting. However, Virginia allows only a very limited form of absentee voting. The Secretary of the Commonwealth allows voters to absentee voting if they meet one of 20 acceptable requirements including: disability, work, vacation, pregnancy, military service or religious obligation (Thomasson). While the verification standards for these excuses are relatively lax, they impose time and informational costs on perspective absentee voters which may decrease the utilization of the program. This option is a combination of a limited vote-by-mail program and an EIP program. It would allow for no-excuse in-person voting for the same 45 day period as EIP and would give voters flexibility to vote-by-mail by requesting an absentee ballot prior to the election period.

Effectiveness:

Like early in-person voting programs, absentee balloting appears to have only a small effect on turnout across all elections. When excluding VBM, programs like absentee balloting resulted in no notable turnout effect (Fitzgerald, 2005). There is evidence that the adoption of a no-excuse absentee program may marginally decrease voter turnout in some elections (Gronke, Galanes-Rosenbaum, & Miller, 2007). While studies have consistently concluded these programs were ineffective at increasing turnout, but, as noted above, they highlighted the other positive aspects of the program including cost and logistic improvements (Gronke, Galanes-Rosenbaum, & Miller, 2007). For Virginia, there is no evidence that policy makers should expect any increase in voter turnout from a full no excuse absentee program.

Cost to Virginia:

A full in-person and by-mail absentee program will require no additional appropriations from the state of Virginia. All additional costs from an absentee voting program will be covered by Virginia's localities. These costs will be marginally more than an EIP program for localities. Central precincts will require additional staff to operate the in-person absentee voters and two to three times as many staff operating in the central absentee precinct or CAP (Bencoach 2018). Furthermore, the CAP may require an additional high speed scanner depending on the rate of

absentee mail ballot adoption in a locality (Bencoach 2018). Localities will still be required to operate the standard election day voting and thus do not save any money with the adoption of this program (Gronke, Galanes-Rosenbaum, & Miller, 2007). Regardless, of these additional costs, a full absentee voting program is still the lowest cost convenience program other than an EIP only program.

Cost Effectiveness:

Like EIP, it is impossible to evaluate a cost effectiveness score for a full in-person and by mail absentee program. The cost to the Commonwealth is zero to operate this program and there is no evidence that any form of absentee voting would increase the voter turnout rate in the state. Although there are costs at the local level, the lack of efficacy in improving turnout makes a cost effectiveness evaluation ineffective.

Administrative Feasibility:

A complete adoption of no-excuse absentee voting has moderate to high administrative feasibility. Like an EIP only system, this option builds entirely on the already existing central precinct operation to work. The central precinct would operate for 45 days prior to the election with only marginally more required staff (Thomasson | Bencoach 2018). Additionally, the CAP, frequently but not always the central precinct, would require two to three times as many staffers to run scanners of ballots. The CAP may also opt to purchase additional scanners to reduce the need for labor and expedite absentee mail ballot processing (Bencoach 2018). A full absentee system increases the accuracy of ballot counting, but without the risk of delays from VBM (Gronke, Galanes-Rosenbaum, & Miller, 2007). A full absentee system imposes a more severe burden on local election officials than an EIP only option or the status quo, but remains substantially more administratively feasible than any version of postal voting.

Election Integrity:

Like in person voter fraud, absentee voter fraud does occur; although, it is infrequent and requires a high level of effort to perpetrate. Additionally, state governments easily can make attempting absentee fraud high risk by keeping updated voter rolls and purging deceased voters to prevent double voting and impersonation. (Minnite 2017, Page 35). Voter fraud in an absentee system in Virginia is unlikely to be widespread or threaten the integrity of the

Commonwealth's vote. Like other forms of convenience voting, however, citizens tend to report higher perceived levels of "common" fraud in their voting system when absentee balloting is commonly used (Burden and Gaines 2015). Finally, absentee voters are subject to higher levels of lost or residual ballots than standard or EIP precinct voting. Similarly to VBM systems, absentee ballots transmitted via the mail are nearly twice as likely to be lost (Stewart 2011). Voters who take advantage of state's 'permanent' absentee balloting are even less likely to have their ballot counted (Burden and Gaines 2015). However, only nine states have adopted this policy and other absentee voters do not experience this negative effect on returning ballots ("Absentee and Early," 2018).

Political Feasibility:

Full no-excuse absentee balloting has moderate to high political feasibility in Virginia's General Assembly. Like EIP and Dillon Rule VBM, a no-excuse absentee program will be cost-less to the state of Virginia with all costs falling on localities to meet the requirements of the law (Bencoach 2018). The option carries no risk of reducing incumbency advantage in the state because it has no statistically significant effect on voter turnout (Gronke, Galanes-Rosenbaum, & Miller, 2007 | Skelley 2017). No-excuse absentee programs are well studied and have been adopted by 27 states ("Absentee and Early," 2018). Finally, there have been bills to implement this policy introduced to the General Assembly as recently as 2018; however, they have not left the Committee on Privileges and Elections (Heretick 2018). No-excuse mail and in-person absentee voting could reasonably gain support in the General Assembly due to its low political and fiscal costs, as well as, its well documented policy diffusion.

Outcomes Matrix & Recommendation

Outcomes Matrix:

	Option 1: Full VBM	Option 2: Partial VBM	Option 3: Dillon Rule	Option 3: Early In-Person	Option 5: Full Absentee
Effectiveness (Votes Added)	**3,900,000**	**2,900,000**	**2,400,000**	**0**	**0**
Cost to Virginia	**$3,000,000**	**$3,000,000**	**$0**	**$0**	**$0**
Cost to Localities	**($35,016,000)**	**($17,200,000)**	**($10,100,000)**	**$31,500,000**	**$104,000,000**
Cost per Vote	**($9)**	**($5)**	**($4)**	**N/A**	**N/A**
Administrative Feasibility	**Moderate**	**Moderate-Low**	**Low**	**High**	**High**
Election Integrity	**Moderate-High**	**Moderate-High**	**Moderate**	**High**	**Moderate-High**
Political Feasibility	**Low**	**Low**	**Moderate**	**High**	**Moderate-High**
All evaluations made on a 12 year time horizon. Additional Assumptions in Appendix A					

Recommendation:

This analysis recommends that Delegate Toscano and Senator Deeds pursue ***Option 3***, a Dillon Rule allowance for localities to adopt postal voting for any election type. While this option does not have the highest effectiveness of the Vote-by-Mail alternatives, the low political feasibility of more comprehensive systems combined with their upfront costs to the Commonwealth make their adoption highly unlikely in the near future. Consequently, a Dillon Rule option gives Virginia the best chance to partially adopt Vote-by-Mail and increase voter turnout rate overall. Neither early in-person nor complete absentee programs can be recommended due to their lack of efficacy in increasing turnout.

Considerations for Implementation:

A Dillon Rule implementation of Vote-by-Mail offers the Commonwealth of Virginia the opportunity to substantially increase voter turnout in the state without incurring substantial costs during the early stages of the program. However, relative to a full implementation of Vote-by-Mail, a partial program has lower administrative feasibility and election integrity, largely due to the diffuse decision making during implementation by local election officials. In order to offset these concerns, the legislation allowing for local VBM should also contain language directing the Department of Elections to produce a best practices document for circulation to local registrars across the Commonwealth. Possible inclusions for this document include:

1. At least, one secure dropbox for ballots in all tradition physical precincts (Southwell 2007).
2. A signature verification system paralleling the Oregon system to ensure the integrity of the vote (Minnite 2017, Page 75).
3. Extensive information campaigns to produce local buy-in and increase trust in ballots delivered via Vote-by-Mail (Stewart 2011).
4. Partnership with local post offices to develop smart ballot tracking and other programs which increase transparency and efficiency of ballot delivery (Flaxman et al. 2013).

Future Considerations:

This analysis addresses the benefits and costs of a Dillon Rule VBM adoption on a 12-year time horizon; however, members of the General Assembly should consider program evaluation on a much shorter time scale. Locality-based adoption should be considered a pilot program for a larger scale postal voting system, either in all elections or specifically targeted at odd-year elections. Legislators should revisit the program within five years, which is the same time period that Oregon waited before expanding their VBM program (Richardson 2018). At this time, proponents should commission JLARC studies of VBM localities in the Commonwealth to evaluate their best practices in early adoption along the criteria utilized in this analysis.

References:

Absentee and Early Voting. (2018). Retrieved January 29, 2018, from http://www.ncsl.org/research/elections-and-campaigns/absentee-and-early-voting.aspx

All-Mail Elections (aka Vote-By-Mail). (2018). Retrieved April 26, 2018, from http://www.ncsl.org/research/elections-and-campaigns/all-mail-elections.aspx

Alvarez, R. M., Hall, T. E., & Llewellyn, M. H. (2008). Are Americans Confident Their Ballots Are Counted? *The Journal of Politics*, *70*(3), 754–766. https://doi.org/10.1017/S0022381608080730

Austermuhle, M. (2017, September 13). Why Does Virginia Hold Elections In Off-Off Years? Retrieved January 29, 2018, from https://wamu.org/story/17/09/13/virginia-hold-elections-off-off-years/

Bencoach, R. (2018, April 17). Interview with Charlottesville Registrar.

Blais, A. (2006). WHAT AFFECTS VOTER TURNOUT? *Annual Review of Political Science*, *9*(1), 111–125. https://doi.org/10.1146/annurev.polisci.9.070204.105121

Blais, A., Massicotte, L., & Dobrzynska, A. (2003). *Why is turnout higher in some countries than in others?* Elections Canada Ottawa.

Brown, P., & Rubenstein, P. (2017, April 11). Quinnipiac University Poll: Virginia 2017.

Burden, B. C., & Gaines, B. J. (2015). Presidential Commission on Election Administration: Absentee and early voting: Weighing the costs of convenience. *Election Law Journal*, *14*(1), 32–37.

Casting a Ballot | Virginia Department of Elections. (2018). [Government Database]. Retrieved April 30, 2018, from https://www.elections.virginia.gov/casting-a-ballot/index.html

Code of Virginia - Title 24.2. Elections, Title 24.2 Virginia State Code §. Retrieved from https://law.lis.virginia.gov/vacode/title24.2/

Constitution of Virginia (1971). Retrieved from https://law.lis.virginia.gov/constitutionfull

Fairfax Department of Elections Budget. (2018). Fairfax County, Virginia. Retrieved from fairfaxcounty.gov/budget/sites/budget/files/assets/documents/fy2018/advertised/volume1/15.pdf

Fitzgerald, M. (2005). Greater Convenience But Not Greater Turnout: The Impact of Alternative Voting Methods on Electoral Participation in the United States. *American Politics Research*, *33*(6), 842–867. https://doi.org/10.1177/1532673X04274066

Flaxman, S., Hyacinthe, M.-F., Lawson, P., & Peters, K. (2013). Voting by Mail: increasing the use and reliability of mail-based voting options.

Gimpel, J. G., & Schuknecht, J. E. (2003). Political participation and the accessibility of the ballot box. *Political Geography*, *22*(5), 471–488. https://doi.org/10.1016/S0962-6298(03)00029-5

Gronke, P., Galanes-Rosenbaum, E., & Miller, P. A. (2007). Early Voting and Turnout. *PS: Political Science & Politics*, *40*(04), 639–645. https://doi.org/10.1017/S1049096507071028

Gronke, P., & Miller, P. (2012). Voting by mail and turnout in Oregon: Revisiting Southwell and Burchett. *American Politics Research*, *40*(6), 976–997.

Heretick, S. HB 1072, Pub. L. No. HB 1072 (2018). Retrieved from https://lis.virginia.gov/cgi-bin/legp604.exe?181+sum+HB1072

Jones, S. C. HB 5002: Virginia Biannial Budget, Pub. L. No. HB 5002 (2018).

Kousser, T., & Mullin, M. (2007). Does Voting by Mail Increase Participation? Using Matching to Analyze a Natural Experiment. *Political Analysis*, *15*(04), 428–445. https://doi.org/10.1093/pan/mpm014

Merrill, D. (n.d.). Absentee Voting [Government]. Retrieved January 29, 2018, from http://portal.ct.gov/SOTS/Election-Services/Voter-Information/Absentee-Voting

Minnite, L. C. (2017). *The Myth of Voter Fraud*. Cornell University Press.

Montjoy Robert S. (2010). The Changing Nature … and Costs … of Election Administration. *Public Administration Review*, *70*(6), 867–875. https://doi.org/10.1111/j.1540-6210.2010.02218.x

Norris, P. (2004). *Electoral engineering: Voting rules and political behavior*. Cambridge university press.

Peaslee, L., & Swartz, N. J. (2013). *Virginia Government: Institutions and Policy*. CQ Press.

Registration/Turnout | Virginia Department of Elections. (2018). Retrieved January 28, 2018, from https://www.elections.virginia.gov/resultsreports/registration-statistics/registrationturnout-statistics/index.html

Richardson, D. (2018). Oregon Vote By Mail Timeline. State of Oregon Secretary of State.

Rocco, K. (2017, October 29). Oregon Budget Analysis. State of Oregon Legislative Fiscal Office.

Rodman, D. HB 230 (2017). Retrieved from http://lis.virginia.gov/cgi-bin/legp604.exe?181+sum+HB230

Simon, M. HB 77, HB 77 § (2017). Retrieved from http://lis.virginia.gov/cgi-bin/legp604.exe?141+sum+HB77

Skelley, G. (2017, October 19). Larry J. Sabato's Crystal Ball » Underneath It All: Elections for the Virginia House of Delegates. Retrieved February 26, 2018, from http://www.centerforpolitics.org/crystalball/articles/underneath-it-all-elections-for-the-virginia-house-of-delegates/#_ednref1

Southwell, P. L., & Burchett, J. I. (2000). The effect of all-mail elections on voter turnout. *American Politics Quarterly*, *28*(1), 72–79.

Stein, R. M., & Garcia-Monet, P. A. (1997). Voting early but not often. *Social Science Quarterly*, 657–671.

Stewart, C. (2011). Adding Up the Costs and Benefits of Voting by Mail | Election Law Journal: Rules, Politics, and Policy. *Election Law Journal*, *10*. Retrieved from https://www.liebertpub.com/doi/abs/10.1089/elj.2011.1034

Sullivan, R. HB 74, Pub. L. No. HB 74 (2017). Retrieved from https://lis.virginia.gov/cgi-bin/legp604.exe?181+sum+HB74

Thomasson, K. (n.d.). Absentee Voting | Virginia Department of Elections. Retrieved January 29, 2018, from https://www.elections.virginia.gov/casting-a-ballot/absentee-voting/index.html

U.S. Census Bureau QuickFacts: Virginia. (n.d.). Retrieved February 1, 2018, from https://www.census.gov/quickfacts/fact/table/VA/PST045217#viewtop

Voter Retention for Select Demographics. (2018). Retrieved February 25, 2018, from https://www.vpap.org/visuals/visual/voter-retention-demographics-2012to2013-1/

Voter turnout history for special elections. (2012). Oregon State Library. Retrieved from https://digital.osl.state.or.us/islandora/object/osl:5905

Wilson, P. (n.d.). In a first, every Virginia General Assembly incumbent re-elected. Retrieved February 26, 2018, from http://pilotonline.com/news/government/politics/article_d36bbd1a-c432-562a-9269-b1781bdf3c08.html

Ziegler, J. (2016, December 1). Understanding the State Budget: The Big Picture. Colorado Joint Budget Committee Staff.

Appendix A - Cost Effectiveness Analysis Technical Appendix

Figure 1: Cost Effectiveness Analysis Results

Results		
Costs		
Vote By Mail	$	(35,016,186.81)
Dillon Rule	$	(10,111,850.39)
Absentee	$	104,885,587.12
Early Voting	$	31,465,676.14
Partial VBM	$	(14,533,278.49)
Votes Added		
Vote By Mail		3,925,441
Dillon Rule		2,363,037
Absentee		-
Early Voting		-
Partial VBM		2,929,490
Cost per Vote Gained		
Vote By Mail	$	(8.92)
Dillon Rule	$	(4.28)
Absentee		N/A
Early Voting		N/A
Partial VBM	$	(4.96)

Technical Appendix- Assumptions:

General Assumptions:

- I assume a 12-year time horizon. While this is a non-standard time horizon, it includes 3 full four year elections cycles.
- I used a standard 7% discount rate.
- I assume that all costs occur at the end of the year, a standard practice.
- I assume that there are 5,522,000 registered voters at year zero, approximately the number of registered voters in 2016 (“Registration/Turnout," 2018).
- I assume that the average four year vote increase is 5.6%. This is the average rate of increase from 1993 through 2017 for Virginia elections (“Registration/Turnout," 2018).
- Costs are only incurred by the Commonwealth of Virginia and localities.

Option 1: Vote-by-Mail

- Based on academic research, I assume a 4.7% increase from Vote-by-Mail in national and gubernatorial elections and 20.1% increase in off year and special elections. (Gronke, Galanes-Rosenbaum, & Miller, 2007 | Southwell 2007).
- I assume that administrative set up costs $1.5 million for the first two years of the program based on Colorado’s implementation of a similar program in 2013 (Flaxman et. al 2013).
- I assume that the cost to localities per registered voter is $1.72 based on Charlottesville’s 2018 costs and registered voters (Bencoach 2018).
- I assume cost saving for localities of 50% (Gronke, Galanes-Rosenbaum, & Miller, 2007).

Option 2: Odd-year Vote-by-Mail

- I assume that costs are only incurred in odd-years.
- I assume that all other costs and benefits are identical to full all year vote-by-mail.

Option 3: Dillon Rule

- I assume that localities will adopt VBM at a rate of 5% of Virginia’s 133 localities per year based on similar adoption rates by Oregon (Richardson 2018).
- I assume that all cost are the same as VBM once localities adopt.

Option 4: No-Excuse Early Voting

- I assume 133 central precincts (“U.S. Census”).
- I assume a 45 day voting period (Thomasson).
- I assume a 16 hour voting day (Bencoach 2018).
- I assume 3 additional employees at wage rate of $13.79 (Bencoach 2018).

Option 5: Absentee Voting

- I assume the same base costs as No-Excuse Early Voting.
- I assume 10 additional employees rather than three (Bencoach 2018).

Technical Appendix - Formulas:

Option 1: Vote-by-Mail

- Initial Administrative Set up Cost (Cost Incurred by State)=

  Set-up Cost / (1+ Discount Rate) ^ Year

  = $2,712,027

- Closure of Precincts (Incurred by localities)=

  (Cost to Localities per Registered Voter X Number of Virginia Registered Voters X Vote-by-Mail Saving Rate) / (1+ Discount Rate) ^ Year

  = ($37,728,000)

- Other costs including labor and local administrative costs are transfers.
- Total Costs

  =($35, 016,000)

- Effectiveness=

  (Virginia Registered Voters X (1 + General Election VBM Increase Rate OR Special/Off-year VBM Rate, Year Dependent) - Virginia Registered Voters) / (1+ Discount Rate) ^ Year

  =3,925,000

Option 2: Partial Vote-by-Mail

- Initial Administrative Set up Cost (Cost Incurred by State)=

  Set-up Cost / (1+ Discount Rate) ^ Year

  = $2,712,027 votes

- Closure of Precincts (Incurred by Localities in Odd-Years)=

  (Cost to Localities per Registered Voter X Number of Virginia Registered Voters X Vote-by-Mail Saving Rate) / (1+ Discount Rate) ^ Year

  = ($17,245,000)

- Other costs including labor and local administrative costs are transfers.
- Total Costs

  =($14,533,000)

- Effectiveness (Only in Odd-years)

  (Virginia Registered Voters X (1 + General Election VBM Increase Rate OR Special/Off-year VBM Rate, Year Dependent) - Virginia Registered Voters) / (1+ Discount Rate) ^ Year

  =2,929,000 votes

Option 3: Dillon Rule

- Year to Year Administrative Costs (Localities) =

  ((Cost to Localities per Registered Voter X Number of Virginia Registered Voters X Vote-by-Mail Saving Rate) X Adoption Rate X Year) / (1+ Discount Rate) ^ Year

  =($10,111,000)

- Total Costs

  =($10,111,000)

- Effectiveness

  ((Virginia Registered Voters X (1 + General Election VBM Increase Rate OR Special/Off-year VBM Rate, Year Dependent) - Virginia Registered Voters) * Adoption Rate * Year) / (1+ Discount Rate) ^ Year

  = 2,363,000 votes

Option 4: No-Excuse Early In-Person Voting

- Personnel Charges (Localities) =

  (Additional Employees X Wage X Number of Localities X Length of Early Voting Period in Days X Length of Early Voting Period per Day) / (1+ Discount Rate) ^ Year

  = $31,465,000

- Effectiveness

  There is no evidence of a statistically significant effect of EIP on Voter Turnout

  = 0 votes

Option 5: No-Excuse In-Person and by Mail Absentee

- Personnel Charges (localities) =

  (Additional Employees X Wage X Number of Localities X Length of Early Voting Period in Days X Length of Early Voting Period per Day) / (1+ Discount Rate) ^ Year

  =$104,885,000

- Effectiveness

  There is no evidence of a statistically significant effect of EIP on Voter Turnout

  = 0 votes

Appendix B - A Comparison of Special and Odd-Year Elections

Figure 2:

Election Type	Turnout	State	Year	Notes	Source
Off-Year	29.10%	VA	2015		(“Registration/Turnout," 2018)
Off-Year	28.61%	VA	2011		(“Registration/Turnout," 2018)
Off-Year	30.20%	VA	2007		(“Registration/Turnout," 2018)
Off-Year	30.80%	VA	2003		(“Registration/Turnout," 2018)
Off-Year	36.10%	VA	1999		(“Registration/Turnout," 2018)
Special	56.20%	OR	1993	Sales Tax	(“Voter Turnout History," 2012)
Special	34%	OR	1989		(“Voter Turnout History," 2012)
Special	28.90%	OR	1987		(“Voter Turnout History," 2012)
Special	56.30%	OR	1985	Sales Tax	(“Voter Turnout History," 2012)
Special	27.70%	OR	1977		(“Voter Turnout History," 2012)
Special	57%	OR	1969	Sales Tax	(“Voter Turnout History," 2012)
Special	61.40%	OR	1963	Income Tax	(“Voter Turnout History," 2012)
Special	52.80%	OR	1973	School Tax	(“Voter Turnout History," 2012)
Standard Deviation	13.50%				
Standard Deviation w/o Tax Years	2.91%				

Throughout this analysis, there is an assumption that differences in special election turnout investigated in much of the academic research cited in this analysis is representative of the change which policy makers could assume in Virginia’s off year elections, directly before presidential election years. This appendix addresses that assumption by comparing Colorado’s special elections to modern iterations of Virginia’s off year elections. While there is a relatively high standard deviation when considering all special elections before VBM, the standard deviation when eliminating tax related special elections which have unusually high turnout is only 2.91%, a low deviation across special elections and off-year elections. With this result, it can be reasonably assumed that Virginia should similar outcomes for off-year elections which Colorado experienced in their state special elections.