**IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF GEORGIA ATLANTA DIVISION**

| | |
|---|---|
| GEORGIA STATE CONFERENCE OF THE NAACP, et al.<br><br>3 O D L,Q W L I I V<br><br>v.<br><br>STATE OF GEORGIA, et al.<br><br>' H I H Q G D Q W V | Case No. 1:21-CV-5338-ELB-SCJ-SDG |
| COMMON CAUSE, et al.,<br><br>3 O D L,Q W L I I V<br><br>v.<br><br>BRAD RAFFENSPERGER<br><br>' H I H Q.G D Q W | Case No. 1:22-CV-00090-ELB-SCJ-SDG |

**NOTICE OF ERRATA TO PLAINTIFFS' STATEMENT OF MATERIAL FACTS WHICH PRESENT A DISPUTE IN OPPOSITION TO DEFENDANTS' MOTION FOR SUMMARY JUDGMENT**

PLAINTIFFS GEORGIA STATE CONFERENCE OF THE NAACP, GEORGIA COALITION FOR THE PEOPLEôS AGENDA, INC., AND GALEO LATINO COMMUNITY DEVELOPMENT FUND INC. (collectively, ñPlaintiffsò) submit this errata to correct typographical errors in DKT 152-2, which

%DVHG RQ KLV DQDO\VLV RI WKH OHJLVODWLYH KLVWRU\ %DJOH\

RSLQHG WKDW WKH ³GHFUHDVH LQ WKH HQW GHPDQGV IRU PR

SURFHVV ZDV VWLOO FDUULHG RXW EHKLQG FORVHG GRRUV

LQJRUH %DJOH\ DWWDFKHG 5HS +DOO DQG &KDLUPDQ 5LFK¶V VWDWHPHQW

95$ ZDV ³XQQHFHVVDU\´ WR WKH SURFHGXUH RI UHOHYDQW

GLVFULPLQDWLRQ

7KH OHJLVODWXUH XVHG WKH UHGLVWU

LJQRULQJ WKH SXEOLF¶V FDOO %DJOH\ RSLQHG WKDW SURFH

SURFHGXUDO DQG VXEVWDQWLYH GHSDUWXUHV LV

FRPPLWWHH JXLGHOLQHV WKDW LQVWUXFWV FRPPL

WR IDVKLRQ LWV EHKDYLRU DQG DFWLRQV SURFH

'U %DJOH\ RSLQHG WKDW WKLV ZDV FRQVLVWHQW

ZLWK WKH SDFNLQJ DQG FUDFNLQJ RI SRSXODWLRQ

'U %DJOH\ RSLQHG WKDW WKH SXEOLF ZDV

FRORU VSHFLILFDOO\« FRQJUHVVZRPDQ /XF\ 0F%D

'U %DJOH\ RSLQHG WKDW PHPEHUV RI WKH

³9RWHUV RI FRORU ZHUH EHLQJ PDQLSXODWHG DJD

+HQU\ &REE DQG *ZLQQHWW FRXQWLHV´

%DVHG RQ KLV DQDO\VLV 'U %DJOH\ RSLQH

OHDGHUVKLS RQ PRUH WKHUHVHVHFWLRQVLVQRW DV UHVSRQV

DV WKH\ ZHUH WR WKH 2PLWHULWD\YH ZKLHKDZKDQGIXO

(DVW $VLDQ PHPEHUV DQG QRQH ZHUH %ODFN ´

' 'HPRJUDSKLF 7UHQGV LQ *HRUJLD

%HWZHHQ *HRUJLD V SRSXODWLRQ JUHZ

HQWLUHO\ E\ DQ LQFUHDVH LQ WKH ULS SRSXODWLRQ F

7KH VKDUH RI %ODFN DQG +LVSDQLF *HRUJLDQV LQFUHDVHG

WR WKH ZKLWH SRSXODWLRQ GHFUHDVHG I

EHWZHHQ WKH DQG FHQVXV WKH *HRUJLD SRSXODWLRQ

%ODFN

'HVSLWH WKH SRSXODWLRQ JURZWK RI SHUV

HQDFWHG &RQJUHVVLRQDO SODQ UHGXFHV WKH QX

/DWLQR SUHIHUUHG FDQGLGDWHV IURP 6HQDWH SODQ

QXPEHU RI SHUIRUPLQJ GLVWULFWV IRU %ODFN DQG

5HS DW

( 7KH 0DS 'UDZLQJ 3URFHVV

*LQD :ULJKW WKH GLUHFWRU RI &RQJUHVVLRQDO

5HDSSRUWLRQPHQW 2IILFH SULPDULO\ UHVSRQVLEO

DVSHFWV RI GUDZLQJ WKH &RQJUHVVLRQDO 'HSRVLWLRQ RI *

:ULJKW 'HS

5RE 6WUDQJLD *HRJUDSKLF ,QIRUPDWLRQ 6\

DW WKH /&52 ZKR GUDZV WKH PDSV &DQWUHOO 'HSR

'HSRVLWLRQ RI 5REHUW 6WUDQJLD

0U 6WUDQJLD FUHDWHG D IRUPXOD WR WHVW WKH PDS

OHYHO EXW WKLV GDWD ZDV QRW DYDLODEOH DW WKH

DFFHVV WR UDFLDO GDWD DW WKH EORFN OHYHO W

'LUHFWRU :ULJKW WHVWLILHG WKDW VKH GLG QR

DERXW UHGLVWULFWLQJ PDSV EHFDXVH VKH GLG Q

'HS

'LU :ULJKW NHSW GUDIWV IRU DOO WKUHH

XQWLO WKH GUDZLQJ RI WKH PDSV :ULJKW GUHZ GU

&RQJUHVVLRQDO GLVWULFWV DW WKH GLUHFWLRQ

WKH FRPSXWHU VFUHHQV ZKHUH :ULJKW PDSV OLQHV

SULYDWH LQ RIILFH :ULJKW 'HS 5HS

5LFK :ULJKW 'HS :ULJKW 'HS :ULJKW 'HS

:ULJKW 'HS :ULJKW 'HS :ULJKW 'HS

:KHQ HLFW:RULJKW GUHZ GUDIW &RQJUHVVLI
OHJVODWRUV VKH DQG WKH OHJLVODWRUV FRXOG L
WKH UDFLDO EDODQFH RI GLVWULFWV GDWD FKDQJHG R
ZKHQ PDNLQJ FKDQJHV WR PDSH

:KHQ LUHF:WLRJKW GUHZ GUDIW 6HQDWH WKH
OHJLVODWRUV UDFLDO GDWD ZDV SURMHFWHG RQ
ZHUH EHLQJ GUDZQ :ULJKW 'HS :ULJKW 'HS
:ULJKW 'HS :ULJKW 'HS :ULJKW 'HS
:ULJKW 'HS :ULJKW 'HS

:KHQ LUHF:WLRJKW GUHZ GUDIW 6HQDWH GLVWU
DQG WKH OHJLVODWRUV FRXOG LPPHGLDWHO\ VHI
EDODQFH RI GLVWULFWV :ULJKW 'HS

:KHQ HLFW:RULJKW GUHZ GUDIW +RXVH GLVWU
OHJLVODWRUV UDFLDO GDWD ZDV SURMHFWHG RQ
ZHUH EHLQJ GUDZQ :ULJKW 'HS :ULJKW 'HS
:ULJKW 'HS :ULJKW 'H

:KHQ HLFW:RULJKW GUHZ GUDIW +RXVH GLVWUL
DQG WKH OHJLVODWRUV FRXOG LPPHGLDWHO\ VHI
EDODQFH RI GLVWULFWV :ULJKW 'HS

'DQ 2¶&RQQRU \VWDWHG WKDW DQ /&52 WHVWL

GHSRVLWLRQ WKDW D GLVWULFW LQ *HRUJLD WKDV

'HPRFUDWV DQG WKDW WKH ILJXUH ZDV FRQFHUQLQJ

ˆ 'HSRVLWLRQ RI 2¶&RQQRU˝

+H DOVR WHVWLILHG WKDW LI D OHJLVODWRU

WKDW LW ZDV PRUH SUREDEOH

QHFHVVDU\ WR ORZHU WKH DPRXQW RI %9$3 LQ WK

+H IXUWKHU WHVWLILHG WKDW LQ RUGHU W

RQH ZRXOG QHHG WR HLWKHU PRYH %9$3 RXW RI W

RU PRYH :9$3 LQWR WKH GLVWULFW WR GLOXWH W

,,, 0DWHULDO )DFWV 5HODWLQJ WR &RPSDFWQHVV DQG 6SOLW

$ 'U 'XFKLQ¶V 0HWKRGRORJ\

'U 0RRQ 'XFKLQ LV D 3URIHVVRU RI 0DWKHP

WKH -RQDWKDQ 0 7LVFK &ROOHJH RI &LYLF /LIH

'LUHFWRU RI 5HGLVWULFWLQJ /DE IRFXVHG RQ JHR

DVSHFWV RI UHGLVWULFWLQJ

'U 'XFKLQ KDV EHHQ DFFHSWHG DV DQ H[SH

LVVXHV RI SUHFRQGLWLRQV MXGJH DQG PDS DQDO\VLV

JHUU\PDQGHULQJ LVVXHV 6RXWK &DUROLQD See 'HFO

'HSRVLWLRQ RI 0RRKL 'XFKLQ ³

'U 'XFKLQ DQDO\]HG WKH &RQJUHVVLRQDO

GHWHUPLQH ZKHWKHU DWK HUDFHLV SUHGRPLQDWHG WKH

UHGLVWULFWLQJ SULQFLSOHV LQ WKH GUDZLQJ RI

also 'XFKLQ 'HS

7R GR VR 'U 'XFKLQ SULPDULO\ XVHG WZR

H[DPLQHG FRUH UHWHQWLRQ DQG SRSXODWLRQ GL

WKH HQDFWHG SODQ LQ RUGHU WR GHWHFW HYLG

SRSXODWLRQ WR UHEDODQFLQJ´ DQG ZKHWKHU WK

GLVWULFWV¶ HIIHFWLYHQHVV IRU HOHFWLQJ %ODF

5HS DW'XFKLQ 'HS

'U 'XFKLQ RSLQHG WKDW UDFLDOO\ LPEDODQ

RXW RI D GLVWULFW DUH HYLGHQFH WKDW UDFH

SULQFLSOHV

6HFRQG 'U 'XFKLQ ORRNHG DW SUHFLQFW

SUHFLQFW VSOLWV WR GHWHUPLQH ZKHWKHU WKH

RI ³FUDFNLQJ´ DQG ³SDFNLQJ´ WKDW VXJJHVWV

UHGLVWULFWLQJ SULQFLSOHV LQ 'XFKHQ GUDZLQJ R

'HSRVLWLRQ RI 0RRQLQ 'XFKLQ

'U 'XFKLQ WHVWLILHG WKDW LV H[WUHPHO\ IUHTXHQW

VKRZ PDMRU UDFLDO GLVSDULW\ DQG WKH VWURQJ FDXVDWLYH

SURYLGH SDUWLFXODUO\ VWURQJ HYLGHQFH WKDW

LQ WKH FUHDWLRQ RI WKH PDS ´

'U 'XFKLQ DOVR DQDO\]HG FRPPXQLW\ WHV

WKHUH ZHUH FRPPXQLW\ RI LQWHUHVW MXVWLILF

GHWHUPLQHG ZHUH FRQVLGHUHG LQ WKH SODQ DW

'XFKLQ

% &RUH 5HWHQWLRQ DQG 3RSXODWLRQ 'LVSOD
3ODQ

&' ³ZDV QHDUO\ DW LGHDO VL]H EHIRUH WK

UHVLGHQWV HQXPHUDWHG WKDW WKH FHQVXV RUVDQG

VL]H 'XFKLQ 5HS

&' ZDV QHYHUWKHOHVV ³VXEMHFWHG WR

OHDVW SHRSOH IURP WKH EHQFKPDUN GLVWU

DQG ZKLOH DW OHDVW GLIIHUHQW SHRSO

DQG Id. ´

/DUJHU SURSRUWLRQV RI %ODFN DQG +
QHLJKERUKRRGV ZHUH PRYHG RXW RI &U VXEXUEDQ
ZHUH PRYHG Id. LQDWR &'

7KH ODUJHVW UHDVVLJQPHQW RI SRSXODW
DSSUR[LPDWHO\ *HRUJLDQV

7KH WUDQVIHU RI SRSXODWLRQ IURP &' W
/DWLQR Id.

7KH ODUJHVW WUDQVIHU RI SRSXODWLRQ
DSSUR[LPDWHO\ Id. *HRUJLDQV

7KH SRSXODWLRQ WUDQVIHUUHG LQWR &'
/DWLQR Id.

8QGHU WKH EHQFKPDUN SODQ &' SHUIRU
YRWHUV Id.

7KH FKDQJHV WR &W DGXEXUEDQ H[XUEDQ
GLVWULFW Id. )LJXUH

'U 'XFKLQ RSLQHG WKDW &' ZDV QFUDEYHG
VZDSV RI SRSXODWLRQ´ WKDW GLOXWHG WKH YRW
'XFKLQ 'HQS

'U 'XFKLQ RSLQHG WKDW WKH UDFLDOO\ GL

DUHYLGHQFH WKDW UDFH SUHGRPLQDWHGORYHLQW

GUDZLQJ RXF&'LHQS

'U 'XFKLQ GHWHUPLQHG WKDW FRUH UHWHQ

LQ &' ZHUH ³GLVWLQFWLYH LQ WHUPV RI GHQVLW

&' H[SDQGHG LQWR &REE &RXQWODFN LQ

FLWLHV 3RZGHU 6SULQJV DQGLXHWXGHG EHORZ

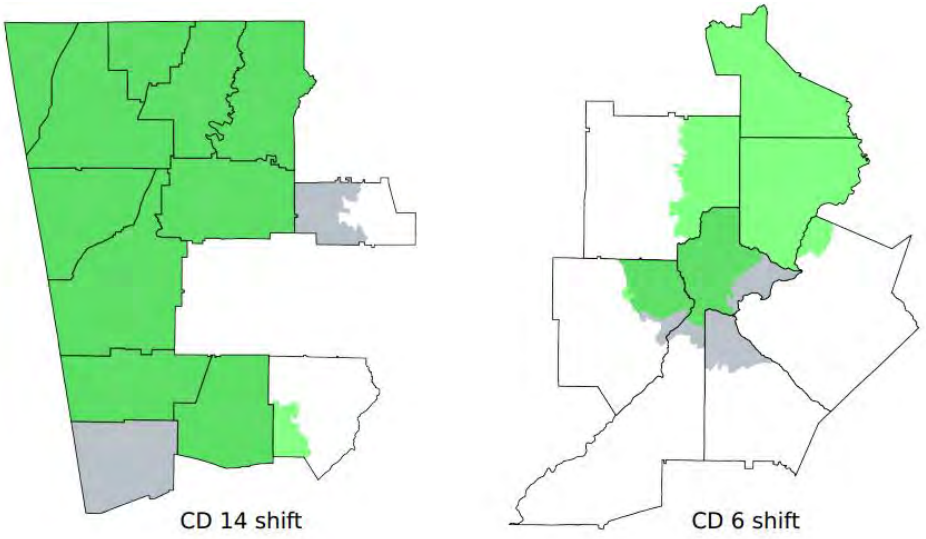



Figure 30: These before-and-after plots show benchmark configurations in gray, while new district placement is in light green. We can see that CD 14 made a new incursion into Cobb County while shedding rural Haralson and part of Pickens County. Meanwhile, CD 6 went sharply the other way, withdrawing from its metro Atlanta coverage and picking up rural counties to the north. Compare to Figure 31.

'U 'XFKLQ RSLQHG WKDW ³LQFXUVLRQ RI &'

QRW UHTXLUHG E\ DGKHUHQFH WRSUDFLSOHRQ´DO

7KH 'XQFDQQHG² WKH ILUVW &RQJUHVVLRQDO

WKH 6HQDWH 5HGL²VWULFWLQJ &RPPLWWHZGHU 6SU

&' Id See also' XFKLQ 'HS &DQWHU 'HFORVLRQ

6HQDWRU ..HQQHGS ³

'U 'XFKLQ GHWHUPLQHG $PHULFD³GHQLJKSRU

LQ 3RZGHU 6SULQJV DQG $XVWHOO ZHUH ³VXEPHUJ

FRPPXQLWLHV ´ ZKLF@ &'RXOG QRW ESHFWXVHVLIHGQE

'XFKLQS D'WFKLHQS

'U 'XFKLQ UHYLHZHG FRPPXQLW\ WHVWLP

FRPPXQLW\ RI LQWHUHVW MXVWLILFDWLRQV FRXOG

DQG $XVWHOO'XFKLQ&S DW

'U XFKLQ GHWHUPLQHG WKDW KHU FRUH

GLVSODFHPHQW DQDO\VLV RI &' SURYLGHG HYL

WUDGLWLRQDO UHGLVWULFWLQJ'XFKLQ FLSOHV LQ W

& &RUH 5HWHQWLRQ DQGH3PHQW DWLRQ'LVS

6HQDWH 3ODQ

'U 'XFKLQ DQDO\]HG FRUH UHWHQWLRQ DQG

HQDFWHG 6HQDWH3ODQ

L 6'

%HQFKPDUN 6' ZDV UHSUHVHQWHG E\ 0L

FDQGLGDWH RI FKRLFH Id. RI YRWHUV RI FRORU

5RXJKOWWKZURYHU ²SRHFEHQFKPDUN 6'

PRYHG LQWR HQDFWHG 6' ZHUH %Id.DFN DQG /DWL

7KH UHWDLQHG SRSXODWLRQ RI 6' Id. KDV RQ

1R WHUULWRU\ PRYHG LQWR 6' RYHU Id.KDV D %+9

'U 'XFKLQ RSLQHG WKDW WKH QHZ 6' LV

DQG /DWLQR Id. YRWHUV

'U 'XFKLQ RSLQHG WKDW 6' ¶V UDFLDOO

GLVSODFHPHQW RI H[SRUWHG RU FRXOG QRW HDVLO\ WR LPSURYH 6' ¶V

FRPSDUHG WR EHQFKPDUN 6' Id. )LJXUH

'U 'XFKLQ RSLQHG WKDW KHU FRUH UHWHQV

DQDO\VLV RI 6' LV HYLGHQFH WKDW UDFH SUHG

SULQFLSOHV LQ WKH 'XFKLQ UHGUDZLQJ RI 6'

6'

'U 'XFKLQ DQDO\]HG WKH FRUH UHWHQWLRQ

WKH HQDFWHG 6' KDG SUHYLRXVO\ EHHQ DQ HIIHF

/DWLQR 'XFKLQ 5HS DW

6' UHWDLQHG RQO\ DERXW KDOI RI LWV U

PLOGO\ RYHU SRSXODWHG Id.

$SSUR[LPDWHO\ KDOI RI WKH RXWJRLQJ SRS

DQG /DWLQR Id.

7KH LQFRPLQJ %ODFN DQG /DWLQR SRSXODW

WKDQ RI WKH LQFRPLQJ SRSXODWLRQ Id.

7KH QHZ 6' LV QRZ LQHIIHFWLYH IRU %ODF Id.

'U 'XFKLQ GHWHUPLQHG WKDW QR GLVWULF

6' WKHUHE\ EHFDPH HIIHFWLYH IRU %ODFN DQG / Id.

'U 'XFKLQ RSLQHG WKDW WR FUHDWH D PRU

FRPSDUHG WR WKH EHQFKPDUN 6' FDQQRW H

SRSXODWLRQ IORZV WR )D\HWWH RU 6' Id. See also 'HS

GHVFULELQJ ([ :ULJKW 'HS ([

'U 'XFKLQ WHVWLILHG WKDW KHU FRUH UHW

GLVSODFHPHQW DQDO\VLV RI 6' LV HYLGHQFH W

UHGLVWULFWLQJ SULQFLSOHV VXFK DV WKH GUDZLQJ R

6'

'U 'XFKLQ DQDO\]HG WKH VWDWH DQG SRSXOD

HQDFWHG 6' ZKLFK KDG UHFHQWO\ EHFRPH FRPSHWLWL

'XFKLQ 5HS DW

%HQFKPDUN 6' ZDV DOPRVW HQWLUHO\ SO

+RZHYHU LQFXPEHQW 5HSXEOLFDQ -RKQ $OE

GLVWULFW Id.

'U 'XFKLQ RSLQHG WKDW WKH SRSXODWLRQ

HQDFWHG 6' ZDV UDFLDOO\ LPEDODQFHG

$SSUR[LPDWHO\ RI WKH SRSXODWLRQ PR

WR HQDFWHG 6' Id. ZDV %+9$3

(DFK WHUULWRU\ PRYHG LQWR 6' FRQWDLQHG XQGHU

7KH QHZ 6' LV FRPSHWLWLYH IRU %ODFN DQG /

'U 'XFKLQ GHWHUPLQHG WKDW KHU FRUH

GLVSODFHPHQW DQDO\VLV RI 6' LV HYLGHQFH WKD

UHGLVWULFWLQJ SULQFLSOHV VXFK DV WKH GUDZLQJ R

' &RUH 5HWHQWLRQ DQG 3RSXODWLRQ 'LVSOD
3ODQ

+'V DQG

'U 'XFKLQ DQDO\]HG SRSXODWLRQ GLVSODF
HQDFWHG +RXVH 3ODQ 'XFKLQ 5HS DW

'U 'XFKLQ LGHQWLILHG VHYHQ KRXVH GI
FRPSHWLWLYH IRU %ODFN DQG /DWLQR YRWHUV EH
WHQ HDUV +'V DQGId DW

'U 'XFKLQ GHWHUPLQHG WKDW ILYH RI WKH
DQG² ZHUH ³UHEXLOW WR EH LQHIIHFWLYH IRU %O
³UDFLDOO\ LPEDODQFHG SRSXODWLRQ WUDQVIHUV

'U 'XFKLQ SURGXFHG DGHPRQVWUDWRV WK
GLVWULFW UHDVVLJQPHQWV IRU %+9$3 IRU +'V

| Benchmark HD | Outward | Inward |
|---|---|---|
| 44 | .425 (to HD 35) | .226 (from HD 20) |
| 48 | .464 (to HD 51) | .201 (from HD 49) |
| 49 | .227 (to HD 47) | .127 (from HD 48) |
| 52 | .436 (to HD 54) | .245 (from HD 79) |
| 104 | .715 (to HD 102) | .363 (from HD 103) |

Table 40: This table records the BHVAP share of the largest district-to-district reassignment for the five "dismantled" House districts that were formerly swingy, now made ineffective.

Id DW 7DEOH

'U 'XFKLQ RSLQHG WKDW UDFLDOO\ LPEDOD
LQWR +'V DQG SRXQGHLWKHUEH³
SULQFLSOHV OLNH FRPSDFWQHVV RU UHVSHFW I
PXQLFLSDO EdRXQGDULHJXUH

( 3ROLWLFDO 6XEGLYLVLRQ 6SOLWV LQ WKH &

&REE &RXQW\ LV VSOLW DFUR &' IRXUQG &'\

UHFHLYLQJ SRUWLRQV RI &REE WKDW DUH RYHU

FRQWDLQV D SDUW RI &REE WKDW LV DERXW

'U 'XFKLQ GHWHUPLQHG WKLV HYLGHQFH LV

FUDFNLQJ WUDWHJ\

&' DQG &' VSOLW %LE &RXQW\

'U 'XFKLQ GHWHUPLQHG WKDW PLQXWHO\ U

³HYLGHQW DORQJ WKH ERXQGDU\ RI &' DQG &' L

E\ WKH ILJXUH EHORZ

| County | District | BVAP | BHVAP |
|---|---|---|---|
| Bibb | CD 2 | .6349 | .6710 |
| | CD 8 | .3098 | .3394 |

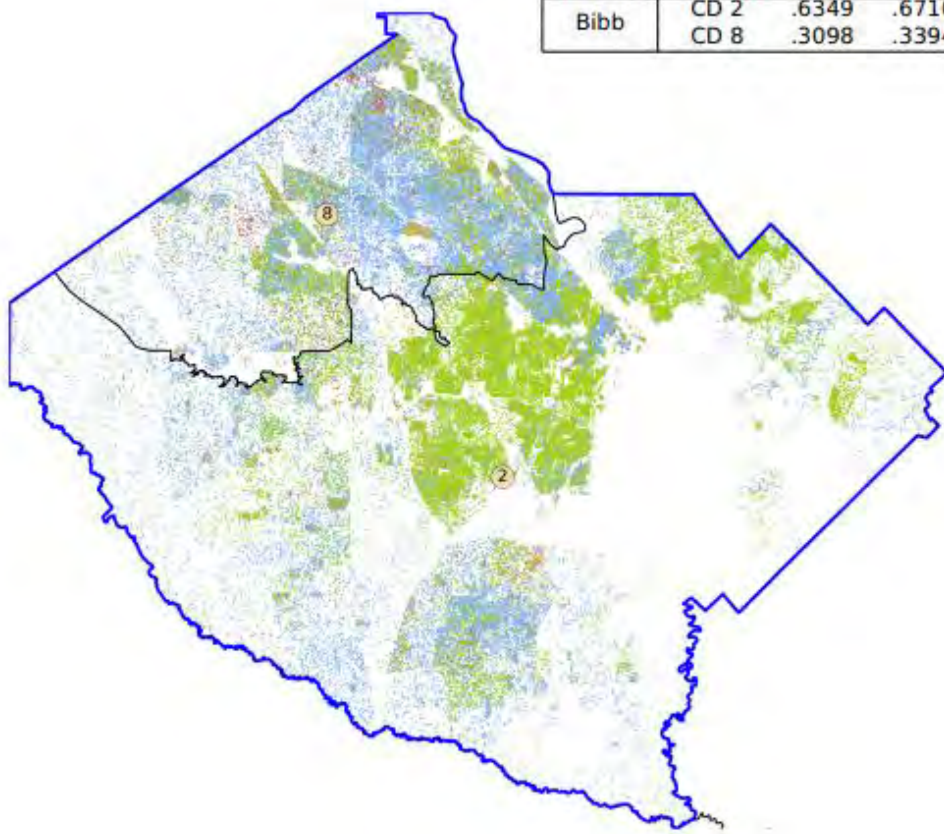



Figure 34: Minutely race-conscious decisions are evident along the boundary of CD 2 and CD 8 in Bibb County.




Id. DW ) See also LJXUH DW FRQWDLQLQJ NH\ WR

'U 'XFKLQ DQDO\]HG DOO FRXQW\ VSOLWV L

Id. DW 7DEOH

'U 'XFKLQ GHWHUPLQHG WKDW WKH H[HFWWKH

&ODB\WRQ &RXQW\ FRQWDLQV WKH Q WHUULWRU\ SDUW RI FU

DQG &' SDFNLQJ LQ &' DQG VXEPHUJLQJ D VPD

LQ &' ´ DV GHPRQVWUDWHG EHORZ

| County | District | BVAP | BHVAP |
|---|---|---|---|
| Cherokee | CD 6 | .0304 | .0814 |
| | CD 11 | .0817 | .1902 |
| Clayton | CD 5 | .7280 | .8649 |
| | CD 13 | .7190 | .8266 |
| Cobb | CD 6 | .1092 | .1848 |
| | CD 11 | .2654 | .3850 |
| | CD 13 | .4458 | .6271 |
| | CD 14 | .4646 | .5644 |
| Douglas | CD 3 | .2970 | .3719 |
| | CD 13 | .5762 | .6647 |
| Fayette | CD 3 | .2094 | .2720 |
| | CD 13 | .5762 | .6647 |
| Fulton | CD 5 | .4769 | .5379 |
| | CD 6 | .1574 | .2568 |
| | CD 7 | .1175 | .1777 |
| | CD 13 | .8829 | .9171 |
| Gwinnett | CD 6 | .1336 | .2645 |
| | CD 7 | .3234 | .5450 |
| | CD 9 | .2061 | .3433 |
| Henry | CD 3 | .4678 | .5259 |
| | CD 10 | .4414 | .4948 |
| | CD 13 | .5710 | .6324 |
| Muscogee | CD 2 | .5262 | .5851 |
| | CD 3 | .1909 | .2578 |

Table 41: All county splits involving CD 3, 6, 13, and 14. With the exception of the Clayton split, which is unremarkable in demographic terms, each of these is consistent with an overall pattern of cracking in CD 3 and CD 6, packing in CD 13, and submerging a small and diverse urban community in CD 14. See Appendix C for a complete list of county splits.

Id

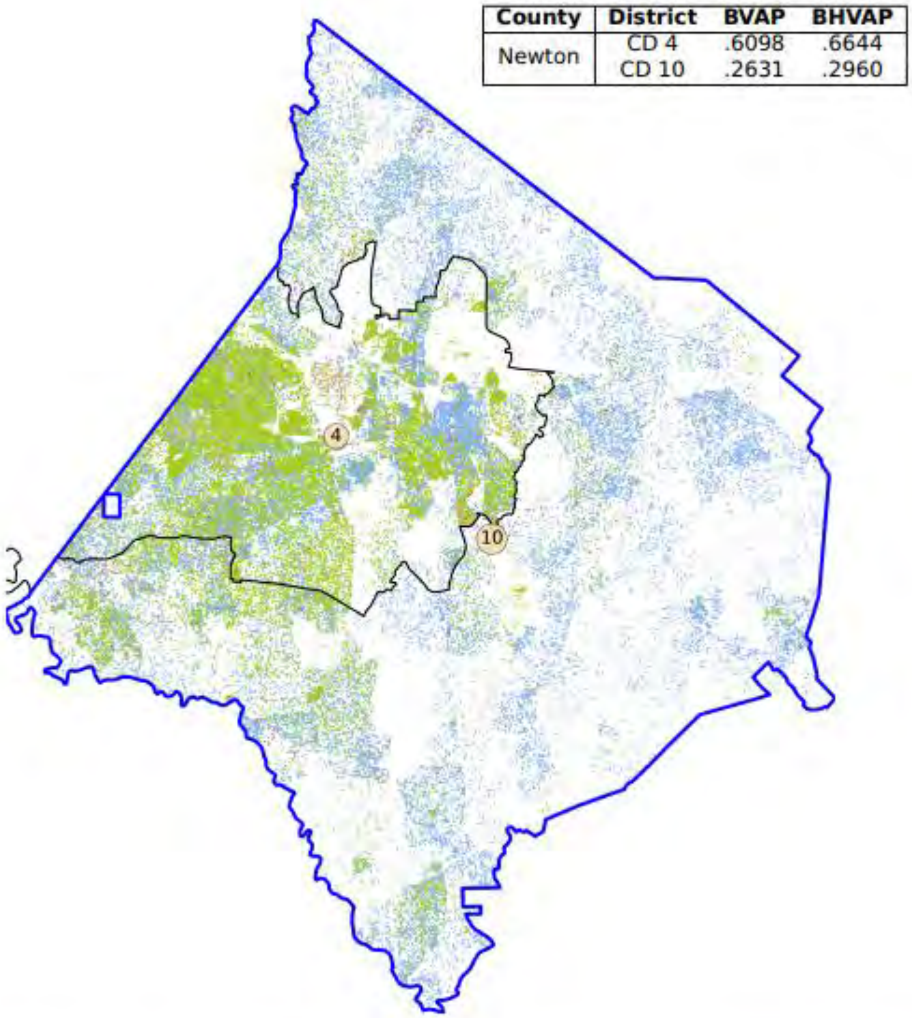
'U 'XFKLQ DQDO\]HG WKH 1HZWRQ &RXQW\ V

Id DW

'U 'XFKLQ GHWKDWLQHG 3 1HZWRQ &RXQW\ &'

GLYLGHG E\ D OLQH WKDW LV FRQVLVWHQW ZLWK S

ODWWHU ´ DV GHPRQVWUDWHG E\ WKH ILJXUH EHO




| County | District | BVAP | BHVAP |
|---|---|---|---|
| Newton | CD 4 | .6098 | .6644 |
| | CD 10 | .2631 | .2960 |

Figure 35: In Newton County, CD 4 and CD 10 are divided by a line that is consistent with packing the former district and cracking the latter.

Id DW )LJXUH

'U 'XFKLQ DOVR DQDO\]HG&RQJUHVVLRQDO SODQ

DW

'U 'XFKLQ RSLQHG WKDW ³IRU WKH SXUSR

JHUU\PDQGHULQJ WKH VSOLWV WR VWDWH SUHFL

WKH XQLWV DW ZKLFK FDVW YRWHV DUH UHSRUWHG

RI GHPRJUDSKLFV EXW QRW YRWH WRWDOV ... VKRZ

RI UDFH RYHU HYHQ ... (See also Duchin Report ...)

'U 'XFKLQ RSLQHG WKDW VSHFLILF SUHFLQ

DQG &' ³VKRZ VLJQLILFDQW UDFLDO GLVSDULW\ FRQVL

WKH HOHFWRUDO HIIHFWLYHQHVV RI &' ´ DV GHPR

| State precinct | District | BVAP | BHVAP |
|---|---|---|---|
| MARIETTA 5A | CD 6 | .1975 | .4938 |
| | CD 11 | .4232 | .5803 |
| MARIETTA 6A | CD 6 | .1391 | .6607 |
| | CD 11 | .4738 | .5464 |
| SEWELL MILL 03 | CD 6 | .2225 | .3042 |
| | CD 11 | .4064 | .5548 |

Table 42: Three examples of split precincts on the CD 6 / CD 11 border that show significant racial disparity, consistent with an effort to diminish the electoral effectiveness of CD 6 for Black voters. (Note that CD 6 receives a higher share of BHVAP in Marietta 6A, but a far lower share of BVAP.)

'XFKLQ 5HSRUW 7DEOH

'U 'XFKLQ RSLQHG WKDW VHYHUDO SUHFLQ

ERUGHU ³VWDQG RXW ERWK LQ GHPRJUDSKLF DQG JHRJUD

HYLGHQFH RI WKH ³SDFNLQJ RI &' DQG FUDFNLQJ

WDEOH EHORZ

| State precinct | District | BVAP | BHVAP |
|---|---|---|---|
| ALCOVY | CD 4 | .4010 | .4499 |
| | CD 10 | .0512 | .0620 |
| CITY POND | CD 4 | .5912 | .6554 |
| | CD 10 | .3923 | .4192 |
| OXFORD | CD 4 | .6444 | .6932 |
| | CD 10 | .0929 | .1213 |
| DOWNS | CD 4 | .6429 | .7024 |
| | CD 10 | .4429 | .4930 |

Table 43: Four examples of split precincts on the CD 4 / CD 10 border, all consistent with packing of CD 4 and cracking of CD 10.

Id DW 7DEOH

) 3ROLWLFDO 6XEGLYLVLRQ 6SOLWV LQ WKH 6

,Q WKH HQDFWHG 6WHDWH FRXQWLHVRLQWH D

%+9$3 GLVSDULW\ LQ %+9$3 Id DEW RVV FRXQW\ VSOLV

'U 'XFKLQ DQDO\]HG&RXQWYSOLWLQJ %'LEE 6'

DQG 6'Id )LJXUH

'U 'XFKLQ GHWHUPLQHG WKDW VSOLW UDF%DI

&RXQW\ LQYROYLQJ 6' 6' DQG 6' DUH HYLGH

GHPRQVWUDWHG E\ WKH WDEOH EHORZ

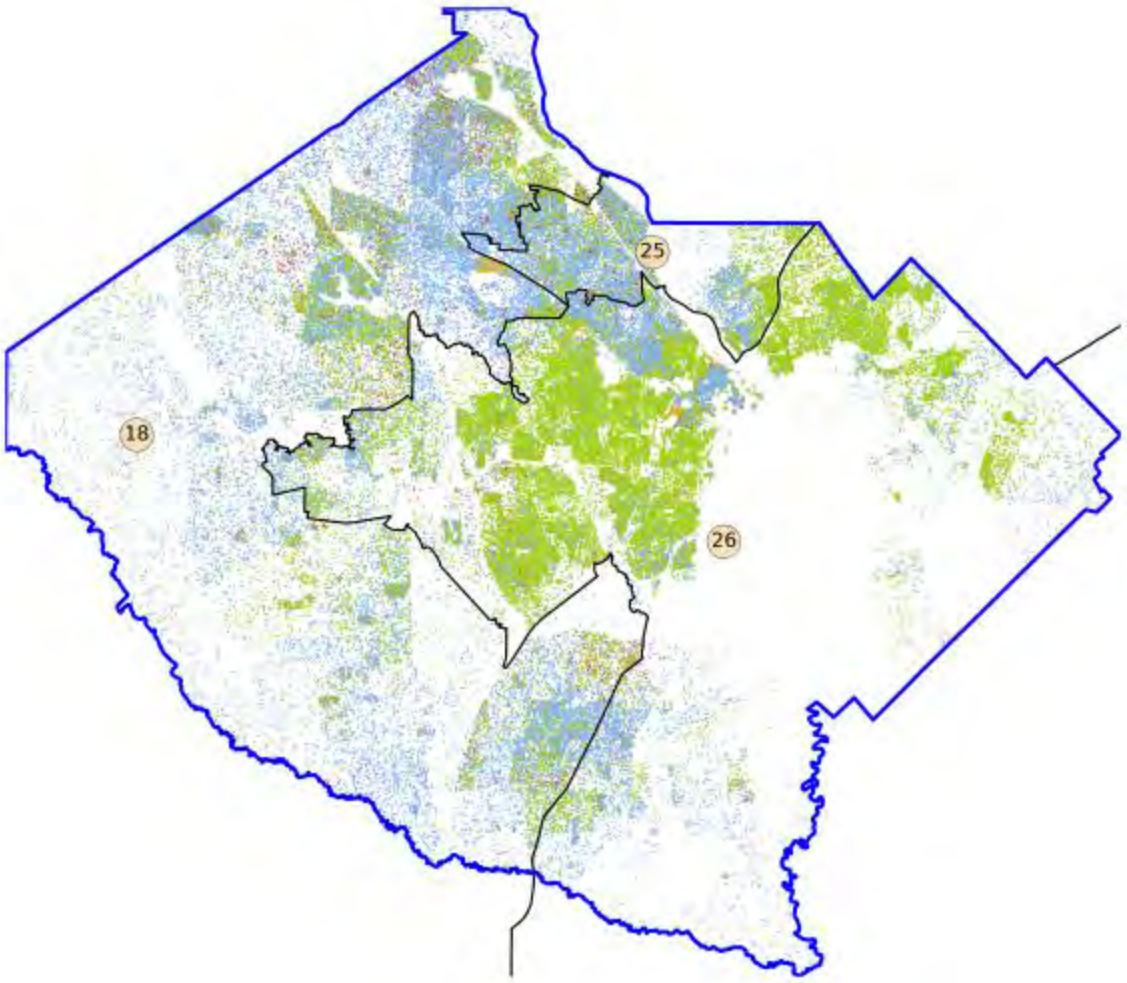



Figure 37: This figure shows the separation of Bibb County in a way that packs SD 26.

Id

'U 'XFKLQ DQDO\]HG WKH VSOLW RI &KDWKD

DQGId. DW )LJXUH

6' LV DQ HIILFWLRH %LVDFN DQG /DWLQR 9R

DUHIdQRW

'U 'XFKLQ GHWHUPLQHG WKDW &RXQ

FOHDUO\ UDFLDOO\ VRUWHG LQWR 6HQDWH GLVWU

/DWLQR YRWHUV FDQ RQO\ KDYH LQIOXHQFH LQ RQH RI WKH LFRQVW

GHPRQVWUDWHG EHORZ

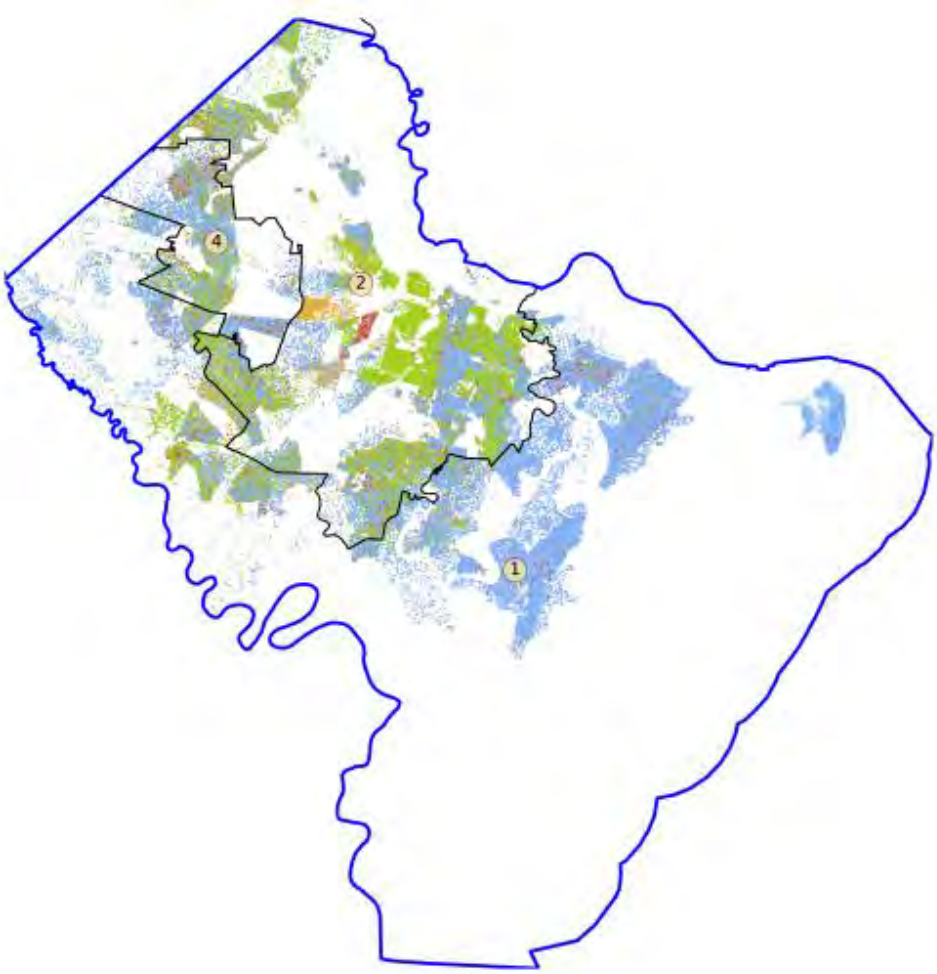



Figure 38: The pieces of Chatham County look to be clearly racially sorted into Senate districts in a way that ensures that Black and Latino voters can only have effective influence in one of the constituent districts. Indeed, SD 2 is an effective district, while SD 1 and SD 4 are not.

Id

* 'U 'XFKLQ &RQFOXGHG :DV 8VHG WR $FKLHYH
2XWFRPHV LQ WKH 6WDWH¶V (QDFWHG 3ODQ

'U 'XFKLQ H[DPLQHG DPRQJ RWKHU WKLQJ
'HIHQGDQW ZLWQHVVHV WKDW SDUWLVDQ SROLWLF
GUDZLQJ FHUWDLQ FRQJUHVVLRQDO &DQWHQDWHO DQ
'XFKLQ 5HEXWWDO PHQWSSO5HSRUW ³'XFKLQ 5HEXWWD

'U 'XFKLQ UDQ DOJRULWKPLF H[SHULPHQWV
OHJLVODWXUH GUHZ WKH FRQJUHVVLRQDO VHQDW
XSRQ SXUVXLQJ SDUWLVDQ DGYDQWDJH

7R H[DPLQH WKH HIIHFWV RI SDUWLVDQVKLS
VWDWHZLGH SODQV DW HDFK OHYHO RI UHGLVWUL
ODUJHU QXPEHUV RI 7UXPS VWULFWV IURP WKH 3
DW

7KHVH UDQDW LYH GSYDUWLVDQ SODQV ZHUH GU
WUDGLWLRQDO GLVWULFWLQJ SULQFLSOHV LQFO
FRXQW\ SUHEXWYGLG RR LQFOXGH UDFH GDWD

%HFDXVH 'U 'XFKLQ GLG QRW LQSXW UDFH
DEOH WR H[SORUH ³ZKHWKHU ²SOXQV ZLWKHQRW UDFH
WHQG WR KDYH WKH VDPH KDOOPDUNV RI UDFLDO
SODQV ´

'U 'XFKLQ SORWWHG WKH %ODFN 9RWLQJ

GLVULFWHVQLDFWHKH SODQHWDJRLQDWWLKHQ DGYDQWI

E\ KHU DOld.RUWKPV

'U 'XFKLQ RSLQHG WKDW ³LI D SODQ ZHUH

SRSXQDWRRVHFXUH SDUWLVDQ DGYDQWDJHUWQVDQ

VXSSRUW´ ZH ZRXOG H[SHFW WR VHH ³FUDFNLQJ´

LQ WKH PLGGOH UDQJHld.RI SDUWLVDQ DGYDQWDJH

'U 'XFKLQ¶V HG[SHUWKRZQWLQUWKHJHPLRGSODUW

DGYDQWDJHQLFRVJUHVVLRQDO VWDWKH6HQDFWHGDQ

%ODFN 9$3 VKRZQHGUF³FUDFNLQJ´ L H ³UHGXFHG

UHODWLYH WR WKld FRPSDULVRQ SODQV

'U 'XFKLQ RSLQHG PWKDW[SKHUUPDQJRUVXJHV

OHJLVODWXUH GLG QRW SXUVXH D ³UDFH QHXWUDO

UDWKHU D FRQVFLRXVFHSXUVXLW RI SDUWLVDQ DGY

'U 'XFKLQ UHDFKHG WKH VDPH DFQG+RXVLR

PDSV ILQGLQJ WKDW ³7KH VDPH VLJQDWXUH RI

&RQJUHVVLRQld DWER[SORW´

'U 'XFKLQ WKHQ GUHZ UDQGRP FRQJUHVVLF [illegible]

IURP WKH PUGQOH GLVWULEXWLRQ [illegible]

%9$3 [illegible] SODQ

'U 'XFKLQ FRQFOXGHG WKDW WKH HQDFWHG [illegible]

RI WKH UDQGRPO\ VHOHFWHG [illegible]

VHOHFWHG [illegible] HQDWH DQG [illegible] Id. +RXVH SODQV

'U 'XFKLQ FRQFOXGHG WKDW EDVHG RQ KH [illegible]

WKRXVDQGV RI H[DPSOHV ZLWK HYHQ JUHDWHU SD [illegible]

FRXOG KDYH EHHQ GUDZQ EXW ZKLFK [illegible]

WKDW DUH IRXQG [illegible] Id. WKH HQDFWHG SODQ ´

'U 'XFKLQ FDOFXODWHG WKDW WKH SUREDE [illegible]

ORZ LQ %9$3 FRPSDUHG [illegible]

Id.

'U 'XFKLQ FDOFXODWLQJ [illegible]

ORZ LQ %9$3 FRPSDUHG [illegible]

Id.

'U 'XFKLQ FDOFXODWHG WKDW WKH SUREDE [illegible]

ORZ LQ %9$3 FRPSDUHG [illegible]

Id.

'U 'XFKLQ DOVR IRXQG LQGLFDWLRQV FRUU

UDFH ZDV XVHG WR DFKLHYH SDUWLVDQ RXWFRPHV

QXPEHUV RI VSOLW SUHFLQFWV EHFDXVH SUHFLQFWV

OHYHO Id.

,9 7KH ) *Gingles* 3UHFRQGLWLRQ

$ 'U 'XFKLQ¶V 0HWKRGRORJ\

'U 'XFKLQ H[DPLQHG ZKHWKHU 3ODLQWLIIV *Gingles* FRX

SUHFRQGLWLRQ 'XFKLQ 7U 'XFKLQ WHVW 7R GR VR 'U 'XF

DQDO\]HG ZKHWKHU LW ZDV SRVVLEOH WR GUDZ DGGLWLRQDO

*HRUJLD¶V FRQJUHVVLRQDO ZKLOH DOVR UHVSHFWLQJ

UHGLVWULFWLQJ SULQFLSOHV

,Q GUDZLQJ KHU 'XFKLQ ILUVW XVHG D P

³FRPSXWDWLRQDO UHGLVWULFWLQJ´ ZKLFK LQYROYHV

PDSV 'XFKLQ 'U 'XFKLQ UXQV WKLV ³DOJRULWK

VHUYH DV D EDVH IRU ODWWHU PDS GUDZLQJ SURFHV

GLIIHUHQW SDUWV RI´ *HRUJLD Id.

$IWHU ³DOJRULWKPLF H[SORUDWLRQ´ JHQHUD

KDQG GUHZ PDSV LQ RUGHU WR EDODQFH FRPSHWLQJ

PDSV WKDW DUH 'XFKLQ3UHGRPLQDQWLDEOH ´

'U 'XFKLQ H[DPLQHG TXDQWLILDEOH DQG

UHGLVWULFWLQJ SULQFLSOHV 'XFKLQ 'HS

'XFKLQ 5HS

'U 'XFKLQ XVHG UHGLVWULFWLQJ JXLGHOLQHV

FKDPEHUV RI WKH *HRUJLD JHQHUDO DVVHPEO\ DQG WKH

UHGLVWULFWLQJ SULQFLSOHV WR JXLGH KLV DQDO\VLV

A. GENERAL PRINCIPLES FOR DRAFTING PLANS

1. Each congressional district should be drawn with a total population of plus or minus one person from the ideal district size.
2. Each legislative district of the General Assembly should be drawn to achieve a total population that is substantially equal as practicable, considering the principles listed below.
3. All plans adopted by the Committee will comply with Section 2 of the Voting Rights Act of 1965, as amended.
4. All plans adopted by the Committee will comply with the United States and Georgia Constitutions.
5. Districts shall be composed of contiguous geography. Districts that connect on a single point are not contiguous.
6. No multi-member districts shall be drawn on any legislative redistricting plan.
7. The Committee should consider:
   a. The boundaries of counties and precincts;
   b. Compactness; and
   c. Communities of interest.
8. Efforts should be made to avoid the unnecessary pairing of incumbents.
9. The identifying of these criteria is not intended to limit the consideration of any other principles or factors that the Committee deems appropriate.

'XFKLQ 5HS

6RPH RI WKHVH SULQFLSOHV VXFK DV FRPSDFWQHVV

SRSXODWLRQ EDODQFH DUH JHQHUDOO\ FRQVLGHUHG

9RWLQJ 5LJKWV $FW FRPSOLDQFH ZLWK WKH 8 6 DQG *HRU

DQG HQVXULQJ WKDW PHPEHUV RI WKH FRPPXQLW\ DUH QRW F

VXFK DV FRQVLGHUDWLRQ RI WKH ERXQGDULHV RI

LQWHUHVW ODVW LV WR PDLQWDLQ WKH FRUH RI WKH SUHYLRXV

LQFXPEHQWV

7R GHWHUPLQH FRPPXQLWLHV RI LQWHUH

YROXPLQRXV UHFRUG RI SXEOLF WHVWLPRQ\ RQ FRPPXQLWLHV

RI LQWHUHVW WHVWLPRQ\ LQIRUPHG DOO SURFHVVLQJ

7KLV WHVWLPRQ\ LQFOXGHG SXEOLF LQSXW

XOWLPDWHO\ HQDFWHG &' ZRXOG EH EOHQGLQJ FRPPXQL

FRPPRQ LQ UXUDO VRXWKHDVW $UPV &RZHWD RI (

FRPPXQLWLHV WKDW KDYH LQWHUHVWV DQG SUREOHPV

WUDQVSRUWDWLRQ 'XFKLQ

7KLV WHVWLPRQ\ SXEOLF LQSXW UHIOHFWHG

XOWLPDWHO\ HQDFWHG &' ZRXOG EH EOHQGLQJ FRPPXQL

FRPPRQ LQ UXUDO VRXWKHDVW FRPPXQLWLHV

FRPPXQLWLHV WKDW KDYH LQWHUHVWV

)RU KHU GHPRQVWUDWLRQ 'XFKLQ GUHZ

DOWHUQDWLYH PDS FRYHULQJ WKH HQWLUH VWDW

)RU KHUVGHUPRQLYH VHQDWH DQG KRXVH SOD

(QDFWHG 3ODQ LQWHUPRGXLVHV 8QGHUPRGXODU DSSURDFK

DOWHUQDWLYH PDSV LQ JHRJUDSKLF DUHDWKFLQYHU

FHUWDLQLQRWKHHQDXFWKHS SODQ 'XFKLQ 5HS

%1XPHURVLW\

'U 'XFKLQ 'UHZ $GGLWLRQDO 0DM
&RQJUHVVLRQDO 'LVWULFWV

7KH HQDFWHG FRQJUHVVLRQDO SODQ FRQW

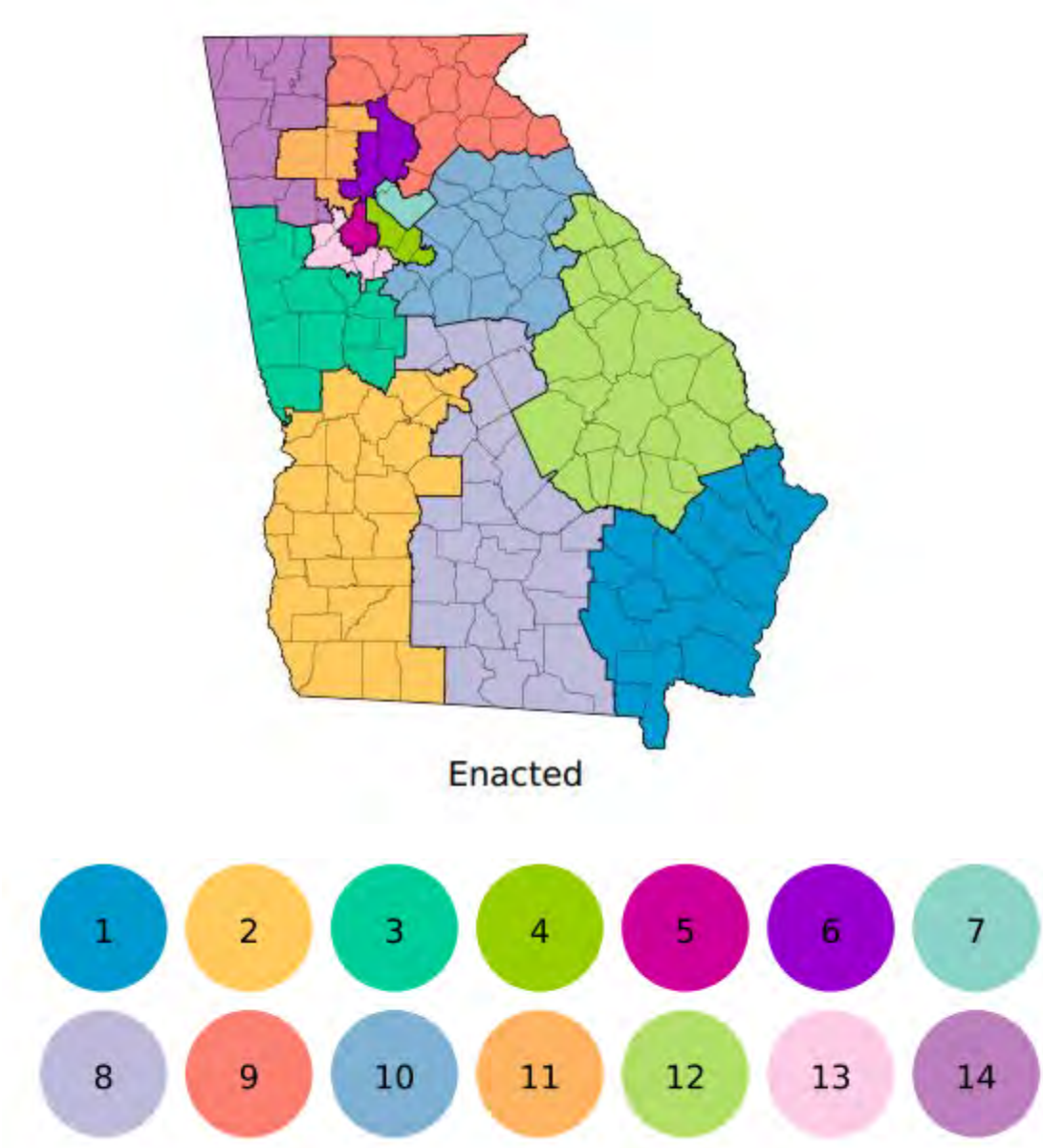
&' DQG &"XFKLQ 5HS DW 7DEOH

7KUHH DGGLWLRQDO GLVWULFWV LQ WKH

PDMRULW\ %ODFN DQG +LVSDQLF YRWLQJ DJHGSRS

&' Id. &' LV QRW PDMRULW\ %ODFN DQG +LVSDQLF

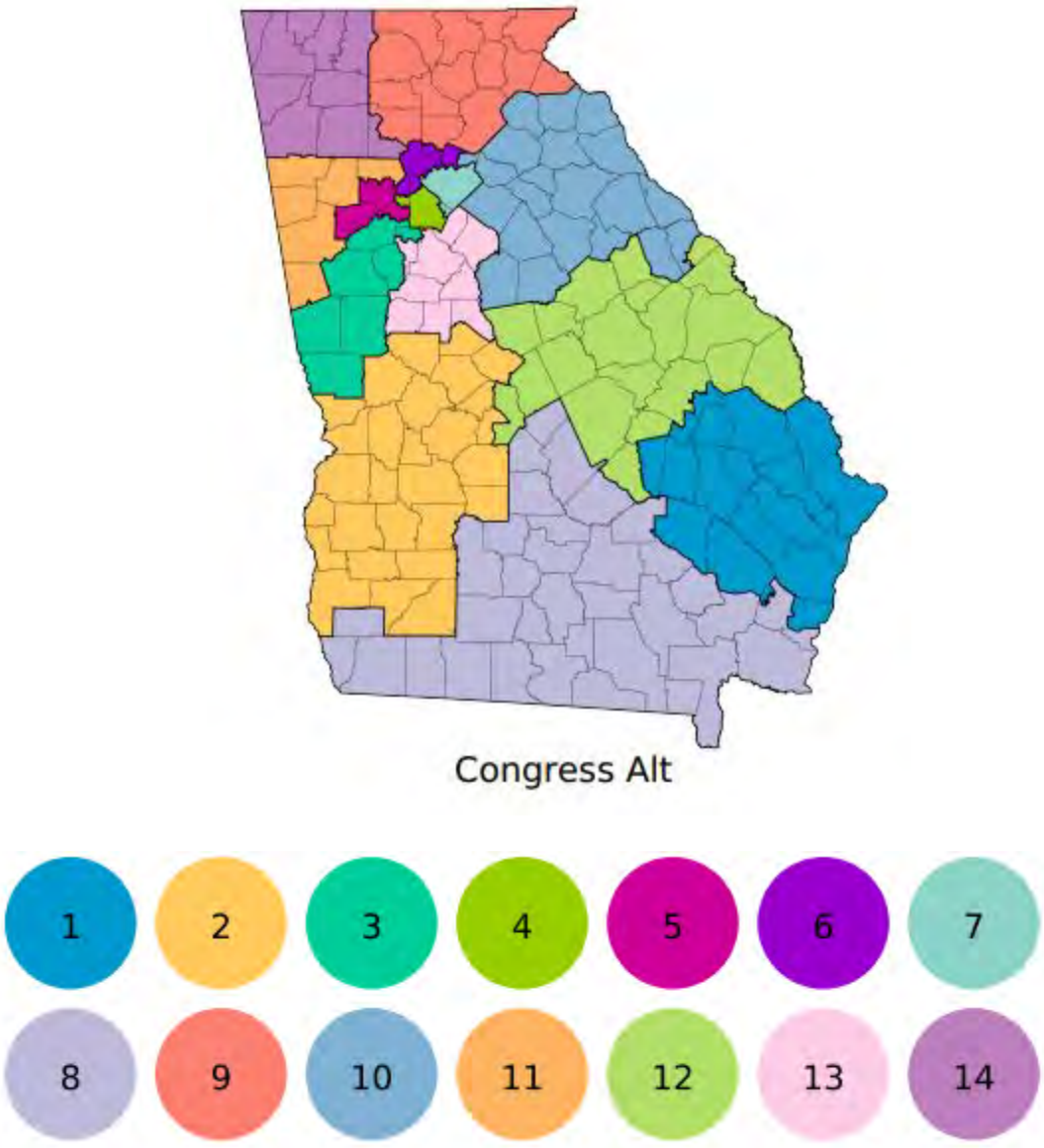
[3] % + & 9 $ 3 Id. See also id. DW )LJXUH




'U 'XFKLQ SURYLGHG RQH DOWHUQDWLYH F

WKDW FUHDWHG DPLQRULWQ GLVWULFWLWV ZKHQ FRP

SOLDQ See also id. DW )LJXUH




$OW&' FUHDWHV IRXUGPLVWULWW%9$3

'XFKLQ 5HS DW 7DEOH

$OW&' DOVR FUHDWHV WZR PDMRW'LW\ D%Q-9$3

Id.

(DFK RI WKH PDMRULW\ $OW&9$%3 DUH GLVWULFWV LQ $OW

%+&9$3 GLVWULFWV

$OW&' WKXV FUHDWHV DGGLWLRQDO PDMRULW\ %+&9$3 GLVWULFW

DV GHPRQVWUDWHG EHORZ LQ WKH FKDUW

| | CD Enacted (Statewide) | | | | | | CD Alt 1 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 1 | 28.2% | 6.8% | 35.0% | 60.4% | 0.285 | 0.456 | 30.3% | 6.9% | 37.2% | 58.5% | 0.312 | 0.633 |
| 2 | 49.3% | 5.1% | 54.4% | 42.7% | 0.267 | 0.458 | 47.7% | 4.7% | 52.4% | 44.5% | 0.315 | 0.494 |
| 3 | 23.3% | 5.3% | 28.6% | 66.8% | 0.275 | 0.461 | 51.2% | 7.2% | 58.4% | 37.4% | 0.278 | 0.411 |
| 4 | 54.5% | 10.1% | 64.6% | 28.3% | 0.246 | 0.307 | 50.6% | 8.2% | 58.8% | 33.8% | 0.295 | 0.481 |
| 5 | 49.6% | 6.7% | 56.3% | 37.9% | 0.322 | 0.512 | 50.1% | 11.4% | 61.5% | 33.4% | 0.216 | 0.424 |
| 6 | 9.9% | 9.1% | 19.0% | 66.6% | 0.198 | 0.424 | 13.7% | 10.9% | 24.6% | 57.1% | 0.232 | 0.346 |
| 7 | 29.8% | 21.3% | 51.1% | 32.8% | 0.386 | 0.496 | 34.3% | 22.4% | 56.7% | 29.4% | 0.351 | 0.518 |
| 8 | 30.0% | 6.1% | 36.1% | 60.5% | 0.210 | 0.338 | 27.3% | 6.9% | 34.2% | 63.0% | 0.227 | 0.377 |
| 9 | 10.4% | 12.9% | 23.3% | 68.3% | 0.253 | 0.380 | 4.6% | 11.5% | 16.1% | 77.9% | 0.403 | 0.512 |
| 10 | 22.6% | 6.5% | 29.1% | 66.2% | 0.284 | 0.558 | 17.6% | 6.9% | 24.5% | 69.8% | 0.335 | 0.576 |
| 11 | 17.9% | 11.2% | 29.1% | 64.0% | 0.207 | 0.480 | 17.6% | 7.6% | 25.2% | 68.1% | 0.283 | 0.364 |
| 12 | 36.7% | 4.9% | 41.6% | 54.6% | 0.278 | 0.502 | 39.2% | 4.6% | 43.8% | 51.9% | 0.181 | 0.489 |
| 13 | 66.7% | 10.5% | 77.2% | 18.8% | 0.157 | 0.380 | 52.0% | 6.8% | 58.8% | 37.8% | 0.276 | 0.510 |
| 14 | 14.3% | 10.6% | 24.9% | 71.3% | 0.373 | 0.426 | 7.6% | 11.0% | 18.6% | 77.0% | 0.514 | 0.484 |
| Avg | | | | | 0.267 | 0.441 | | | | | 0.301 | 0.473 |

'HIHQGDQWV¶ PDSSLQJ H[SHUW 'U 0RUJDQ

GLVSXWH WKDW LW ZDV SRVVLEOH WR GUDZ WKLV DGGLWLRQDO

&RQJUHVVLRQDO SODQ 'HSRVLWLRQ RI 0RUJDQ 'HSRVLWLRQ

7KLV FKDUW DQG RWKHUV UHIOHFW WKH H[LVWLQJ DJH SRSX

FRPSDULVRQV E\ GLVWULFW LQ WKH HQDFWHG SODQ

SODQ 'RF 5HS DW see also Id. DW

7KLV FKDUW DQG RWKHUV OLNH LW UHFRUG WKH VWDWLVWLFV

RQ D YDULHW\ RI PHWULFV LQFOXGLQJ %ODFN YRWLQJ DJH SRSX

YRWLQJ DJH SRSXODWLRQ ³+9$3´ ³:9K$L3WHFLYRWLQJ

YRWLQJ DJH SRSXODWLRQ ³&9$3´ 'XFKLQ 5HQDW

7KLV FKDUW DQG RWKHUV OLNH LW FRPSDU

XVLQJ WKH WZR PRVW FRPPRQ FRPSRSWHUHVVFRUHW

WKH 5HRF7NKHVFRUHU EERDWKHGRVQFRRUHU WKDW UHO\ R

GLVWULFW RQ3DRSPDHSU L3VRDVUEDWLR IRUPHG E\ FRPS

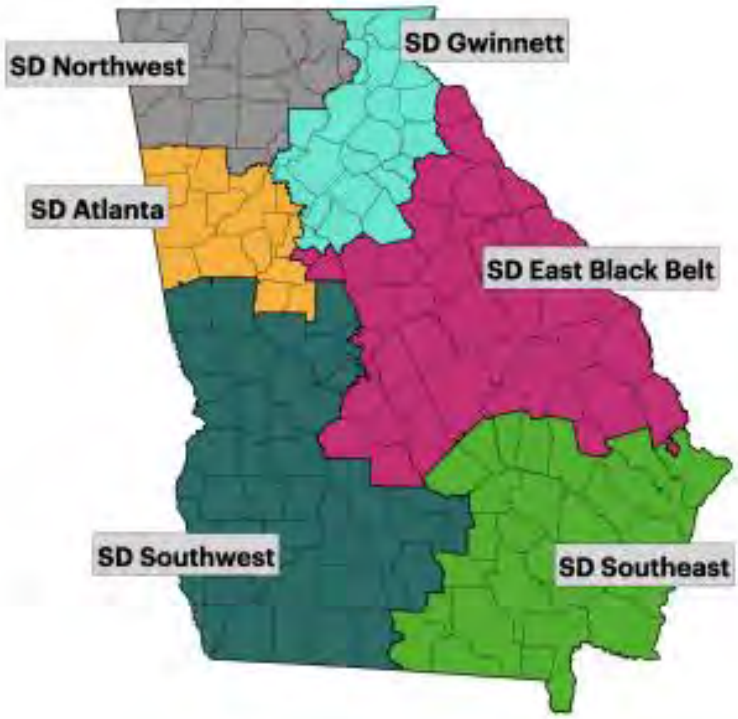
WR LWV SHULPHWHU$ 3Y5LHDRWNKHFRQVLGHUV KRZ PXFK

ERXQGLQJILOLUHGHRLW E\ W'XFKGLQDWULFW¶V DUHD

'U 'XFKLQ 'UHZ $GGLWLRQDO 0DMRUL
'LVWULFWV

'U 'XFKLQ DQDO\]HG VL[ FOXVWHUV RI VHQD

*ZLQQHWW 6' $WODQWD 6' (DVW %ODXFNKH%DHOW 6'

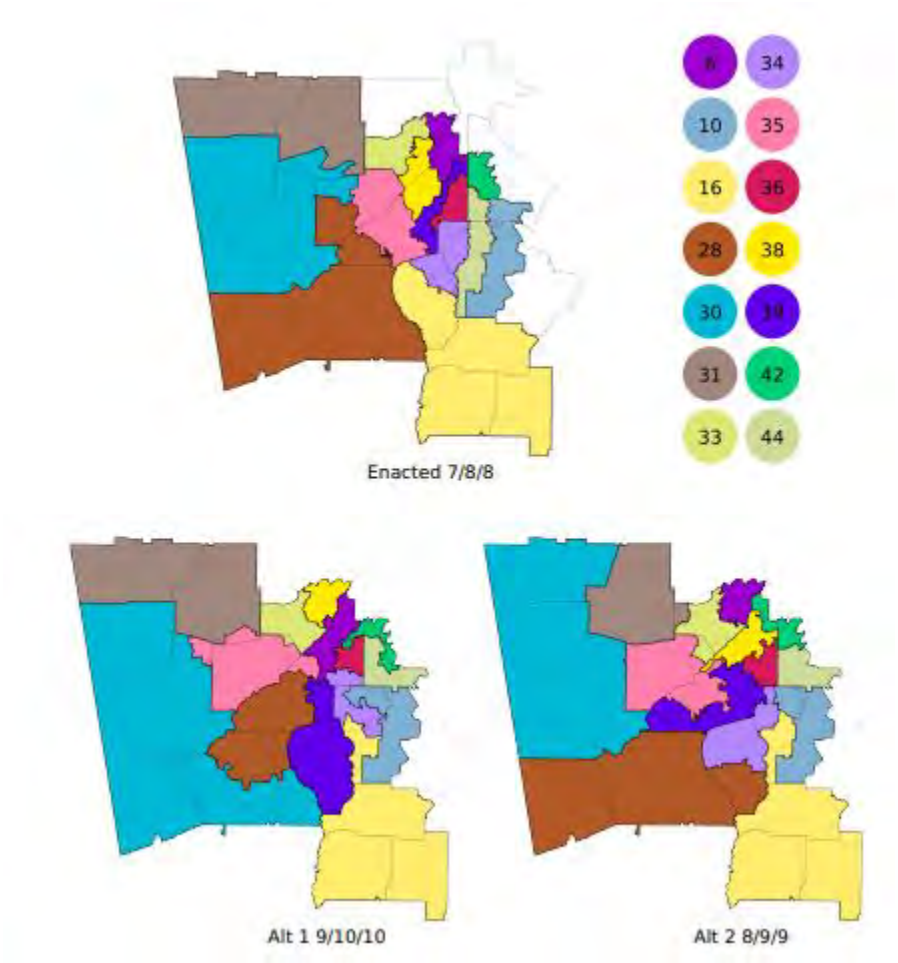



Id D W ) L J X U H

, Q W K H 6 ' $ W O D Q W D U H J L R Q ' U ' X F K L Q S U

³6 ' $ O W $ W O D Q W D ´ D Q G ³6 ' $ O W $ W O D Q W D ´ D Q G

G L V W U L F W V




Id D W ) L J X U H

'H I H Q G H [S W U W 'U W 0 R U J D Q H G K H K D V Q R E D V

'U 'X F K L Q Z D V D E O H W R G R U D Z R U G W L W H R Q D W H P D L W R

'H S see also & D Q W H U 'H ( [S H U W 5 H S R U W R R U J D Q 0 R

5 H S D W & K D U W V 0 R U J D Q 'H S 0 R U J D Q 'H S

0 R U J D Q 'H S

7KH HQDFWHG 6' $WODQWD FOXVWHU FRQW

6'V 'XFKLQJ 5HS 7DEOH DQG 7DEOH

7KH HQDFWHG 6' $WODQWD FOXVWHU FRQWD

GLVWULFW. Id. 6'

6' $OW $WODQWD FRQWDLQV PDMRULW

$WODQWD Id. 7DEOH DQG

6' $OW $WODQWD FRQWDLQV PDMRULW\ %9$3 GLVWULFWV 6'

DQG PDMRULW\ %+9$3 GLV

Id. 7DEOH

7KH WDEOHV EHORZ SURYLGH D FRPSDULVRQ

DQG 6' $OW $WODQWD DQG 6' $OW $WODQWD

| | SD Atlanta Enacted | | | | | | **SD Alt 1** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 6 | 23.9% | 8.2% | 32.1% | 57.8% | 0.236 | 0.405 | 50.1% | 6.1% | 56.2% | 39.8% | 0.169 | 0.246 |
| 10 | 71.5% | 5.2% | 76.7% | 19.6% | 0.231 | 0.281 | 59.5% | 11.0% | 70.5% | 23.4% | 0.238 | 0.420 |
| 16 | 22.7% | 5.0% | 27.7% | 66.9% | 0.314 | 0.368 | 50.2% | 6.2% | 56.4% | 40.9% | 0.254 | 0.354 |
| 28 | 19.5% | 6.4% | 25.9% | 69.4% | 0.246 | 0.445 | 50.6% | 6.8% | 57.4% | 39.3% | 0.335 | 0.489 |
| 30 | 20.9% | 6.1% | 27.0% | 69.4% | 0.407 | 0.597 | 14.3% | 5.1% | 19.4% | 76.9% | 0.286 | 0.361 |
| 31 | 20.7% | 7.4% | 28.1% | 68.3% | 0.379 | 0.366 | 19.7% | 7.2% | 26.9% | 69.4% | 0.470 | 0.395 |
| 33 | 43.0% | 22.9% | 65.9% | 30.2% | 0.215 | 0.401 | 50.4% | 18.1% | 68.5% | 27.9% | 0.381 | 0.528 |
| 34 | 69.5% | 12.7% | 82.2% | 13.4% | 0.335 | 0.451 | 72.2% | 11.6% | 83.8% | 11.5% | 0.163 | 0.326 |
| 35 | 71.9% | 7.5% | 79.4% | 18.8% | 0.263 | 0.472 | 50.9% | 8.0% | 58.9% | 38.2% | 0.347 | 0.400 |
| 36 | 51.3% | 7.1% | 58.4% | 36.2% | 0.305 | 0.321 | 50.0% | 5.7% | 55.7% | 38.8% | 0.339 | 0.452 |
| 38 | 65.3% | 8.4% | 73.7% | 21.9% | 0.208 | 0.361 | 27.9% | 15.4% | 43.3% | 46.1% | 0.271 | 0.487 |
| 39 | 60.7% | 5.6% | 66.3% | 27.9% | 0.128 | 0.166 | 51.2% | 5.4% | 56.6% | 38.6% | 0.277 | 0.357 |
| 42 | 30.8% | 8.6% | 39.4% | 51.4% | 0.321 | 0.479 | 35.8% | 9.6% | 45.4% | 43.5% | 0.112 | 0.289 |
| 44 | 71.3% | 8.6% | 79.9% | 15.3% | 0.185 | 0.180 | 61.6% | 3.6% | 65.2% | 31.0% | 0.237 | 0.356 |
| Avg | | | | | 0.270 | 0.378 | | | | | 0.277 | 0.390 |

Table 12: SD Atlanta Alt 1 splits 8 counties within the cluster compared to 7 in the enacted plan and has a better discrete compactness score, with 2017 cut edges rather than 2197, to go with comparable Polsby-Popper and superior Reock compactness.

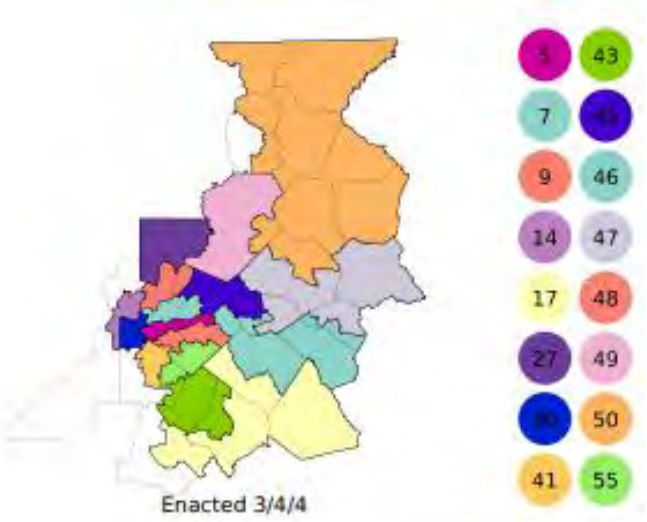
| | SD Atlanta Enacted | | | | | | **SD Alt 2** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 6 | 23.9% | 8.2% | 32.1% | 57.8% | 0.236 | 0.405 | 28.0% | 14.9% | 42.9% | 46.7% | 0.256 | 0.477 |
| 10 | 71.5% | 5.2% | 76.7% | 19.6% | 0.231 | 0.281 | 59.7% | 9.8% | 69.5% | 23.3% | 0.307 | 0.416 |
| 16 | 22.7% | 5.0% | 27.7% | 66.9% | 0.314 | 0.368 | 48.4% | 6.1% | 54.5% | 42.4% | 0.258 | 0.366 |
| 28 | 19.5% | 6.4% | 25.9% | 69.4% | 0.246 | 0.445 | 15.8% | 6.1% | 21.9% | 72.8% | 0.347 | 0.371 |
| 30 | 20.9% | 6.1% | 27.0% | 69.4% | 0.407 | 0.597 | 15.7% | 6.6% | 22.3% | 74.2% | 0.473 | 0.508 |
| 31 | 20.7% | 7.4% | 28.1% | 68.3% | 0.379 | 0.366 | 25.9% | 6.7% | 32.6% | 63.6% | 0.591 | 0.636 |
| 33 | 43.0% | 22.9% | 65.9% | 30.2% | 0.215 | 0.401 | 50.6% | 18.2% | 68.8% | 27.4% | 0.224 | 0.463 |
| 34 | 69.5% | 12.7% | 82.2% | 13.4% | 0.335 | 0.451 | 54.4% | 11.9% | 66.3% | 27.9% | 0.246 | 0.381 |
| 35 | 71.9% | 7.5% | 79.4% | 18.8% | 0.263 | 0.472 | 60.9% | 7.5% | 68.4% | 29.3% | 0.206 | 0.490 |
| 36 | 51.3% | 7.1% | 58.4% | 36.2% | 0.305 | 0.321 | 54.0% | 6.8% | 60.8% | 33.6% | 0.263 | 0.466 |
| 38 | 65.3% | 8.4% | 73.7% | 21.9% | 0.208 | 0.361 | 51.0% | 5.6% | 56.6% | 37.6% | 0.154 | 0.260 |
| 39 | 60.7% | 5.6% | 66.3% | 27.9% | 0.128 | 0.166 | 86.5% | 5.5% | 92.0% | 7.0% | 0.118 | 0.271 |
| 42 | 30.8% | 8.6% | 39.4% | 51.4% | 0.321 | 0.479 | 17.0% | 10.7% | 27.7% | 61.4% | 0.144 | 0.282 |
| 44 | 71.3% | 8.6% | 79.9% | 15.3% | 0.185 | 0.180 | 76.3% | 3.2% | 79.5% | 18.7% | 0.374 | 0.456 |
| Avg | | | | | 0.270 | 0.378 | | | | | 0.283 | 0.417 |

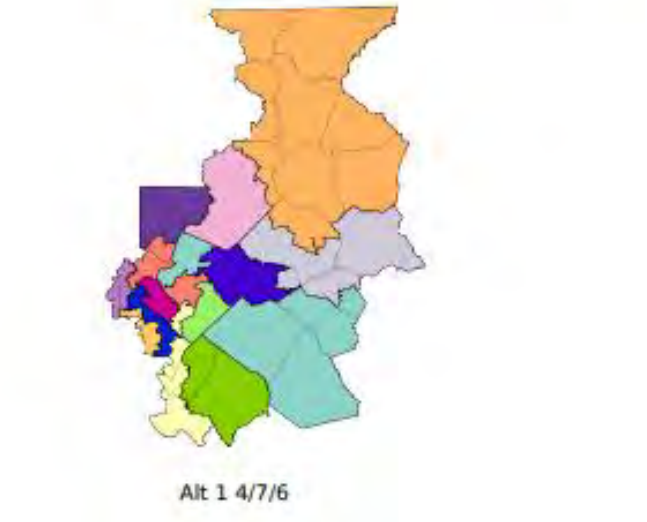
Table 13: SD Atlanta Alt 2 splits 6 counties within the cluster and has just 1985 cut edges, better than the enacted plan's 7 and 2197, while also improving on both contour-based compactness scores.

Id 7DEOH DQG 7DEOH

'U 'XFKLQ SURYLGHG DQ DOWHUQDWLYH P

*ZLQQHWW´ WKDW FUHDWHG




Id. D W ) L J X U H

'H I H Q G D Q W V ¶ H [ S H U W 'U 0 R U J D Q W K D W L I L

'U 'X F K L Q Z D V D E O H W R G P U L Q Z R U G W L W H R Q D W O H P G L W R

'H S see also 0 R U J D Q 5 H W S & K D U W V 0 R U J D Q 'H S

0 R U J D Q 'H S 0 R U J D Q 'H S

7KH HQDFWHG 6' *ZLQQHWW FOXVWHU FRQW

6'V DQG DQG DGGLWLRQDO PDMRULW\ 0RUDQ

5HSDW 7DERR 0RQ 'XFKLQ ³'XFKLQ 5HS´ DW 7DE

6' $OW *ZLQQHWW FUHDWHV LWWULPDMRULW\$

*ZLQQHWW DQG DQG PDMRULW\

*ZLQQHWWId DQG

7KH WDEOH EHORZ FRPSDUHV WKH HQDFWHG

*ZLQQHWW

| | SD Gwinnett Enacted | | | | | | SD Alt 1 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 5 | 29.9% | 41.7% | 71.6% | 15.7% | 0.207 | 0.166 | 20.3% | 34.6% | 54.9% | 28.0% | 0.285 | 0.384 |
| 7 | 21.4% | 16.6% | 38.0% | 37.8% | 0.339 | 0.344 | 17.1% | 14.3% | 31.4% | 45.5% | 0.278 | 0.401 |
| 9 | 29.5% | 18.8% | 48.3% | 35.8% | 0.213 | 0.233 | 29.3% | 27.0% | 56.3% | 26.2% | 0.234 | 0.498 |
| 14 | 19.0% | 12.1% | 31.1% | 57.1% | 0.242 | 0.273 | 18.1% | 11.4% | 29.5% | 57.6% | 0.208 | 0.296 |
| 17 | 32.0% | 5.1% | 37.1% | 59.4% | 0.168 | 0.342 | 51.1% | 6.6% | 57.7% | 35.9% | 0.113 | 0.188 |
| 27 | 5.0% | 10.2% | 15.2% | 71.5% | 0.456 | 0.499 | 4.7% | 10.2% | 14.9% | 70.8% | 0.500 | 0.497 |
| 40 | 19.2% | 21.6% | 40.8% | 46.3% | 0.345 | 0.508 | 50.1% | 17.7% | 67.8% | 25.1% | 0.130 | 0.208 |
| 41 | 62.6% | 6.7% | 69.3% | 21.4% | 0.302 | 0.509 | 57.3% | 10.0% | 67.3% | 23.3% | 0.149 | 0.279 |
| 43 | 64.3% | 6.9% | 71.2% | 26.5% | 0.346 | 0.635 | 52.0% | 7.0% | 59.0% | 38.3% | 0.420 | 0.537 |
| 45 | 18.6% | 13.1% | 31.7% | 55.5% | 0.305 | 0.350 | 19.8% | 12.1% | 31.9% | 58.8% | 0.226 | 0.380 |
| 46 | 16.9% | 7.0% | 23.9% | 69.9% | 0.207 | 0.365 | 16.5% | 5.0% | 21.5% | 73.4% | 0.416 | 0.514 |
| 47 | 17.4% | 9.6% | 27.0% | 67.5% | 0.187 | 0.353 | 16.7% | 8.7% | 25.4% | 68.5% | 0.176 | 0.326 |
| 48 | 9.5% | 7.0% | 16.5% | 52.2% | 0.342 | 0.348 | 10.1% | 6.4% | 16.5% | 54.8% | 0.266 | 0.387 |
| 49 | 8.0% | 21.9% | 29.9% | 65.6% | 0.341 | 0.461 | 8.1% | 24.6% | 32.7% | 62.8% | 0.382 | 0.573 |
| 50 | 5.6% | 8.8% | 14.4% | 81.5% | 0.228 | 0.450 | 5.4% | 6.1% | 11.5% | 84.3% | 0.232 | 0.462 |
| 55 | 66.0% | 8.7% | 74.7% | 20.6% | 0.271 | 0.333 | 50.0% | 13.9% | 63.9% | 30.0% | 0.419 | 0.451 |
| Avg | | | | | 0.281 | 0.386 | | | | | 0.277 | 0.399 |

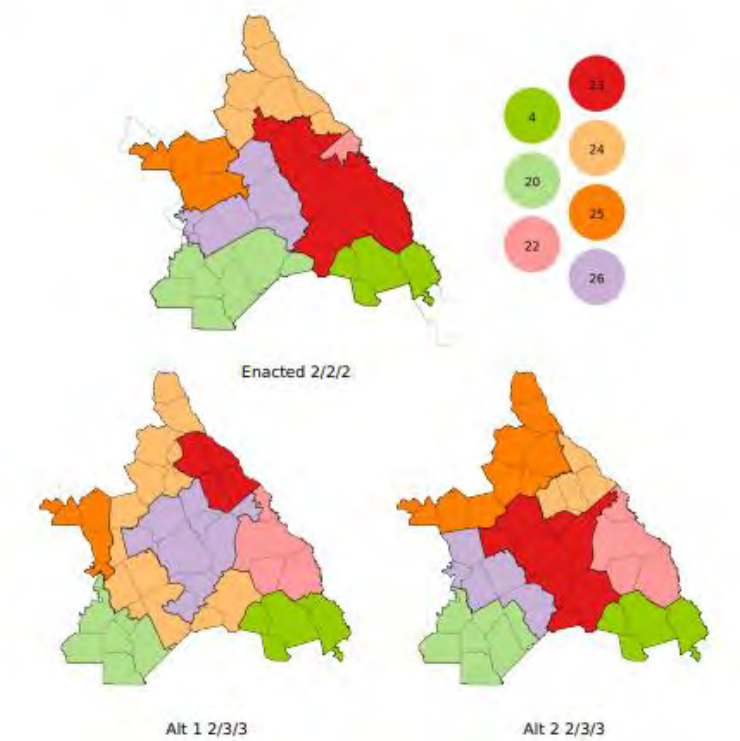
Id.

'U 'XFKLQ SURYLGHG WZR DOWHUQDWLYH P

FOXVWHU ³6' $OW (DVW %ODFN %HOW´ DQG ³6' $

DGGLWLRQDO PDMRULW\ 0RUDQ 'XFKLQ ³'XFKLQ 5HS´ DW 7DE

**7.2.3 SD East Black Belt**




Id D W ) L J X U H

' H I H Q G D Q W V ¶ H [ S H U W G K U H K R U J Q R E W H L V W L R

' U ' X F K L Q Z D V D E O H W R G P U L Q Z R U G W L W L R Q D W H P G L W R

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%ODFN %HOW WDEOH

7KH WDEOH EHORZ SURYLGHV D FRPSDULVR

%ODFN %HOW FOXVWHU DQG 6' $OW (DVW %ODFN

| | SD East Black Belt Enacted | | | | | | **SD Alt 1** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 4 | 23.4% | 5.5% | 28.9% | 66.8% | 0.265 | 0.471 | 23.5% | 5.5% | 29.0% | 66.7% | 0.284 | 0.495 |
| 20 | 31.3% | 3.5% | 34.8% | 61.7% | 0.358 | 0.404 | 34.4% | 5.1% | 39.5% | 56.5% | 0.231 | 0.498 |
| 22 | 56.5% | 5.3% | 61.8% | 34.4% | 0.288 | 0.404 | 50.5% | 3.8% | 54.3% | 42.6% | 0.241 | 0.455 |
| 23 | 35.5% | 4.5% | 40.0% | 56.9% | 0.164 | 0.365 | 23.0% | 5.6% | 28.6% | 64.6% | 0.466 | 0.497 |
| 24 | 19.9% | 4.4% | 24.3% | 69.8% | 0.213 | 0.366 | 25.0% | 3.5% | 28.5% | 69.1% | 0.083 | 0.229 |
| 25 | 33.5% | 3.7% | 37.2% | 59.9% | 0.241 | 0.386 | 50.0% | 4.0% | 54.0% | 43.4% | 0.174 | 0.344 |
| 26 | 57.0% | 4.2% | 61.2% | 36.6% | 0.203 | 0.469 | 50.1% | 3.7% | 53.8% | 43.4% | 0.209 | 0.472 |
| Avg | | | | | 0.247 | 0.409 | | | | | 0.241 | 0.427 |

Table 15: SD East Black Belt Alt 1 has more cut edges than the state (1301 vs. 1021 from the enacted plan), paired with a comparable Polsby-Popper and a superior Reock score. This alternative plan splits seven counties while the state splits four within the cluster.

| | SD East Black Belt Enacted | | | | | | **SD Alt 2** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 4 | 23.4% | 5.5% | 28.9% | 66.8% | 0.265 | 0.471 | 23.4% | 5.5% | 28.9% | 66.8% | 0.265 | 0.471 |
| 20 | 31.3% | 3.5% | 34.8% | 61.7% | 0.358 | 0.404 | 32.5% | 4.9% | 37.4% | 58.7% | 0.304 | 0.586 |
| 22 | 56.5% | 5.3% | 61.8% | 34.4% | 0.288 | 0.404 | 50.4% | 3.5% | 53.9% | 42.9% | 0.264 | 0.432 |
| 23 | 35.5% | 4.5% | 40.0% | 56.9% | 0.164 | 0.365 | 47.4% | 4.1% | 51.5% | 45.8% | 0.231 | 0.441 |
| 24 | 19.9% | 4.4% | 24.3% | 69.8% | 0.213 | 0.366 | 23.1% | 5.6% | 28.7% | 64.5% | 0.327 | 0.458 |
| 25 | 33.5% | 3.7% | 37.2% | 59.9% | 0.241 | 0.386 | 28.2% | 4.5% | 32.7% | 64.3% | 0.176 | 0.311 |
| 26 | 57.0% | 4.2% | 61.2% | 36.6% | 0.203 | 0.469 | 51.2% | 3.1% | 54.3% | 43.5% | 0.205 | 0.331 |
| Avg | | | | | 0.247 | 0.409 | | | | | 0.253 | 0.433 |

Table 16: SD East Black Belt Alt 2 has just two county splits, compared to four in the state's plan. With just 1008 cut edges, it also executes a clean sweep of compactness scores relative to the enacted plan.

Id

'U 'XFKLQ 'UHZ $GGLWLRQDO 0DMRUL
'LVWULFWV

'U 'XFKLQ DQD+R\]HG FRXQW\ FOXVWHUV +' $WODQW

'H.DOE +' *ZLQQHWW +( D6VRXWWKOZDHFVNW % HOdW D+W' 6RX

Figure 7: Seven "modular" House clusters made up of groups of enacted districts.

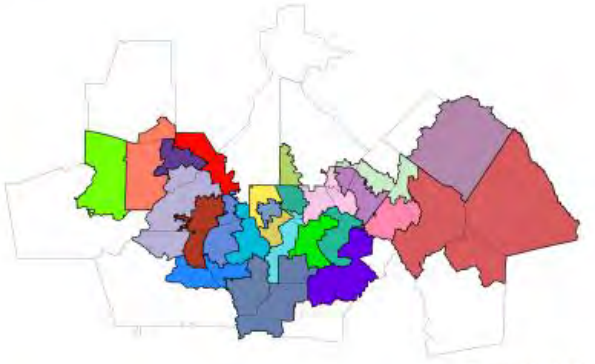
Id DW )LJXUH

'U 'XFKLQ SURYLGHG WZ+R $DOOWWHUQDWLYH

³+' $OW $WODQWD+W' $OW IRU WKH FOXVWHU WKDW FUHD

PLQRULW\ GLVWULFWV

**7.3.1 HD Atlanta**



Enacted 18/18/18

61 64 65 66 67 68 69 71 73 74 75 76 77
78 79 90 91 92 93 112 113 114 115 116 117

Id DW )LJXUHV DQG

'HIHQGDQWV¶ H[SHUW 'U ... KDV QR EDV

LW LV SRVVLEOH WR GUDZ ...

*see also* 0RUJDQ 5HS &KDUWV DQG 0RUJDQ

0RUJDQ 'HS 0RUJDQ

7KH HQWLUH $WODQWD FOXVWHU FRQWDLQV

+'V

See'XFKLQ DWS 7DEOH DQG 7DEOH

+' $OW $WODQWD FRQWDLQV PDMRULW\

$WODQWD

Id 7DEOH

+' $OW $WODQWD FRQWDLQV PDMRULW\

$WODQWD

DQG RQH PDMRULW\ %+9$3 GLVWULFW 7DEOH +' $OW $W

7KH WDEOHV EHORZ SURYLGH FRPSDULVRQ

DQG +' $WODQWD $OW DQG +' $WODQWD $OW

| HD | HD Atlanta Enacted | | | | | | HD Alt 1 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 61 | 74.3% | 7.6% | 81.9% | 16.8% | 0.198 | 0.247 | 50.1% | 10.0% | 60.1% | 37.1% | 0.229 | 0.265 |
| 64 | 30.7% | 7.4% | 38.1% | 57.8% | 0.361 | 0.365 | 50.9% | 6.5% | 57.4% | 40.0% | 0.132 | 0.263 |
| 65 | 62.0% | 4.5% | 66.5% | 31.5% | 0.172 | 0.454 | 81.7% | 4.7% | 86.4% | 12.5% | 0.222 | 0.350 |
| 66 | 53.4% | 9.5% | 62.9% | 33.9% | 0.246 | 0.356 | 51.0% | 9.0% | 60.0% | 36.2% | 0.256 | 0.386 |
| 67 | 58.9% | 7.8% | 66.7% | 30.9% | 0.122 | 0.357 | 89.9% | 5.4% | 95.3% | 4.4% | 0.195 | 0.515 |
| 68 | 55.7% | 6.3% | 62.0% | 33.9% | 0.172 | 0.318 | 13.7% | 6.6% | 20.3% | 71.5% | 0.310 | 0.518 |
| 69 | 63.6% | 5.4% | 69.0% | 26.9% | 0.247 | 0.403 | 51.9% | 8.8% | 60.7% | 34.0% | 0.339 | 0.409 |
| 71 | 19.9% | 6.2% | 26.1% | 69.8% | 0.352 | 0.441 | 19.9% | 6.2% | 26.1% | 69.8% | 0.350 | 0.441 |
| 73 | 12.1% | 7.0% | 19.1% | 72.6% | 0.198 | 0.278 | 11.8% | 6.4% | 18.2% | 75.9% | 0.335 | 0.417 |
| 74 | 25.5% | 5.6% | 31.1% | 64.4% | 0.247 | 0.496 | 50.8% | 6.9% | 57.7% | 39.7% | 0.205 | 0.461 |
| 75 | 74.4% | 11.3% | 85.7% | 11.3% | 0.285 | 0.420 | 54.2% | 7.7% | 61.9% | 34.1% | 0.133 | 0.230 |
| 76 | 67.2% | 13.2% | 80.4% | 10.5% | 0.509 | 0.524 | 61.6% | 20.0% | 81.6% | 11.2% | 0.460 | 0.409 |
| 77 | 76.1% | 12.2% | 88.3% | 7.6% | 0.211 | 0.396 | 89.6% | 5.0% | 94.6% | 3.5% | 0.211 | 0.292 |
| 78 | 71.6% | 8.9% | 80.5% | 15.0% | 0.194 | 0.210 | 64.2% | 11.3% | 75.5% | 15.4% | 0.256 | 0.414 |
| 79 | 71.6% | 16.0% | 87.6% | 7.1% | 0.209 | 0.498 | 73.3% | 14.6% | 87.9% | 8.0% | 0.370 | 0.444 |
| 90 | 58.5% | 4.3% | 62.8% | 34.0% | 0.286 | 0.359 | 58.5% | 4.3% | 62.8% | 34.0% | 0.286 | 0.359 |
| 91 | 70.0% | 5.9% | 75.9% | 22.0% | 0.202 | 0.447 | 50.3% | 5.2% | 55.5% | 40.7% | 0.245 | 0.384 |
| 92 | 68.8% | 4.7% | 73.5% | 24.1% | 0.198 | 0.361 | 87.6% | 3.5% | 91.1% | 8.3% | 0.260 | 0.543 |
| 93 | 65.4% | 9.6% | 75.0% | 22.9% | 0.112 | 0.260 | 62.1% | 10.4% | 72.5% | 25.4% | 0.160 | 0.232 |
| 112 | 19.2% | 3.3% | 22.5% | 73.7% | 0.522 | 0.619 | 19.2% | 3.3% | 22.5% | 73.7% | 0.522 | 0.619 |
| 113 | 59.5% | 6.7% | 66.2% | 31.8% | 0.318 | 0.501 | 51.0% | 5.1% | 56.1% | 41.2% | 0.338 | 0.425 |
| 114 | 24.7% | 3.7% | 28.4% | 68.8% | 0.283 | 0.502 | 32.8% | 4.4% | 37.2% | 60.3% | 0.267 | 0.438 |
| 115 | 52.1% | 7.0% | 59.1% | 36.9% | 0.226 | 0.436 | 50.2% | 6.0% | 56.2% | 38.6% | 0.193 | 0.282 |
| 116 | 58.1% | 7.3% | 65.4% | 27.2% | 0.280 | 0.407 | 54.8% | 8.0% | 62.8% | 29.6% | 0.333 | 0.478 |
| 117 | 36.6% | 5.4% | 42.0% | 54.5% | 0.275 | 0.408 | 51.0% | 7.2% | 58.2% | 39.0% | 0.409 | 0.511 |
| Avg | | | | | 0.257 | 0.402 | | | | | 0.281 | 0.403 |

Table 17: In HD Atlanta, the enacted plan has 10 county splits and 2221 cut edges. Alt 1 maintains 10 county splits and improves to 1988 cut edges.

| HD | HD Atlanta Enacted | | | | | | HD Alt 2 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 61 | 74.3% | 7.6% | 81.9% | 16.8% | 0.198 | 0.247 | 47.4% | 10.1% | 57.5% | 39.6% | 0.290 | 0.276 |
| 64 | 30.7% | 7.4% | 38.1% | 57.8% | 0.361 | 0.365 | 50.5% | 6.8% | 57.3% | 40.0% | 0.201 | 0.271 |
| 65 | 62.0% | 4.5% | 66.5% | 31.5% | 0.172 | 0.454 | 67.6% | 4.1% | 71.7% | 26.6% | 0.302 | 0.458 |
| 66 | 53.4% | 9.5% | 62.9% | 33.9% | 0.246 | 0.356 | 51.2% | 9.1% | 60.3% | 36.0% | 0.336 | 0.407 |
| 67 | 58.9% | 7.8% | 66.7% | 30.9% | 0.122 | 0.357 | 90.4% | 5.3% | 95.7% | 4.0% | 0.131 | 0.428 |
| 68 | 55.7% | 6.3% | 62.0% | 33.9% | 0.172 | 0.318 | 58.2% | 6.8% | 65.0% | 31.0% | 0.168 | 0.329 |
| 69 | 63.6% | 5.4% | 69.0% | 26.9% | 0.247 | 0.403 | 54.6% | 6.3% | 60.9% | 34.4% | 0.310 | 0.538 |
| 71 | 19.9% | 6.2% | 26.1% | 69.8% | 0.352 | 0.441 | 19.9% | 6.2% | 26.1% | 69.8% | 0.352 | 0.441 |
| 73 | 12.1% | 7.0% | 19.1% | 72.6% | 0.198 | 0.278 | 11.9% | 7.0% | 18.9% | 73.6% | 0.373 | 0.498 |
| 74 | 25.5% | 5.6% | 31.1% | 64.4% | 0.247 | 0.496 | 12.8% | 5.7% | 18.5% | 75.5% | 0.192 | 0.320 |
| 75 | 74.4% | 11.3% | 85.7% | 11.3% | 0.285 | 0.420 | 61.4% | 12.0% | 73.4% | 17.6% | 0.225 | 0.404 |
| 76 | 67.2% | 13.2% | 80.4% | 10.5% | 0.509 | 0.524 | 70.4% | 13.2% | 83.6% | 9.6% | 0.352 | 0.416 |
| 77 | 76.1% | 12.2% | 88.3% | 7.6% | 0.211 | 0.396 | 77.0% | 12.6% | 89.6% | 7.0% | 0.491 | 0.510 |
| 78 | 71.6% | 8.9% | 80.5% | 15.0% | 0.194 | 0.210 | 68.6% | 8.4% | 77.0% | 21.0% | 0.325 | 0.540 |
| 79 | 71.6% | 16.0% | 87.6% | 7.1% | 0.209 | 0.498 | 73.1% | 15.5% | 88.6% | 7.5% | 0.357 | 0.549 |
| 90 | 58.5% | 4.3% | 62.8% | 34.0% | 0.286 | 0.359 | 58.5% | 4.3% | 62.8% | 34.0% | 0.286 | 0.359 |
| 91 | 70.0% | 5.9% | 75.9% | 22.0% | 0.202 | 0.447 | 53.0% | 5.2% | 58.2% | 38.4% | 0.231 | 0.369 |
| 92 | 68.8% | 4.7% | 73.5% | 24.1% | 0.198 | 0.361 | 69.6% | 6.9% | 76.5% | 21.3% | 0.174 | 0.330 |
| 93 | 65.4% | 9.6% | 75.0% | 22.9% | 0.112 | 0.260 | 85.5% | 7.2% | 92.7% | 7.0% | 0.201 | 0.329 |
| 112 | 19.2% | 3.3% | 22.5% | 73.7% | 0.522 | 0.619 | 19.2% | 3.3% | 22.5% | 73.7% | 0.522 | 0.619 |
| 113 | 59.5% | 6.7% | 66.2% | 31.8% | 0.318 | 0.501 | 53.9% | 5.6% | 59.5% | 37.9% | 0.153 | 0.355 |
| 114 | 24.7% | 3.7% | 28.4% | 68.8% | 0.283 | 0.502 | 24.9% | 3.8% | 28.7% | 68.6% | 0.235 | 0.487 |
| 115 | 52.1% | 7.0% | 59.1% | 36.9% | 0.226 | 0.436 | 50.3% | 6.9% | 57.2% | 39.8% | 0.304 | 0.475 |
| 116 | 58.1% | 7.3% | 65.4% | 27.2% | 0.280 | 0.407 | 53.2% | 7.9% | 61.1% | 31.0% | 0.382 | 0.452 |
| 117 | 36.6% | 5.4% | 42.0% | 54.5% | 0.275 | 0.408 | 50.1% | 6.5% | 56.6% | 38.4% | 0.155 | 0.323 |
| Avg | | | | | 0.257 | 0.402 | | | | | 0.282 | 0.419 |

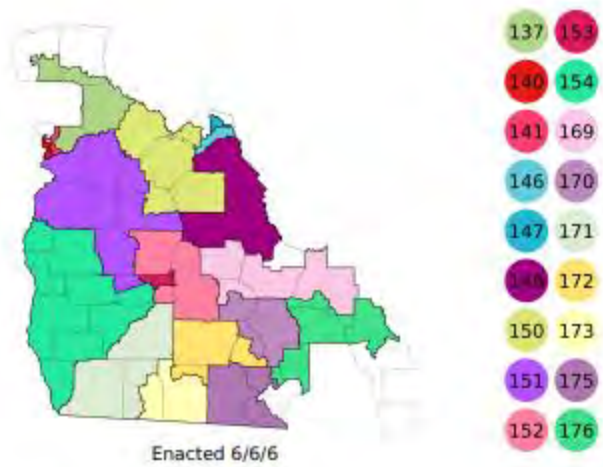
Table 18: With 9 county splits and 1995 cut edges, Alt 2 dominates the enacted plan.

Id.

'U 'XFKLQ GUHZ DQ DOWHUQDWLYH PDS IR

6RXWKZHVW WKDW FUHDWHV

**7.3.2 HD Southwest**




Enacted 6/6/6

Alt 1 8/8/8

Id D W ) L J X U H

' H I H Q G D Q W V ¶ H [ S H U W ' U 0 R U J D Q W H V W L I L H

L W L V S R V V L E O H W R G P U L D Q Z R D I G W L W K R R Q H U G D P S W R U E W

; see also 0 R U J D Q 5 H S & K D U W V 0 R U J D Q ' H S

0 R U J H D S Q 0 R U J H D S Q

7KH HQDFWHG +' 6RXWKZHVW FRQWDLQV VL[

DQG DW'XFKLQ 5HHS

+' $OW 6RXWKZHVW FRQWDLQV HLJKW PDM

6RXWKZHVW Id 7DEOH

7KH WDEOH EHORZ SURYLGHV D FRPSDULV

6RXWKZHVW FOXVWHU DQG +' $OW 6RXWKZHVW

| | HD Southwest Enacted | | | | | | HD Alt 1 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 137 | 52.1% | 4.5% | 56.6% | 40.8% | 0.165 | 0.328 | 51.7% | 3.7% | 55.4% | 42.0% | 0.143 | 0.259 |
| 140 | 57.6% | 8.0% | 65.6% | 31.7% | 0.192 | 0.289 | 57.1% | 7.9% | 65.0% | 32.4% | 0.197 | 0.257 |
| 141 | 57.5% | 6.6% | 64.1% | 31.8% | 0.200 | 0.261 | 53.6% | 6.7% | 60.3% | 35.5% | 0.299 | 0.423 |
| 146 | 27.6% | 4.7% | 32.3% | 61.8% | 0.195 | 0.257 | 23.3% | 4.9% | 28.2% | 64.4% | 0.208 | 0.468 |
| 147 | 30.1% | 7.2% | 37.3% | 55.3% | 0.261 | 0.331 | 31.8% | 7.2% | 39.0% | 55.1% | 0.220 | 0.341 |
| 148 | 34.0% | 3.1% | 37.1% | 60.4% | 0.235 | 0.438 | 38.6% | 3.4% | 42.0% | 56.1% | 0.388 | 0.590 |
| 150 | 53.6% | 6.1% | 59.7% | 38.3% | 0.275 | 0.439 | 51.2% | 5.3% | 56.5% | 41.5% | 0.250 | 0.544 |
| 151 | 42.4% | 7.3% | 49.7% | 47.2% | 0.222 | 0.528 | 51.0% | 7.5% | 58.5% | 38.6% | 0.275 | 0.424 |
| 152 | 26.1% | 2.3% | 28.4% | 67.9% | 0.297 | 0.394 | 34.2% | 3.2% | 37.4% | 58.7% | 0.314 | 0.473 |
| 153 | 67.9% | 2.5% | 70.4% | 27.7% | 0.297 | 0.298 | 52.9% | 2.7% | 55.6% | 43.0% | 0.400 | 0.536 |
| 154 | 54.8% | 1.7% | 56.5% | 42.2% | 0.332 | 0.410 | 50.1% | 2.1% | 52.2% | 45.7% | 0.175 | 0.261 |
| 169 | 29.0% | 7.7% | 36.7% | 61.0% | 0.226 | 0.283 | 24.0% | 9.0% | 33.0% | 64.6% | 0.296 | 0.456 |
| 170 | 24.2% | 8.7% | 32.9% | 64.2% | 0.342 | 0.531 | 26.8% | 12.5% | 39.3% | 57.9% | 0.223 | 0.285 |
| 171 | 39.6% | 4.6% | 44.2% | 53.9% | 0.368 | 0.347 | 51.0% | 4.0% | 55.0% | 43.4% | 0.249 | 0.275 |
| 172 | 23.3% | 13.4% | 36.7% | 61.0% | 0.316 | 0.437 | 25.1% | 9.4% | 34.5% | 63.1% | 0.217 | 0.375 |
| 173 | 36.3% | 5.4% | 41.7% | 55.7% | 0.378 | 0.564 | 35.4% | 5.6% | 41.0% | 56.4% | 0.412 | 0.424 |
| 175 | 24.2% | 5.0% | 29.2% | 66.5% | 0.374 | 0.472 | 21.0% | 5.7% | 26.7% | 68.7% | 0.143 | 0.273 |
| 176 | 22.7% | 8.2% | 30.9% | 66.2% | 0.160 | 0.335 | 23.8% | 6.2% | 30.0% | 67.1% | 0.116 | 0.227 |
| Avg | | | | | 0.269 | 0.386 | | | | | 0.252 | 0.383 |

Table 19: HD Southwest Alt 1 splits 12 counties within the cluster, to the state's 10 split counties. Its 2290 cut edges are more than the state's 2094, though the Reock scores are nearly identical.

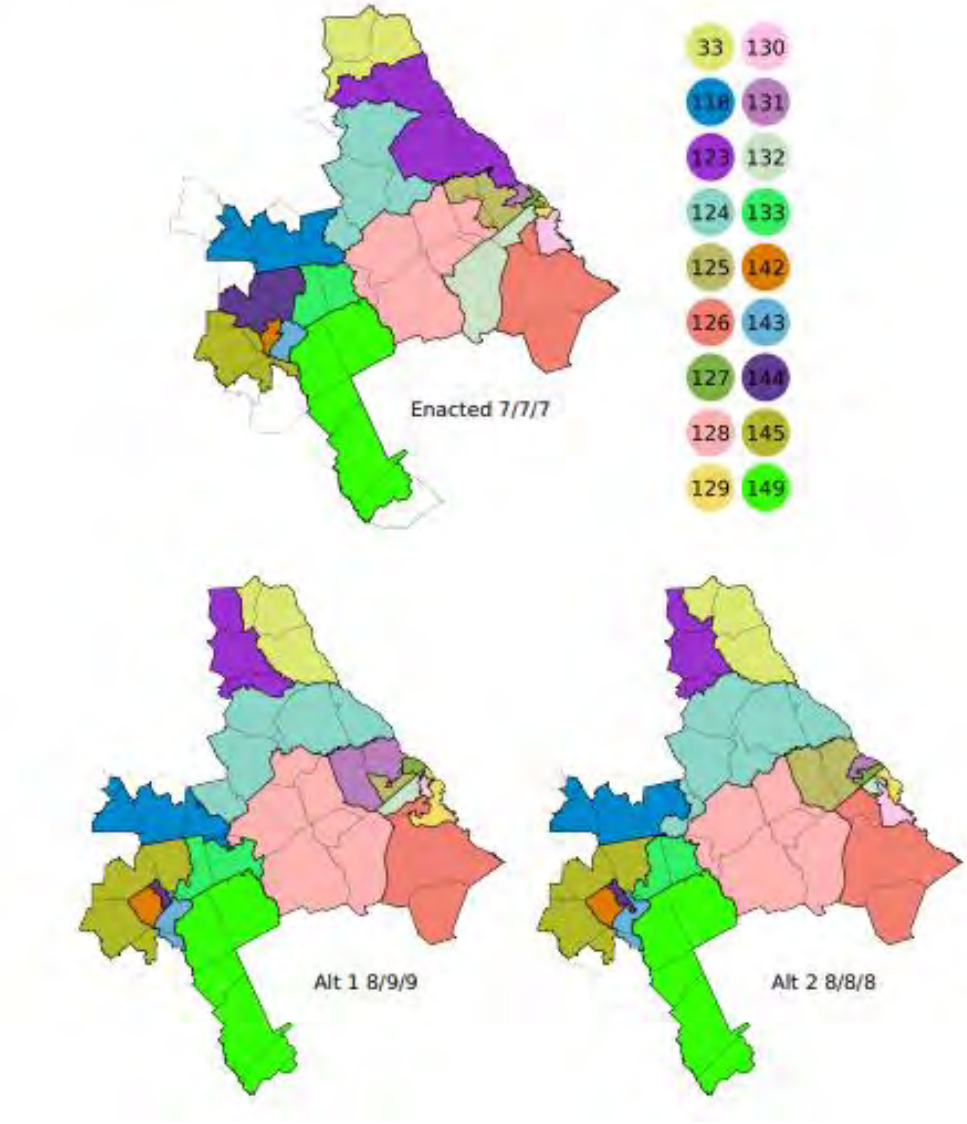
Id.

'U'XFKLQ SURYLGHG WZR DOWHUQDWLYH +'

$OW (DVW %ODFN %HOW´ DQG ³+' $OW (DVW %

PDMRULWR PLQRULW\ GLVWULFWV

**7.3.3 HD East Black Belt**




Id D W ) L J X U H

' H I H Q G D Q W V ¶ H [ S H U W ' U 0 R U J D Q

L W L V S R V V L E O H W R G

see also 0 R U J D Q 5 H S & K D U W V 0DRQUGHDSQ

0 R U J'DHQS 0 R U 'JHDSQ

7 K H H Q D F W H G +' (DFVRWQ W%DOLDQFN V%HHQW P D M R

G L V W U L F W V +'V D W D Q G7 D E O H'X

D Q G 7 D E O H

+' $ O W (D V W %O D F N %H O W F R Q W D L Q V H L J K

$ O W (D V W %O D F N %H O W G +' $ O W (D

%O D F N D O V R F R Q W D L Q V D P D M R U L W \ %+ 9 $Id. G L V W U

7 D E O H

+' $ O W (D V W %O D F N %H O W D O V R F R Q W D L Q

+' $ O W (D V W %O D F N %H O W Id. 7 D E O H

7 K H W D E O H V E H O R Z F R P S D U H W K H H Q D F W H G

$ O W (D V W %O D F N %H O W D Q G +' $ O W (D V W %O D F

| | HD East Black Belt Enacted | | | | | | HD Alt 1 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 33 | 11.2% | 3.1% | 14.3% | 82.3% | 0.371 | 0.487 | 18.7% | 3.8% | 22.5% | 74.6% | 0.405 | 0.343 |
| 118 | 23.6% | 3.7% | 27.3% | 69.7% | 0.223 | 0.350 | 23.2% | 3.1% | 26.3% | 70.6% | 0.218 | 0.329 |
| 123 | 24.3% | 4.3% | 28.6% | 68.1% | 0.178 | 0.295 | 13.3% | 5.8% | 19.1% | 76.3% | 0.281 | 0.357 |
| 124 | 25.6% | 6.2% | 31.8% | 65.0% | 0.233 | 0.442 | 28.4% | 4.7% | 33.1% | 64.4% | 0.224 | 0.362 |
| 125 | 23.7% | 7.7% | 31.4% | 63.0% | 0.173 | 0.409 | 24.1% | 8.0% | 32.1% | 61.5% | 0.255 | 0.328 |
| 126 | 54.5% | 3.2% | 57.7% | 40.0% | 0.414 | 0.516 | 52.5% | 3.5% | 56.0% | 41.6% | 0.322 | 0.534 |
| 127 | 18.5% | 4.8% | 23.3% | 68.1% | 0.201 | 0.351 | 14.6% | 4.9% | 19.5% | 70.1% | 0.585 | 0.546 |
| 128 | 50.4% | 1.7% | 52.1% | 46.5% | 0.319 | 0.601 | 50.1% | 1.6% | 51.7% | 46.7% | 0.357 | 0.628 |
| 129 | 54.9% | 4.3% | 59.2% | 37.2% | 0.254 | 0.482 | 51.9% | 3.5% | 55.4% | 40.7% | 0.108 | 0.314 |
| 130 | 59.9% | 3.9% | 63.8% | 33.7% | 0.255 | 0.508 | 54.4% | 4.3% | 58.7% | 38.7% | 0.253 | 0.451 |
| 131 | 17.6% | 5.9% | 23.5% | 68.2% | 0.283 | 0.377 | 27.1% | 5.1% | 32.2% | 63.3% | 0.285 | 0.604 |
| 132 | 52.3% | 7.8% | 60.1% | 35.6% | 0.296 | 0.270 | 53.6% | 8.2% | 61.8% | 33.1% | 0.293 | 0.243 |
| 133 | 36.8% | 2.1% | 38.9% | 58.4% | 0.415 | 0.543 | 48.7% | 2.0% | 50.7% | 47.2% | 0.178 | 0.385 |
| 142 | 59.5% | 3.7% | 63.2% | 34.8% | 0.229 | 0.353 | 50.8% | 3.7% | 54.5% | 42.3% | 0.539 | 0.605 |
| 143 | 60.8% | 4.7% | 65.5% | 32.3% | 0.299 | 0.502 | 52.4% | 6.3% | 58.7% | 38.4% | 0.176 | 0.332 |
| 144 | 29.3% | 2.6% | 31.9% | 63.0% | 0.325 | 0.510 | 50.4% | 4.3% | 54.7% | 41.3% | 0.299 | 0.298 |
| 145 | 35.7% | 5.9% | 41.6% | 55.1% | 0.194 | 0.376 | 23.1% | 2.8% | 25.9% | 71.1% | 0.204 | 0.422 |
| 149 | 32.1% | 5.7% | 37.8% | 61.0% | 0.223 | 0.325 | 32.1% | 5.7% | 37.8% | 61.0% | 0.223 | 0.325 |
| Avg | | | | | 0.271 | 0.428 | | | | | 0.289 | 0.411 |

Table 20: The Alt 1 map has 10 split counties within the HD East Black Belt cluster, while the enacted plan has 9. Its 1775 cut edges improves on the state's 1887, while also being more compact by Polsby-Popper.

| | HD East Black Belt Enacted | | | | | | HD Alt 2 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 33 | 11.2% | 3.1% | 14.3% | 82.3% | 0.371 | 0.487 | 18.3% | 3.5% | 21.8% | 75.2% | 0.370 | 0.323 |
| 118 | 23.6% | 3.7% | 27.3% | 69.7% | 0.223 | 0.350 | 27.0% | 4.1% | 31.1% | 65.9% | 0.229 | 0.342 |
| 123 | 24.3% | 4.3% | 28.6% | 68.1% | 0.178 | 0.295 | 13.7% | 6.0% | 19.7% | 75.8% | 0.293 | 0.395 |
| 124 | 25.6% | 6.2% | 31.8% | 65.0% | 0.233 | 0.442 | 25.5% | 3.8% | 29.3% | 68.1% | 0.234 | 0.381 |
| 125 | 23.7% | 7.7% | 31.4% | 63.0% | 0.173 | 0.409 | 30.2% | 6.1% | 36.3% | 60.1% | 0.396 | 0.670 |
| 126 | 54.5% | 3.2% | 57.7% | 40.0% | 0.414 | 0.516 | 50.7% | 4.2% | 54.9% | 42.3% | 0.394 | 0.494 |
| 127 | 18.5% | 4.8% | 23.3% | 68.1% | 0.201 | 0.351 | 17.6% | 6.2% | 23.8% | 67.2% | 0.267 | 0.264 |
| 128 | 50.4% | 1.7% | 52.1% | 46.5% | 0.319 | 0.601 | 50.2% | 1.5% | 51.7% | 46.8% | 0.409 | 0.672 |
| 129 | 54.9% | 4.3% | 59.2% | 37.2% | 0.254 | 0.482 | 50.4% | 3.6% | 54.0% | 41.8% | 0.248 | 0.323 |
| 130 | 59.9% | 3.9% | 63.8% | 33.7% | 0.255 | 0.508 | 57.1% | 4.7% | 61.8% | 35.4% | 0.231 | 0.325 |
| 131 | 17.6% | 5.9% | 23.5% | 68.2% | 0.283 | 0.377 | 17.6% | 5.7% | 23.3% | 67.8% | 0.318 | 0.373 |
| 132 | 52.3% | 7.8% | 60.1% | 35.6% | 0.296 | 0.270 | 54.4% | 7.1% | 61.5% | 34.1% | 0.219 | 0.278 |
| 133 | 36.8% | 2.1% | 38.9% | 58.4% | 0.415 | 0.543 | 46.6% | 2.1% | 48.7% | 49.0% | 0.296 | 0.438 |
| 142 | 59.5% | 3.7% | 63.2% | 34.8% | 0.229 | 0.353 | 50.1% | 3.8% | 53.9% | 42.9% | 0.436 | 0.605 |
| 143 | 60.8% | 4.7% | 65.5% | 32.3% | 0.299 | 0.502 | 52.9% | 6.3% | 59.2% | 38.0% | 0.143 | 0.316 |
| 144 | 29.3% | 2.6% | 31.9% | 63.0% | 0.325 | 0.510 | 51.0% | 4.2% | 55.2% | 40.8% | 0.226 | 0.243 |
| 145 | 35.7% | 5.9% | 41.6% | 55.1% | 0.194 | 0.376 | 23.1% | 2.8% | 25.9% | 71.1% | 0.190 | 0.359 |
| 149 | 32.1% | 5.7% | 37.8% | 61.0% | 0.223 | 0.325 | 32.1% | 5.7% | 37.8% | 61.0% | 0.223 | 0.325 |
| Avg | | | | | 0.271 | 0.428 | | | | | 0.285 | 0.396 |

Table 21: Alt 2 eliminates one county split relative to the enacted plan and has a sharply improved 1604 cut edges.

Id 7DEOH DQG 7DEOH

'U 'XFKLQ DOVR SURYLGHG DOWHUQDWLYH

3+' $OWR XWKHDVW´ WKDW FRQWDLQHGQVWDGGLWLRQDO

**7.3.4 HD Southeast**

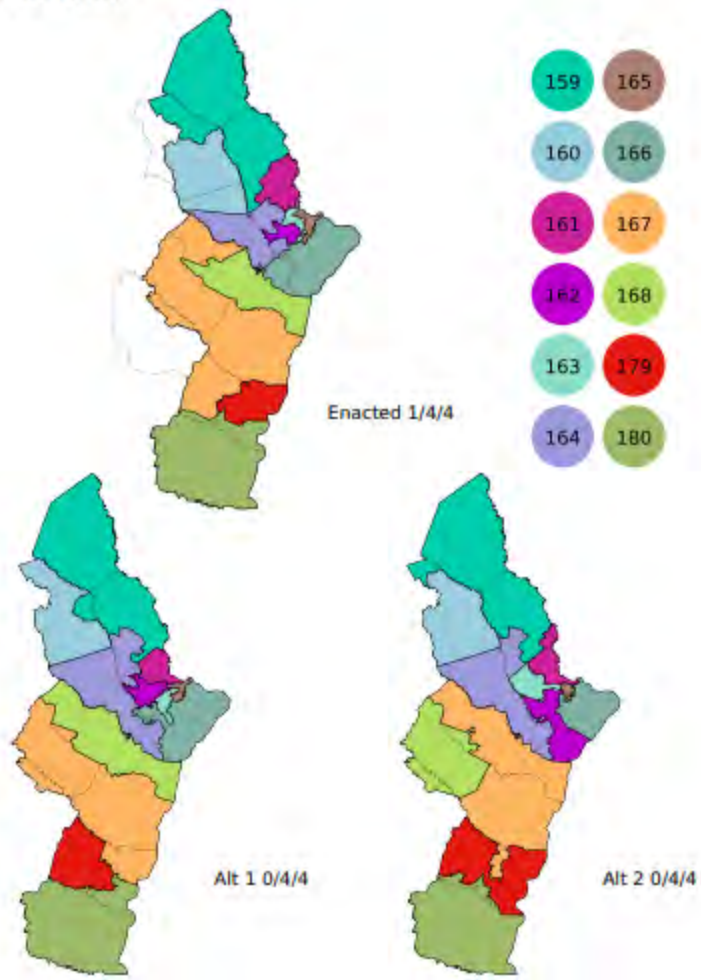



Figure 15: HD Southeast (12 districts).

Id D W ) L J X U H

' H I H Q G D Q W V ¶ H [ S H U W ' U 0 R U J D Q W H V W L I L H

L W L V S R V V L E O H W R G P U L Q Z R D G W L W K R X Q H U G D Q W R U E W

see also 0 R U J D Q D 5 W H S & K D U W V 0 R U J H D Q

0 R U J H D Q 0 R U J H D Q

(QDFWHG +' 6RXWKHDVW FRQWDLQV RQH PD

DQG WKUHH PDMRULW\ %+9$3 G'XVFKUQ 5WV7 DEOH

DQG 7DEOH

+' $OW 6RXWKHDVW FRQWDLQV ILYH PDMR

6RXWKHDVW Id. 7DEOH DQG

+' $OW 6RXWKHDVW DOVR FRQWDLQV ILYH

$OW 6RXWKHDVW Id 7DEOH DQG

7KH WDEOH EHORZ SURYLGHV D FRPSDULVR

FOXVWHU DQG +' $OW 6RXWKHDVW DQG +' $OW 6

| | HD Southeast Enacted | | | | | | **HD Alt 1** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 159 | 24.5% | 2.9% | 27.4% | 69.4% | 0.219 | 0.345 | 22.2% | 3.7% | 25.9% | 70.5% | 0.204 | 0.358 |
| 160 | 22.6% | 5.0% | 27.6% | 68.5% | 0.369 | 0.483 | 26.6% | 5.1% | 31.7% | 64.7% | 0.242 | 0.373 |
| 161 | 27.1% | 6.8% | 33.9% | 60.2% | 0.306 | 0.511 | 42.1% | 8.8% | 50.9% | 42.7% | 0.359 | 0.475 |
| 162 | 43.7% | 9.6% | 53.3% | 40.6% | 0.211 | 0.366 | 39.9% | 10.5% | 50.4% | 42.6% | 0.147 | 0.372 |
| 163 | 45.5% | 7.4% | 52.9% | 41.9% | 0.175 | 0.271 | 44.0% | 6.9% | 50.9% | 43.7% | 0.244 | 0.335 |
| 164 | 23.5% | 8.5% | 32.0% | 60.6% | 0.167 | 0.299 | 12.9% | 5.1% | 18.0% | 76.5% | 0.143 | 0.309 |
| 165 | 50.3% | 5.3% | 55.6% | 39.2% | 0.162 | 0.230 | 47.3% | 4.7% | 52.0% | 42.9% | 0.189 | 0.380 |
| 166 | 5.7% | 4.1% | 9.8% | 84.7% | 0.364 | 0.429 | 7.2% | 4.7% | 11.9% | 82.4% | 0.245 | 0.459 |
| 167 | 22.3% | 7.4% | 29.7% | 66.0% | 0.192 | 0.417 | 20.0% | 6.2% | 26.2% | 70.1% | 0.266 | 0.327 |
| 168 | 46.3% | 10.3% | 56.6% | 39.3% | 0.258 | 0.243 | 45.9% | 10.7% | 56.6% | 39.2% | 0.236 | 0.246 |
| 179 | 27.0% | 6.4% | 33.4% | 63.7% | 0.417 | 0.451 | 32.0% | 7.5% | 39.5% | 56.9% | 0.433 | 0.539 |
| 180 | 18.2% | 5.6% | 23.8% | 71.2% | 0.396 | 0.606 | 17.0% | 5.4% | 22.4% | 72.8% | 0.348 | 0.594 |
| Avg | | | | | 0.270 | 0.388 | | | | | 0.255 | 0.397 |

Table 22: HD Southeast Alt 1 has fewer county splits (5 vs. 6) and a better cut edges score (1122 vs. 1245) than the enacted plan.

| | HD Southeast Enacted | | | | | | **HD Alt 2** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 159 | 24.5% | 2.9% | 27.4% | 69.4% | 0.219 | 0.345 | 22.0% | 3.6% | 25.6% | 70.7% | 0.192 | 0.356 |
| 160 | 22.6% | 5.0% | 27.6% | 68.5% | 0.369 | 0.483 | 26.3% | 5.1% | 31.4% | 64.9% | 0.333 | 0.515 |
| 161 | 27.1% | 6.8% | 33.9% | 60.2% | 0.306 | 0.511 | 41.6% | 10.0% | 51.6% | 42.2% | 0.180 | 0.332 |
| 162 | 43.7% | 9.6% | 53.3% | 40.6% | 0.211 | 0.366 | 43.0% | 8.5% | 51.5% | 42.5% | 0.191 | 0.341 |
| 163 | 45.5% | 7.4% | 52.9% | 41.9% | 0.175 | 0.271 | 42.7% | 7.7% | 50.4% | 43.1% | 0.282 | 0.411 |
| 164 | 23.5% | 8.5% | 32.0% | 60.6% | 0.167 | 0.299 | 13.4% | 5.5% | 18.9% | 75.6% | 0.168 | 0.290 |
| 165 | 50.3% | 5.3% | 55.6% | 39.2% | 0.162 | 0.230 | 45.5% | 5.0% | 50.5% | 44.4% | 0.229 | 0.501 |
| 166 | 5.7% | 4.1% | 9.8% | 84.7% | 0.364 | 0.429 | 7.2% | 4.1% | 11.3% | 83.0% | 0.391 | 0.653 |
| 167 | 22.3% | 7.4% | 29.7% | 66.0% | 0.192 | 0.417 | 36.5% | 7.4% | 43.9% | 52.5% | 0.204 | 0.331 |
| 168 | 46.3% | 10.3% | 56.6% | 39.3% | 0.258 | 0.243 | 40.9% | 10.8% | 51.7% | 44.3% | 0.327 | 0.555 |
| 179 | 27.0% | 6.4% | 33.4% | 63.7% | 0.417 | 0.451 | 18.7% | 6.0% | 24.7% | 71.6% | 0.196 | 0.454 |
| 180 | 18.2% | 5.6% | 23.8% | 71.2% | 0.396 | 0.606 | 18.6% | 5.7% | 24.3% | 70.7% | 0.346 | 0.577 |
| Avg | | | | | 0.270 | 0.388 | | | | | 0.253 | 0.443 |

Table 23: Alt 2 also has just 5 county splits, to go with 1263 cut edges.

Id 7DEOH DQG 7DEOH

& &RPSDFWQHVV DQG 7UDGLWLRQDO 5HGLVWU

'U 'XFKLQ FRQFOXGHG WKDW WKH HQDFWHG GLVWULFWV RQ

PDMRULWDULDQ UHSXEOLFDQ GLVWULFWV LQ WKH FRQJUHVVLRQ

FRPSRUWLQJ ZLWK WKH WUDGLWLRQDO FRQFHSWV 'XFKLQ

'HIHQGDQWV¶ H[SHUWW'LILHGUWKQW KH KDV

WKDW 'U 'XFKLQ¶V LOOXVWUDWLYH WPUDLFRWL WD

FRQILJXURHUJDQD'WS seealso 0RUJDQ DWS

&KDUWV DQG

'U 'XFKLQ WHVWLILHG WKDWZWQJ RXUFRHXW

EDODQFHG WKHVH UHGLVWULFWLQJ SULQFLSOHV '

'U 'XFKLQ H[DPYLHUHGWKH TXDQGWDXWLQYHLWD

UHGLVWULFWLQJ SULQFLSOHV FRGLILHGWE\ WKH *H

$ORI WKH GLVWULFWV LQ DOO RI 'U 'XFKL

VHQDWH DQG KRXVH GLVWULFW DUH FRQWLJXRXV

$V GHPRQVWUDWHGDEW EHORZ 'U 'XFKLQ

SRSXODWLRQV RI HDFK RI KHU LOOXVWUDWLYH FR

| | Maximum positive deviation | Maximum negative deviation | Top-to-bottom deviation |
|---|---|---|---|
| EnactedCD | +1 | −1 | 2 |
| DuncanKennedy | +2 | −1 | 3 |
| CD Alt | +1 | −1 | 2 |
| EnactedSD | +1879 | −1964 | 3843 (2.01%) |
| SD Alt Eff 1 | +2457 | −2598 | 5055 (2.64%) |
| SD Alt Eff 2 | +2547 | −2490 | 5037 (2.63%) |
| SD Alt Eff 3 | +3200 | −3305 | 6505 (3.40%) |
| EnactedHD | +797 | −833 | 1630 (2.74%) |
| HD Alt Eff 1 | +1194 | −1176 | 2370 (3.98%) |
| HD Alt Eff 2 | +1222 | −1097 | 2319 (3.90%) |
| HD Alt Eff 3 | +1173 | −1026 | 2199 (3.70%) |

ld DW 7DEOH

'U 'XFKLQ FRPSDUHG WKH RYHUDOO DYHUD

RI WKH HQDFWHG SODQV DQG HDFK RI 3ODLQWLIIV¶ SHUVXDVLYH

5HRFN DQG ³FXW HGJHV´ DSSURDFK DV GHPRQVWU

| | avg Polsby-Popper (higher is better) | avg Reock (higher is better) | Block cut edges (lower is better) |
|---|---|---|---|
| **BenchmarkCD** | 0.238 | 0.452 | 5775 |
| **EnactedCD** | 0.267 | 0.441 | 5075 |
| **DuncanKennedy** | 0.295 | 0.471 | 4665 |
| **CD Alt** | 0.301 | 0.473 | 4665 |
| **BenchmarkSD** | 0.250 | 0.421 | 12,549 |
| **EnactedSD** | 0.287 | 0.418 | 11,005 |
| **SD Alt Eff 1** | 0.287 | 0.427 | 10,897 |
| **SD Alt Eff 2** | 0.296 | 0.440 | 10,349 |
| **SD Alt EFf 3** | 0.295 | 0.431 | 10,479 |
| **BenchmarkHD** | 0.244 | 0.382 | 24,001 |
| **EnactedHD** | 0.278 | 0.391 | 22,014 |
| **HD Alt Eff 1** | 0.261 | 0.391 | 21,843 |
| **HD Alt Eff 2** | 0.263 | 0.399 | 21,907 |
| **HD Alt Eff 3** | 0.279 | 0.403 | 20,917 |

Table 8: Compactness scores for each plan submitted with January 13 Report.

&DQWHU¶ 'HFODUDWLRQ 'XFKLQ 5HSRUW (DWS 3DUWLDO

'U 'XFKLQ RSLQHG WKDW RYHUDOO FRPSDF

GLVWULFWV DUH FRPSDUDEOH RU EHWWHU WKDQ W

DERYH 'XFKLQ 5HSRUW )LJXUH 7DEOH 'XFKLQ 'HS

'XFKLQ 5HS 7DEOH 'XFKLQ 5HS 7DEOH 7DEOH DW

7DEOH DW 7DEOH 7DEOH 7DEOH 7DEOH DW

7DEOHd DW7DEOHd 7DEOHd DW7DEOHd 7DEOH

'U 'XFKLQ DOVR FRPSDUHG WKH FRPSDFW
LQGLYLGXDO GLVWULFWV LQ WKH GLVWULFW FOXV
DQDO\VLV DQG GHWHUPLQHG WKRVH DFWKRU FRPSD
DQG WKDW HDFK RI WKH GLVWULFWV LQ WKRVH F
'XFKLQ 5DHW 7DEOHV

'U 0RUWHQVWLILHG WKDW 'U 'XFKLQ¶V LOO
FRPSDFW RU FRPSDUDEOH

'U 'XFKLQ DOVR RSLQHG WKDW KHU DOWHU
RI SROLWLFDO VXEGLYLVLRQV VXFK D'XFKLQ 5HLHV

7KH FKDUW EHORZ FRPSDUHV WKH QXPEHU R
WKH HQDFW DQV ZLWK 'U 'XFKLQ¶V LOOXVWUDWLYH

| | County Splits (out of 159) | County Pieces | Muni Splits (out of 538) | Muni Pieces | Precinct Splits (out of 2685) | Precinct Pieces |
|---|---|---|---|---|---|---|
| BenchmarkCD | 16 | 38 | 67 | 141 | 67 | 134 |
| EnactedCD | 15 | 36 | 64 | 136 | 86 | 172 |
| DuncanKennedy | 15 | 36 | 53 | 114 | 66 | 132 |
| CD Alt | 13 | 30 | 58 | 127 | 47 | 95 |
| BenchmarkSD | 37 | 100 | 114 | 269 | 154 | 309 |
| EnactedSD | 29 | 89 | 109 | 266 | 144 | 289 |
| SD Alt Eff 1 | 33 | 95 | 112 | 275 | 110 | 221 |
| SD Alt Eff 2 | 26 | 78 | 108 | 264 | 97 | 196 |
| SD Alt Eff 3 | 29 | 84 | 108 | 264 | 106 | 213 |
| BenchmarkHD | 72 | 284 | 169 | 506 | 303 | 630 |
| EnactedHD | 69 | 278 | 166 | 494 | 352 | 724 |
| HD Alt Eff 1 | 73 | 276 | 164 | 492 | 279 | 570 |
| HD Alt Eff 2 | 69 | 266 | 168 | 494 | 276 | 567 |
| HD Alt Eff 3 | 69 | 265 | 165 | 478 | 277 | 567 |

Id DW 7DEOH See also (DUWD W D

$OWKRXJK 'U 'XFKLQ GLG QRW KDYH DFFHV

GLG H[DPLQH LQFXPEHQF\ WKURXJKWDQDO\]LQJ FRU

'HIHQGDQWV¶ PDSSLQJ H[SHUW HFW[SODLQHG

LQFOXGLQJ SUHVHUYLQJ FRUHV RI GLVWULFWV

&RQWLQXLW\ RI GLVWULFW UHSUHVHQWDWLRQ LV

UHVLGHQWV HOHFWLRQVKLS ZLWK WKHLU HOHFWHG U

'U 'XFKLQ GHWHUPLQHG WKDW WKH OHJLVO

FRUH UHWHQWLRQ L H RQ PDLQWDLQLQJ YRWHUV

WKH EHQFKPDUN ³FRQJUHVVLRQDO SODQ DW OHDVW LQ G

'HS 'U 'XFKLQ GHWHUPLQHG WKDW FRUH

SRRQUWLKH HQDFWHXGFKLRQX5HSSODDWQ

'U 'XFKLQ UDHYLHZHPGQRXV UHFRUG RI SXEOL

'HS 7KLV FRPPXQLW\ RI LQWHUHVW WHVWL

KDQGGUDZLQJ 6UURFHVV See also

'XFKLQ D5WS See also% DJOH\ 5HS DW

9 ***Gingles*** 0LQRULW\ *URXS 3ROLWLFDO &RKHVLRQ

$ &RQWHPSRUDU\ (YLGHQFH RI 0LQRULW\ *URX

3ODLQWLIIV¶ H[SHUW 'U %HQMDPLQ 6FKQHH

YRWLQJ ³539´ Seegenerally &DV DQDOV&LVQWHU ˆ 'HF[SHUW 5HSRUW

%HQMDPLQ 6FKQHHU ³6FKQHHU 5HS ´

³7R LGHQWLI\ LQVWDQFHV RI 539 LQ *HRUJL

ZKHWKHU PHPEHUV RI D PLQRULW\ JURXS WKHLQ cohesive

HOHFWRUDO VXSSRUW IRU D FDQGLGDWH RI FKRLF

JLYHQ PLQRULW\ JURXS VXSSRUW WKH VDPH FDQG

RSSRVH WKLV FDQGLGDWH 6SHFLILFDOO\ H WKH PRU

PLQRULW\ FDQGLGDWH RI FKRLFH 6FKQHHU 5HS ´

'U 6FKQHHU¶V DQDO\VLV UHOLHG RQ KLVWR

EDFN WR DW

6WDWHZLGH (YLGHQFH RI 0LQRULW\ *URX

'U 6FKQHHU¶V DW ³%ODFN DQG +LVSDQLF YR

VWDWHZLGH HOHFWLRQV UHYHDOV WKDW WKHVH J

HOHFWLRQ ZLWK ODUJH PDMRULWLHV RI WKHVH Y

HOHFWLRQ DQG YRWLQJ FRKHVLYHQHVH

Id DW Id DW ) LHXU 1

'HIHQGDQWV¶ H[SHUW 'U $OIRUG GRHV QRW
ILQGL,QJ'U $OIRUGV UHSRUW KH QRWHG WKDW 'U 6
GHPRQVWUDWHV WKDW %ODFN YRWHUVSSRUWYLGH
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5HS´ DW

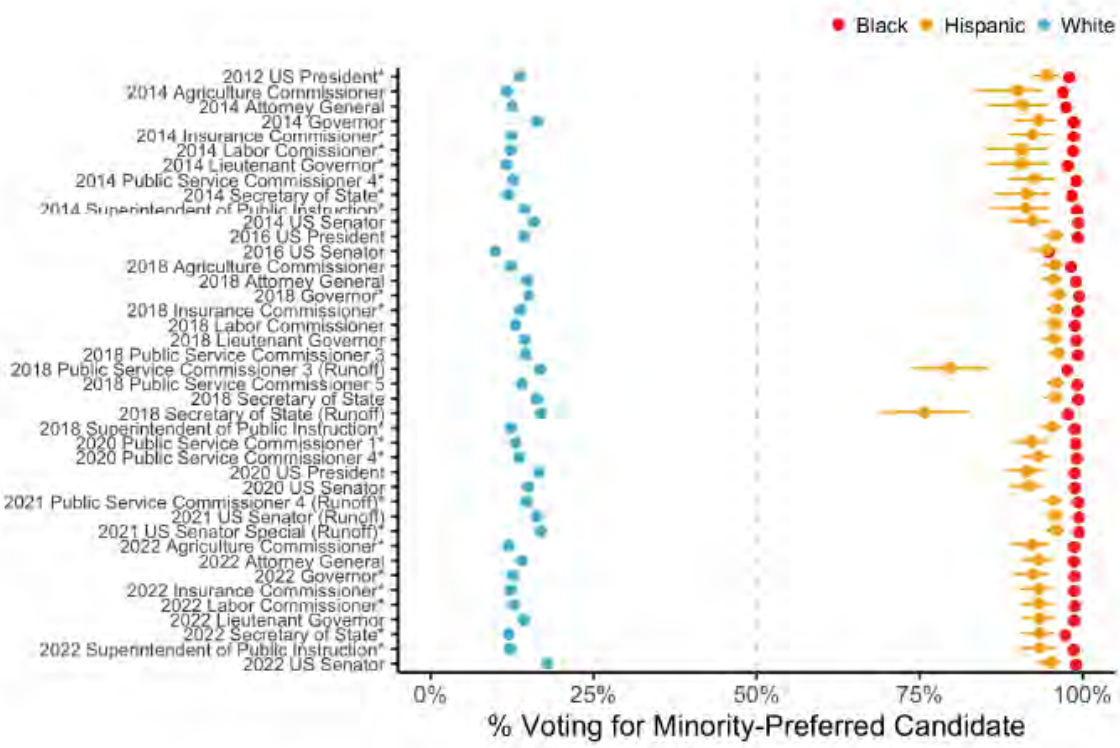


Figure 1: Ecological Inference Results — Statewide (Historical Elections, Two-Party Vote Shares), 3 Racial Groups

'XULQJ KLV GHSRVLWLRQ [illegible] VWDWHG WKH V

FRQFOXVLRQ 6FKQHHU DQG 'U %DXQHWWR@ [illegible] I WKH V

WKDW WZR UDFLDO JURXSV DUH YRWLQJ LQ RSSRV

HYHU\WKLQJ WKDW V LQ 6FKQHHU DQG 'H [illegible] RWKLV LV HFRQ

-RKQ $OIRUG ³$OIRUG 'HS ´

&OXVWHU $QDO\VLV (YLGHQFH RI 0LQRULW\ *URXS &R

'U 6FKQHHU FRQFOXGHG WKDW ³>D@FURVV

(DVW %ODFN %HOW WKHUH LV@ 539 EHWZHHQ :KL

%ODFN YRWHUV FRKHVLYHO\ VXSSRUW D [illegible]

%HQMDPLQ 6FKQHHU [illegible] 6FKQHHU 5H

'U 6FKQHHU DOVR FRQFOXGHG WKDW ³LQ W

+LVSDQLF YRWHUV FRKHVLYHO\ VXSSRUW WKH VDP

WKH ORZHU FRQILGHQFH LQWHUYDO RQ WKH YRWH

WKUHVKROG LQ DOO HOHFWLRQV ZKHUH D PLQ

PLQRULW\ FDQGLGDWH ´

'U 6FKQHHU DOVR FRQFOXGHG WKDW LQ WK

YRWHUV« V\VWHPDWLFDOO\ VXSSRUW WKH VDPH F

DOWKRXJK WKH ³HVWLPDWHV IRU HOHFWLRQV EHIR

FRQILGHQFH [illegible] WKUHVKROG ´

7KH ILJXUH EHORZ UHIOHFWV WKH UHVXOWV

YRWLQJ DQDO\VLV IRU HDFK RI WKHVH FOXVWHUV

Figure 19: Ecological Inference Results — State Senate Clusters (Historical Elections, Two-Party Vote Shares)

Id D W ) L J X U H

'U 6FKQHHU FRQFOXGHG WKDW WKHUH LV ³DQG %ODFN YRWHUV OO VWDWH +RXVH FOXVWHUV FRKHVLYHO\ VXSSRUW DQGLGDWH RI FKRLFH> @

'U 6FKQHHU DOVR FRQFOXGHG WKDW ³+LVSDQLF VXSSRUWLQJ WKH VDPH FDQGLGDWHV RI FKRLFH LQ

7KH ILJXUH EHORZ UHIOHFWV WKH UHVXOWV YRWLQJ DQDO\VLV IRU +' $WODQWD +' 6RXWKZHVW 6RXWKHDVW )LJXUH

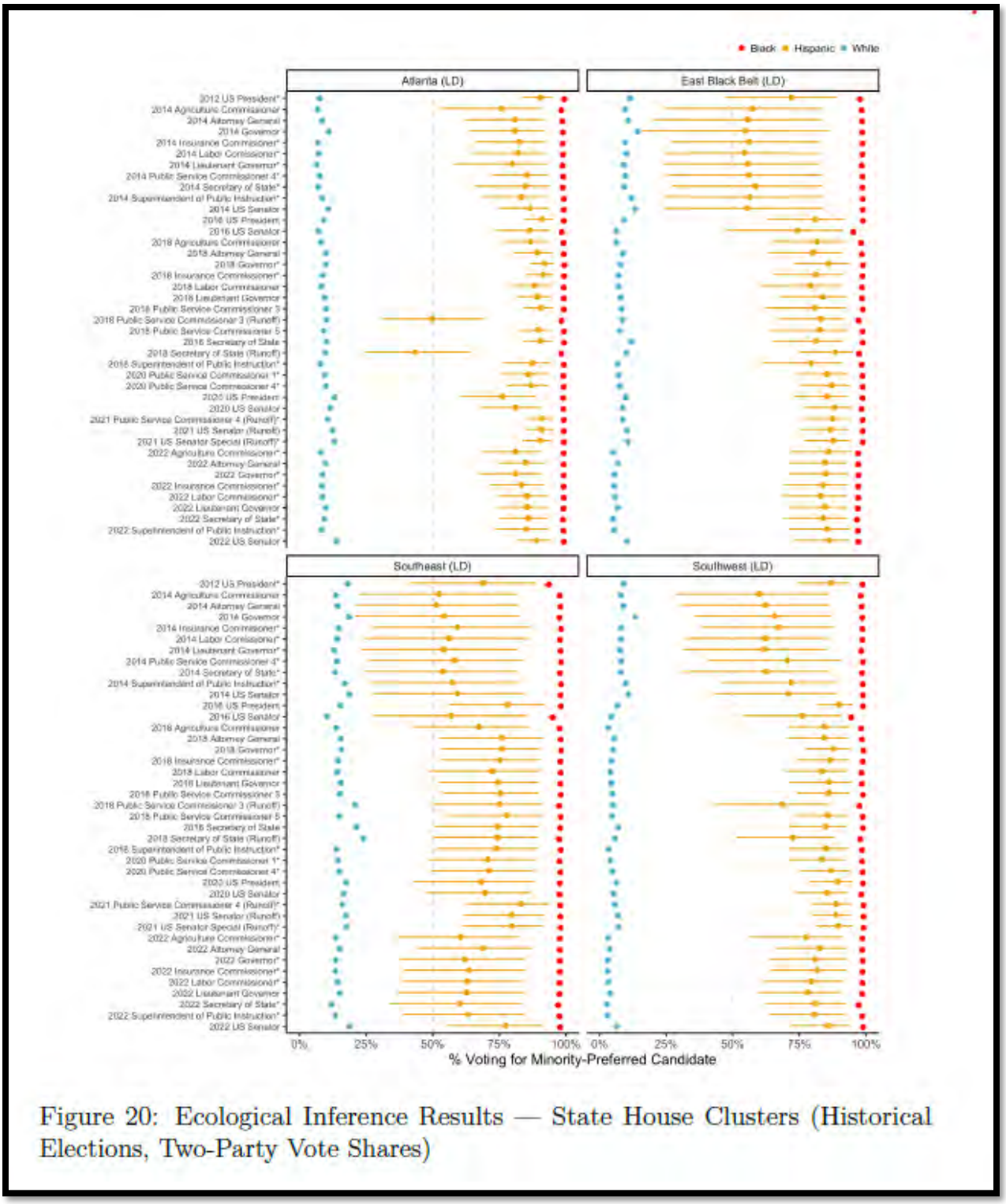


Figure 20: Ecological Inference Results — State House Clusters (Historical Elections, Two-Party Vote Shares)

Id D W ) L J X U H

&RQJUHVVLRQDO /HYHO 'LVWULFW (YLGHQFH RI 0LQRULW\ *U
&RKHVLYH 9RWLQJ

'U 6FKQHHU FRQFOXGHG WKDW WKHUH LV ³5

RQH KDQG DQG :KLWH YRWHUV RQ WKH RWKHU KDQ

LQ WKH (QDFWHG &RQJUHVVLRQDO 0DS@ H J VW

>GLVWULFWV (QDFWHG &RQJUHVVLRQDO 0DS@ RWKHU W

'U 6FKQHHU VWDWHG WKDW ³>L@Q >HQDFWH

DQG %ODFN YRWHUV VXSSRU

WKH PLQRULW\ FDQGLGDWH EHLQJ DFWLYHO\ VXSSRUWHG E\ WKH

'U 6FKQHHU VWDWHG WKDW ³&' GHPRQVW

EHWZHHQ :KLWH DQG %ODFN YRWHUV IRU DOO HOH

, QHYHU HVWLPDWH >G@ PLQRULW\ VXSSRUW IRU WKH ´

'U 6FKQHHU VWDWHG WKDW ³&' SUHVHQWV

FRQJUHVVLRQDO GLVWULFWV RI 539 ZLWK %ODF

FDQGLGDWHV DQG RWKHU PLQRULW\ FDQGLGDWHV ,Q

PLQRULW\ FDQGLGDWH UHFHLYHG PDMRULW\ FDQGLGDWH PL

VXSSRUWHG WKH PLQRULW\ FDQGLGDWH RIWHQ RY

'U 6FKQHHU DOVR SURGXFHG ILYH ILJXUHV

UDFLDOO\ SRODUL]HG YRWLQJ DQDO\VLQJ UHVVLRQ

0DSId DW )LJXUH )LJXUH )LJXUH

7KH ILJXUHV UHIOHFW WKDW %ODFN YRWHU

&RQJUHVVLRQDO 0DS YRWH FRKHVLYHOd\ IDRU WKH

)LJXUH )LJXUH )LJXUH )LJXUH )

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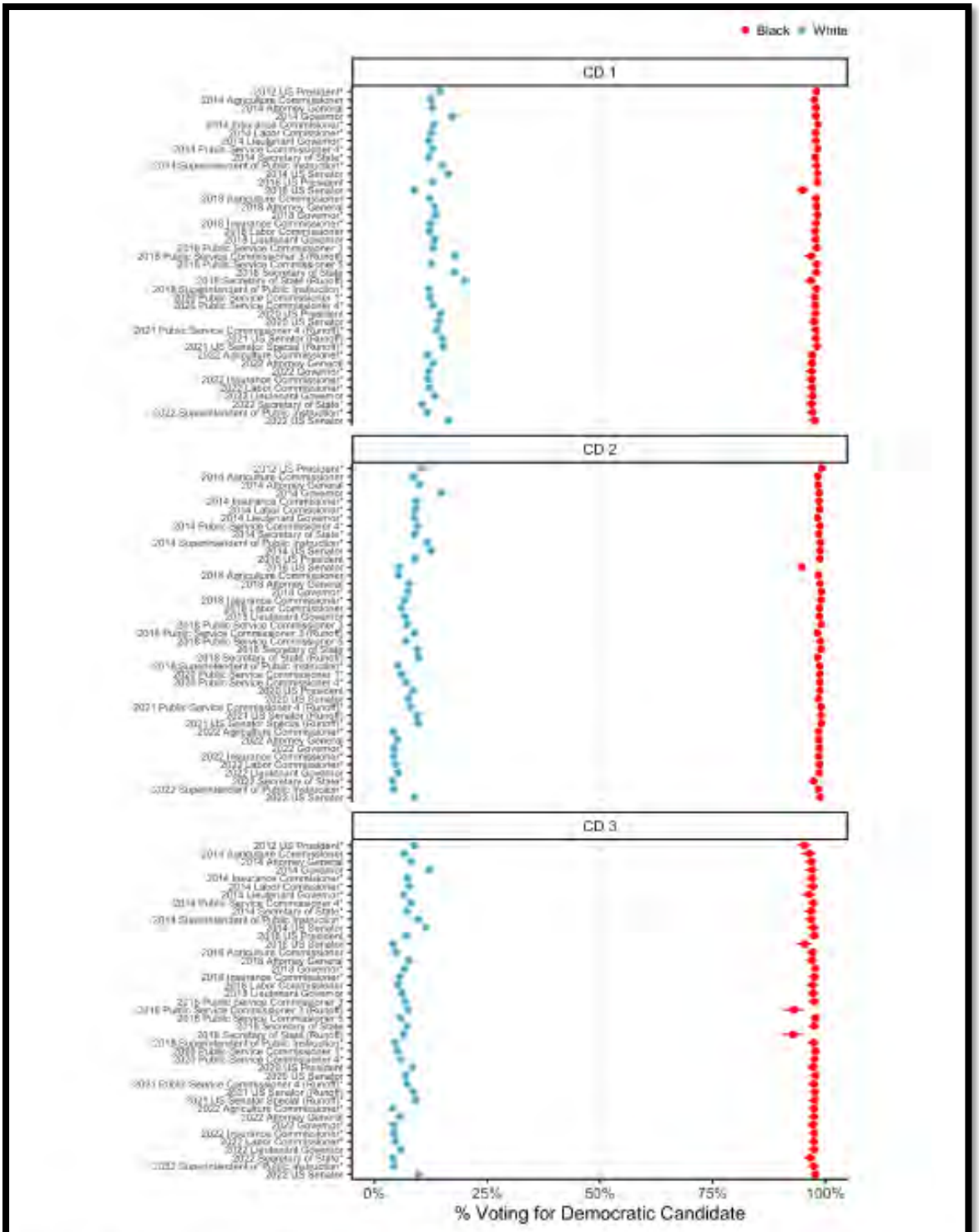



Figure 3: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

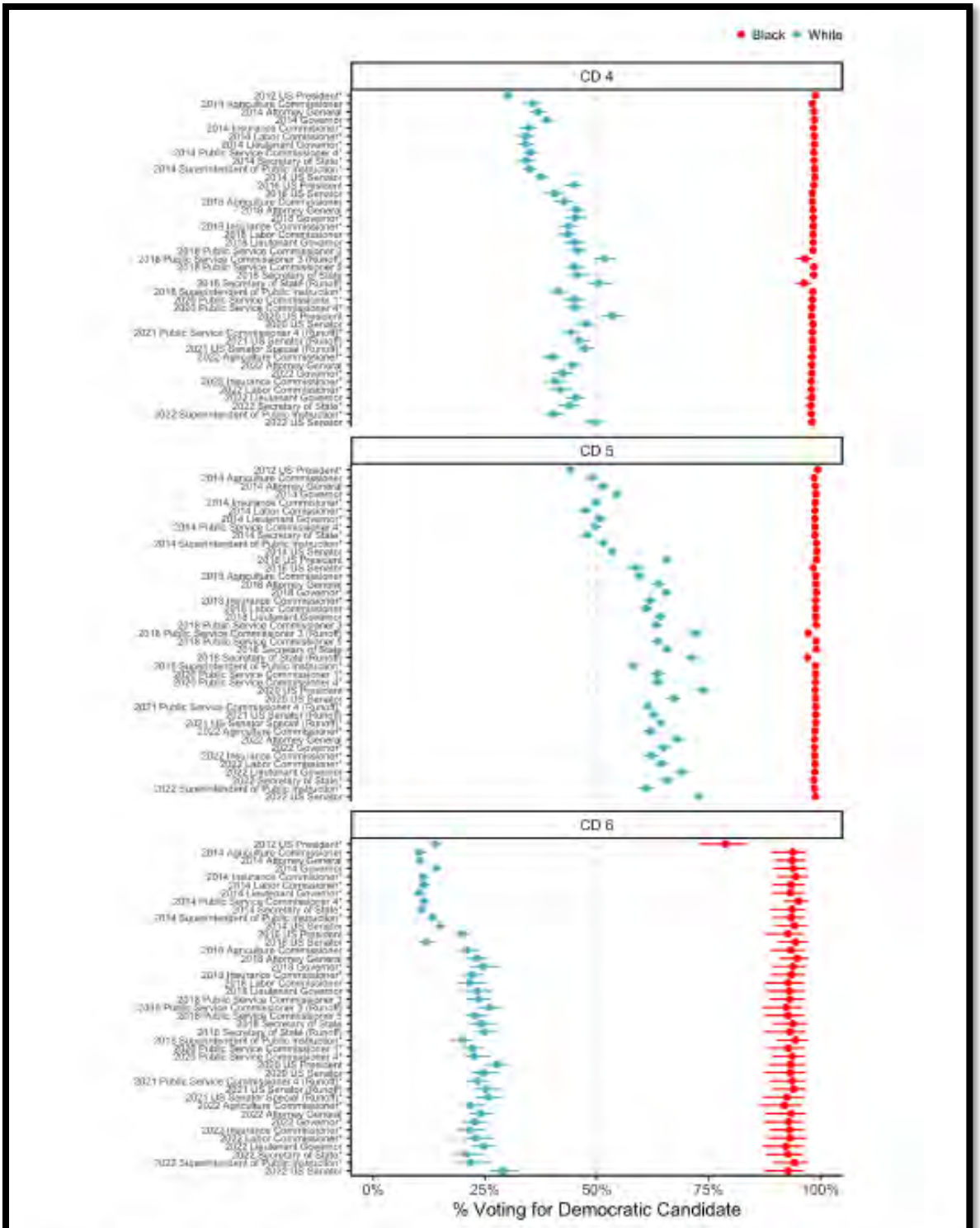



Figure 4: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

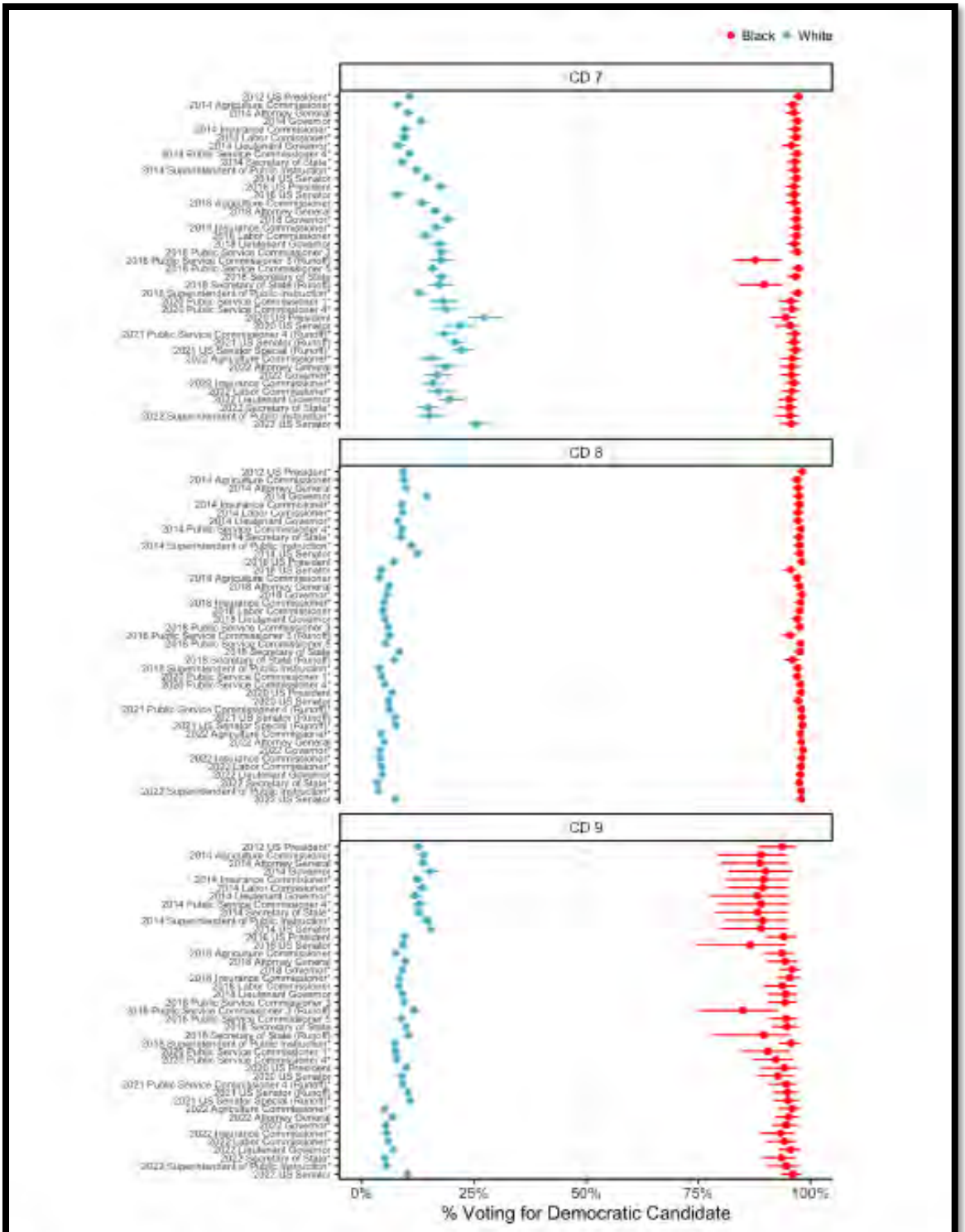



Figure 5: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

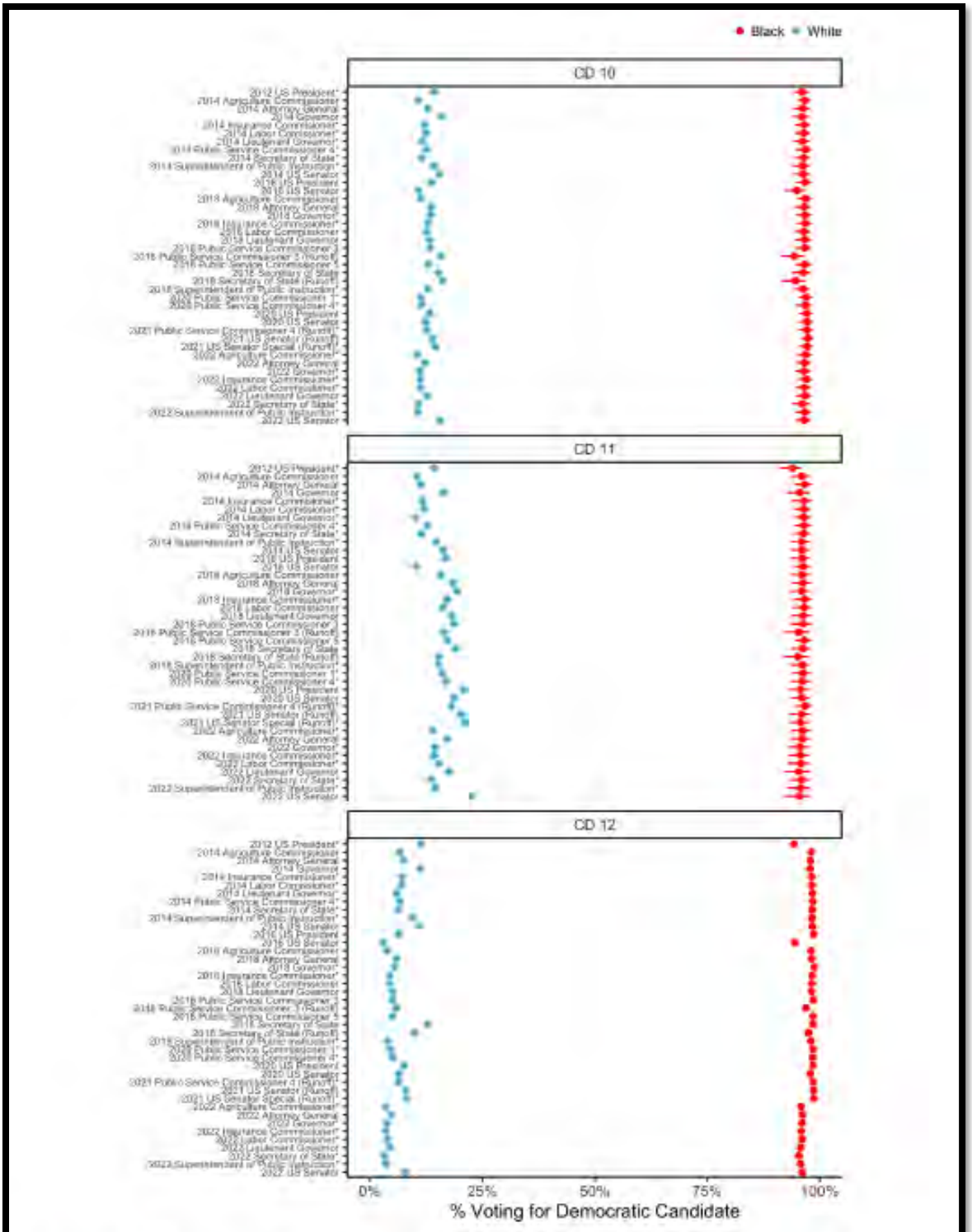



Figure 6: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

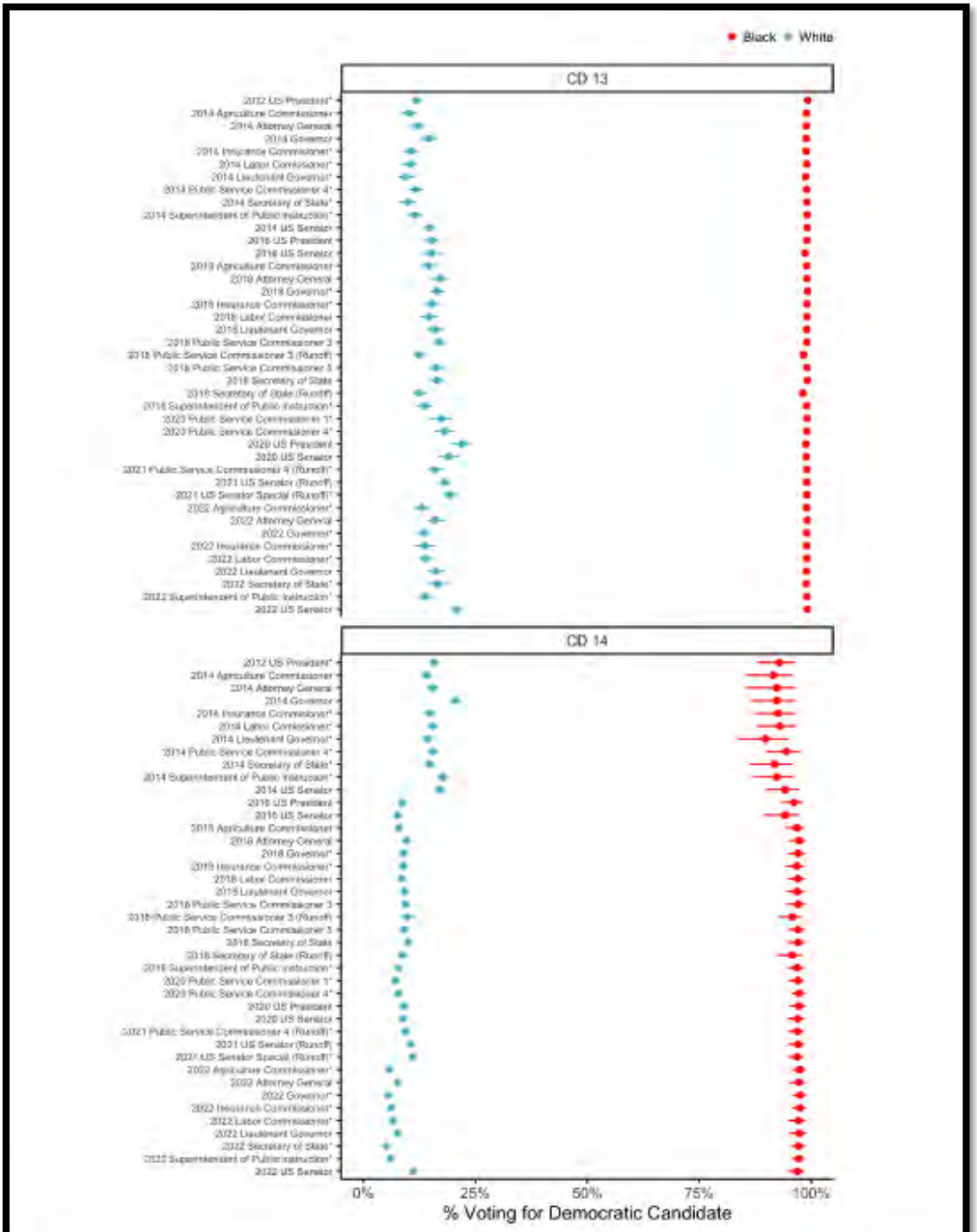



Figure 7: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

Id D W ) L J X U H ) L J X U H ))LLJJXXUUHH )

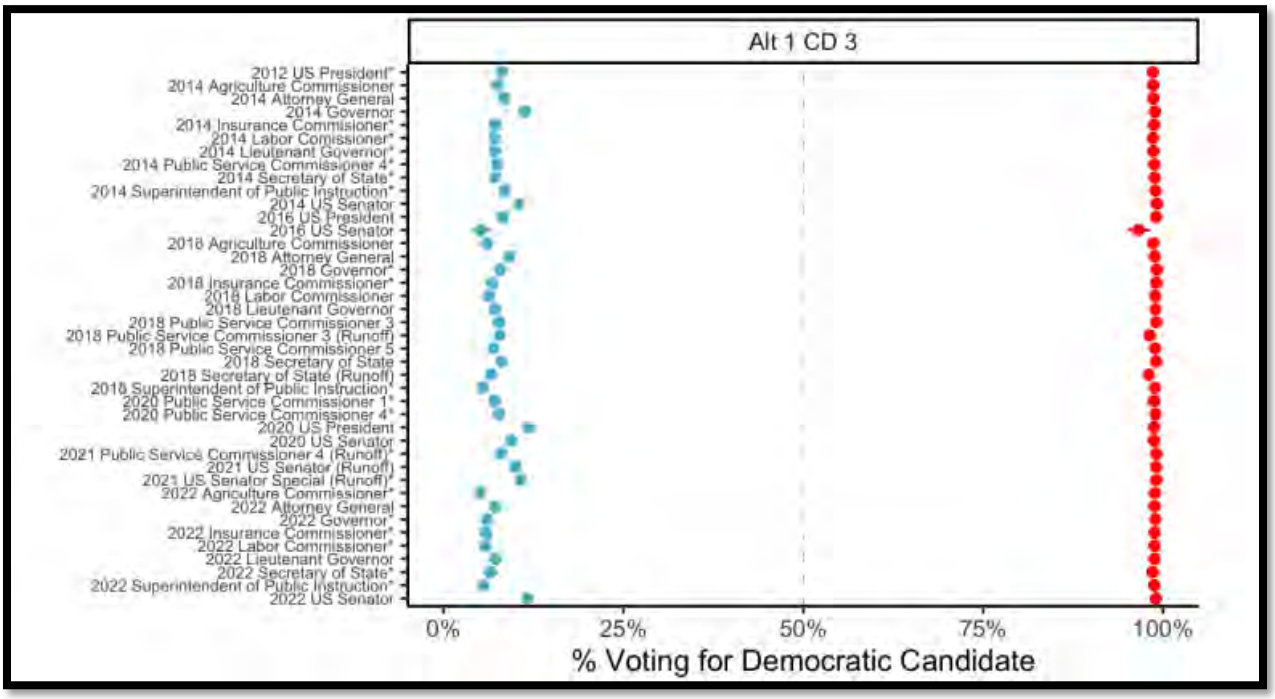
'U 6FKQHHU DQDO\]HG ZKHWKHU WKHUH LV

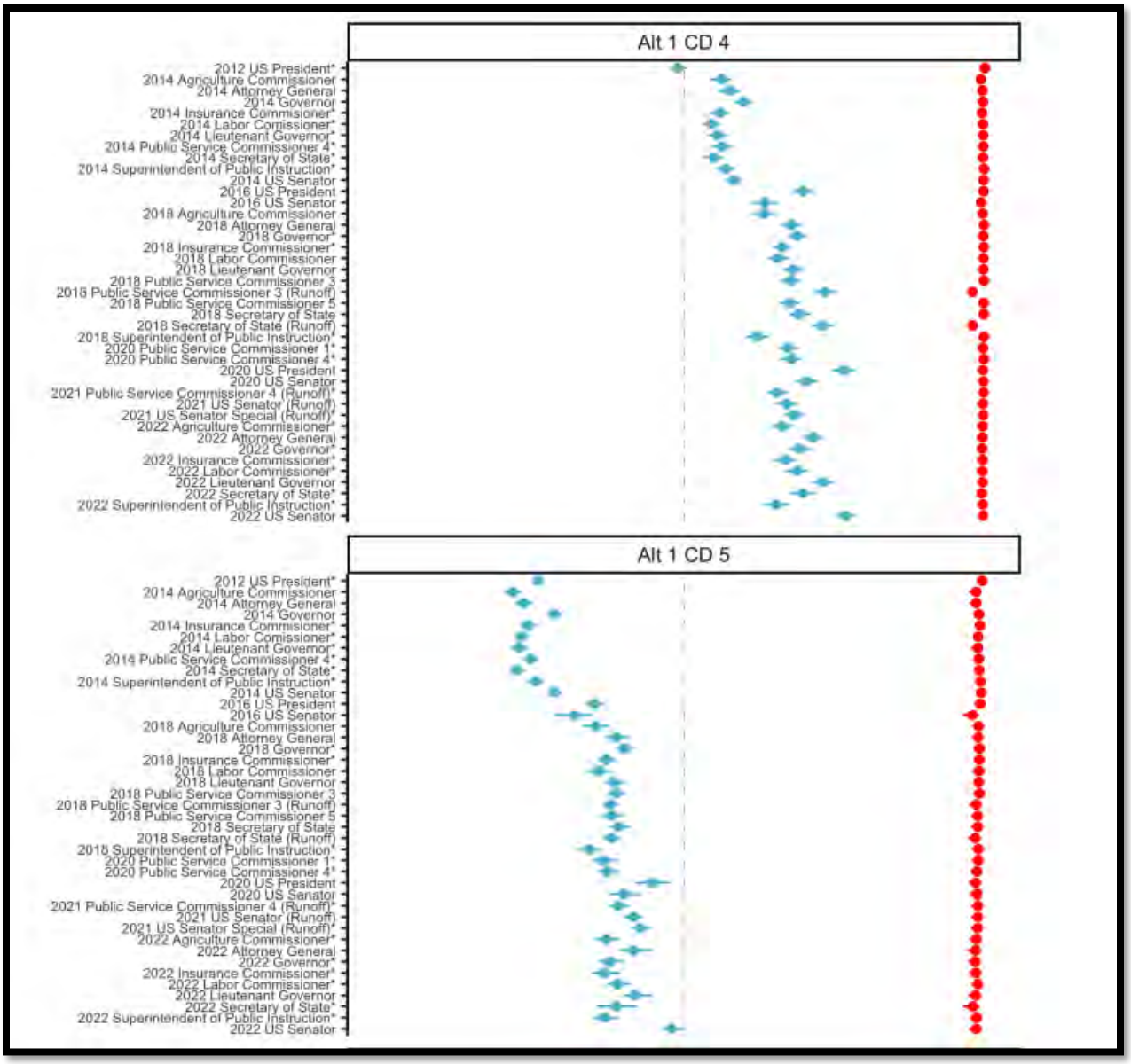
GLVWULFW WKDW 'U 'XFKLQ GUHZ DQG KHU &RQJUHV

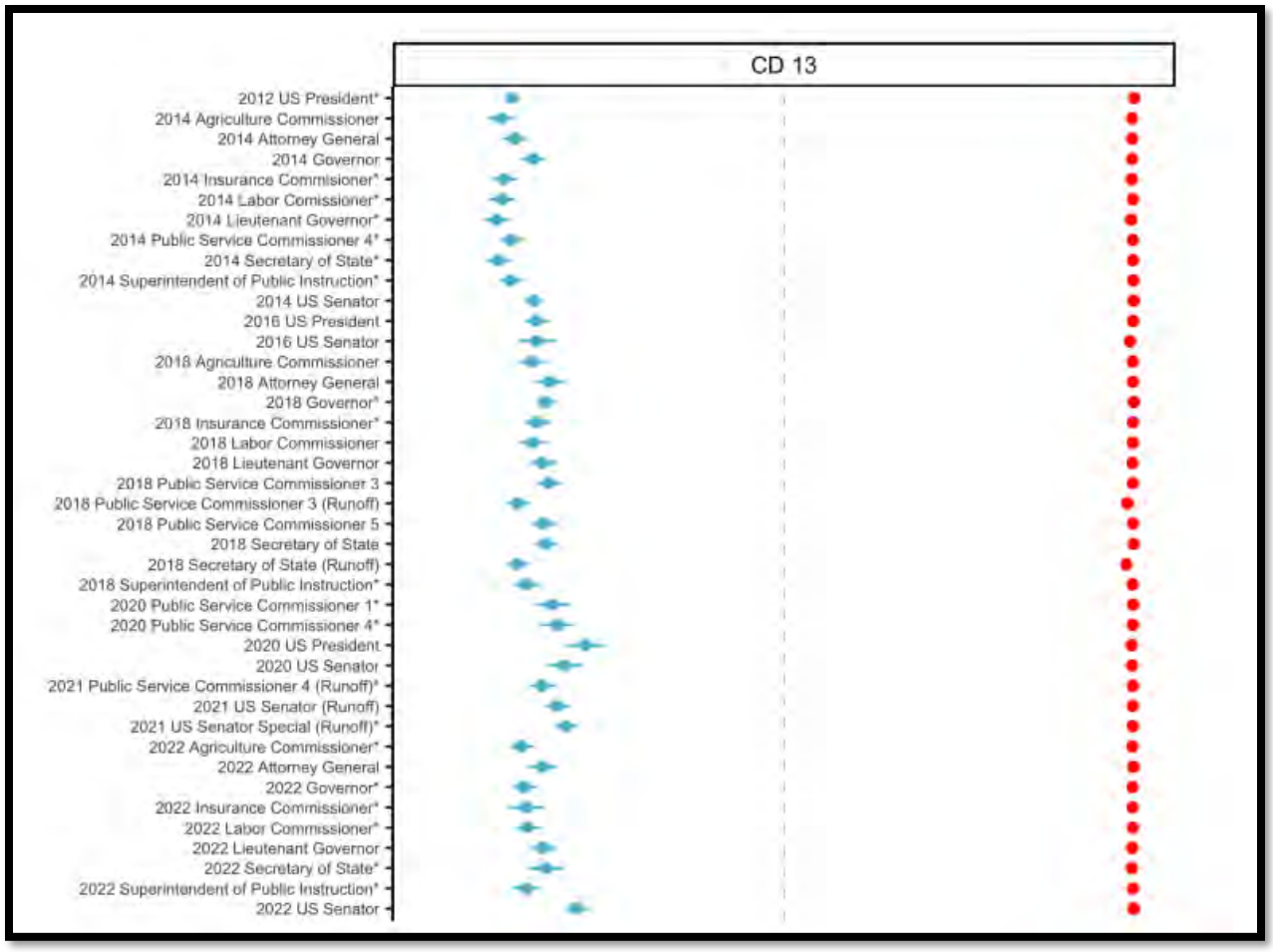
'U 6FKQHHU¶V DQDO\VLV GHPRQVWUDWHV H

² DPRQJ %ODFN YRWHUV LQ WKH &RQJUHVVLRQDO 0DS 'HPRFUDWLF &DQGLGDWHV HFWHG

EHORZ DW )LJXUH )LJXUH




Alt 1 CD 4
2012 US President*
2014 Agriculture Commissioner
2014 Attorney General
2014 Governor
2014 Insurance Commissioner*
2014 Labor Comissioner*
2014 Lieutenant Governor*
2014 Public Service Commissioner 4*
2014 Secretary of State*
2014 Superintendent of Public Instruction*
2014 US Senator
2016 US President
2016 US Senator
2018 Agriculture Commissioner
2018 Attorney General
2018 Governor*
2018 Insurance Commissioner*
2018 Labor Commissioner
2018 Lieutenant Governor
2018 Public Service Commissioner 3
2018 Public Service Commissioner 3 (Runoff)
2018 Public Service Commissioner 5
2018 Secretary of State
2018 Secretary of State (Runoff)
2018 Superintendent of Public Instruction*
2020 Public Service Commissioner 1*
2020 Public Service Commissioner 4*
2020 US President
2020 US Senator
2021 Public Service Commissioner 4 (Runoff)*
2021 US Senator (Runoff)
2021 US Senator Special (Runoff)*
2022 Agriculture Commissioner*
2022 Attorney General
2022 Governor*
2022 Insurance Commissioner*
2022 Labor Commissioner*
2022 Lieutenant Governor
2022 Secretary of State*
2022 Superintendent of Public Instruction*
2022 US Senator
Alt 1 CD 5
2012 US President*
2014 Agriculture Commissioner
2014 Attorney General
2014 Governor
2014 Insurance Commissioner*
2014 Labor Comissioner*
2014 Lieutenant Governor*
2014 Public Service Commissioner 4*
2014 Secretary of State*
2014 Superintendent of Public Instruction*
2014 US Senator
2016 US President
2016 US Senator
2018 Agriculture Commissioner
2018 Attorney General
2018 Governor*
2018 Insurance Commissioner*
2018 Labor Commissioner
2018 Lieutenant Governor
2018 Public Service Commissioner 3
2018 Public Service Commissioner 3 (Runoff)
2018 Public Service Commissioner 5
2018 Secretary of State
2018 Secretary of State (Runoff)
2018 Superintendent of Public Instruction*
2020 Public Service Commissioner 1*
2020 Public Service Commissioner 4*
2020 US President
2020 US Senator
2021 Public Service Commissioner 4 (Runoff)*
2021 US Senator (Runoff)
2021 US Senator Special (Runoff)*
2022 Agriculture Commissioner*
2022 Attorney General
2022 Governor*
2022 Insurance Commissioner*
2022 Labor Commissioner*
2022 Lieutenant Governor
2022 Secretary of State*
2022 Superintendent of Public Instruction*
2022 US Senator




Id D W )LJXUH )LJXUH )LJXUH

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&RKHVLYH 9RWLQJ

'U 6FKQHHU DQDO\]HG ZKHWKHU WKLV LV

IROORZLQJ GLVWULFWV LQ WKH (QDFWHG 6WDWH 6

6' 6' 6' 6' 6' 6' 6' 6' 6' DQG 6'

Id

'U 6FKQHHU FRQFOXGHG WKDW DSDUW IURP

6' ³WKHUH LV HYLGHQFH RI UDFLDOO\ SRODUL]H

:KLWH YRWHUV LQ HYHU\ RWKHU 6WDWH 6HQDWH

VXSSRUWHG\ WKHIHLQRULW\ FDQGLGDWH LQ HYHU\ HOH

WKRVH HOHFWLRQV ZLWK DIdPLQ RULW\ FDQGLGDWH

'U 6FKQHHU DIHRQFOXGHG >(QDFWHG 6WDWH 6HQ

DQG H[KLELW FO%HOD FHYLDQGQ+LHVS

YRWHUV FRKHULQJ DURXQG DW LQRULW\ FDQGLGDWH

'U 6FKQHHU SURGXFHG IRXU ILJXUHV WKDW

SRODUL]HG YRWLQJ DQDO\VLV IRU DOO RI WKH (QD

DQDO\]HG 6G L6H 6' 6' 6' 6' 6' 6' 6

6' 6' 6' 6' DQG 6' )LJXUH )LJ

)LJXUH )LJXUH

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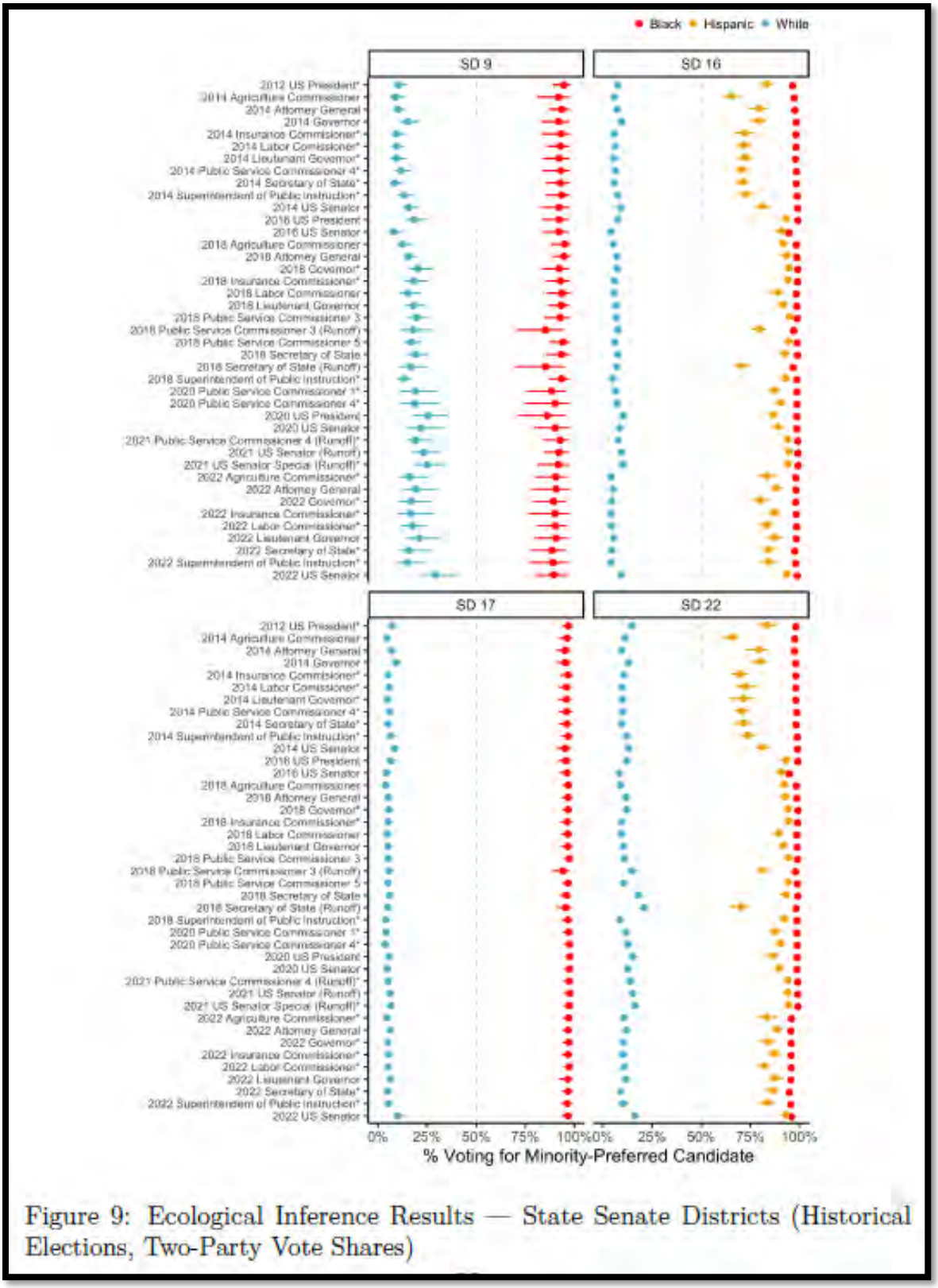


Figure 9: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

Figure 10: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

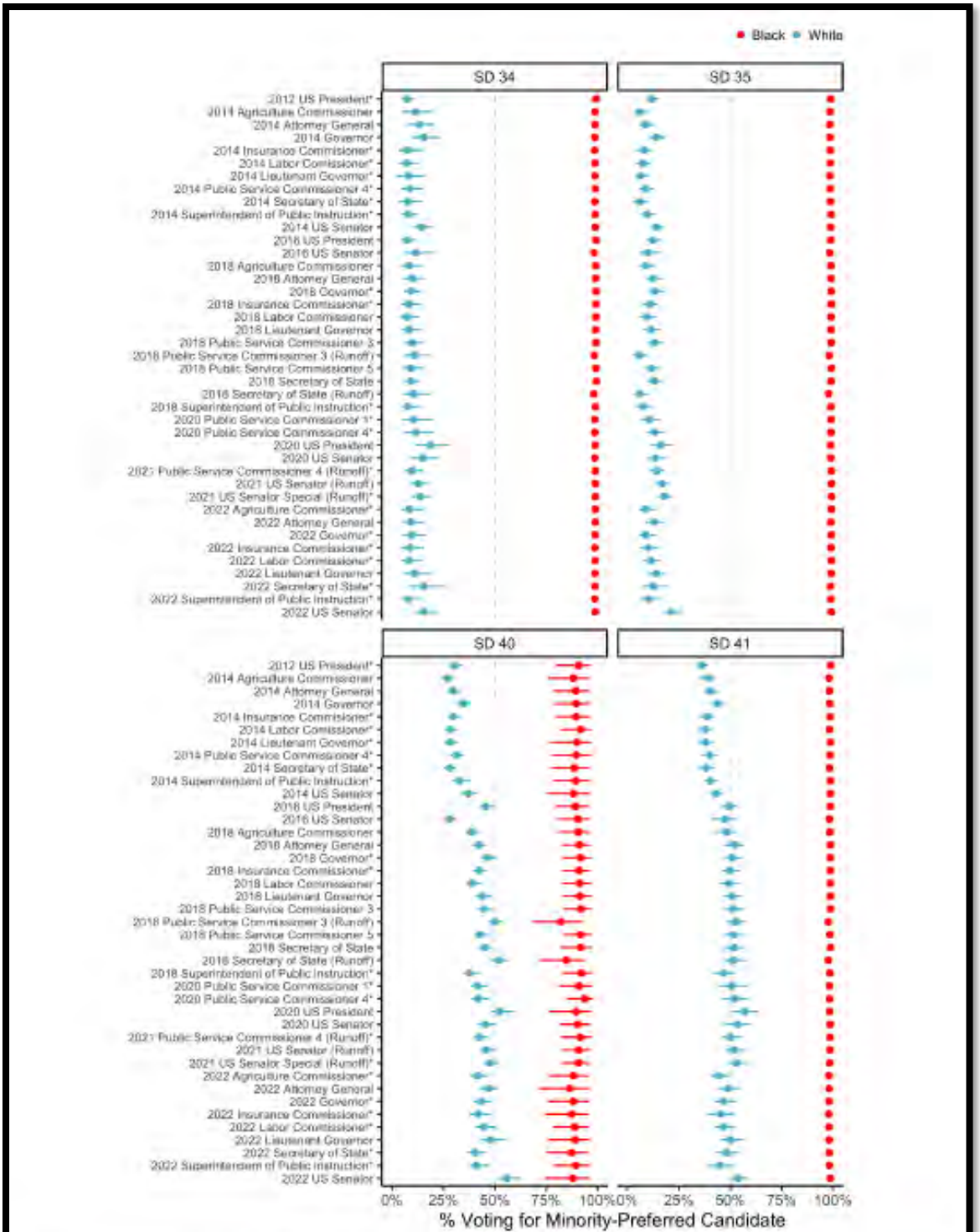


Figure 11: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

Figure 12: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

Id D W ) L J X U H ) L J X U H ) L J X U H

'U 6FKQHHU DOVR DQDO\]HG ZKHWKHU WKH

FHUWDLQ LOOX6'V $OW VWUDWLYH GLDQGLFKHVQGHZ WKHUH

%ODFN DQG +LVSDQLF FRKHVLYHdYRW LQJ LQ 6'V $O

'U 6FKQHHU FRQFOXGHG WKDW WKHUH LV ³

DQG :KLWH YRWHUV DFURVV DOO SDVW VWDWHZL

UXQQLQJ $OW 6' DQG ´

'U 6FKQHHU FRQFOXGHG WKDW KH ³REVHUY

DQG +LVSDQLF YRWHUV >VXSSRUWLQJ PHQ´RUL 6'V $O

Id

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IRU 6'V $OW DQG DQG IRU 6'V $OW

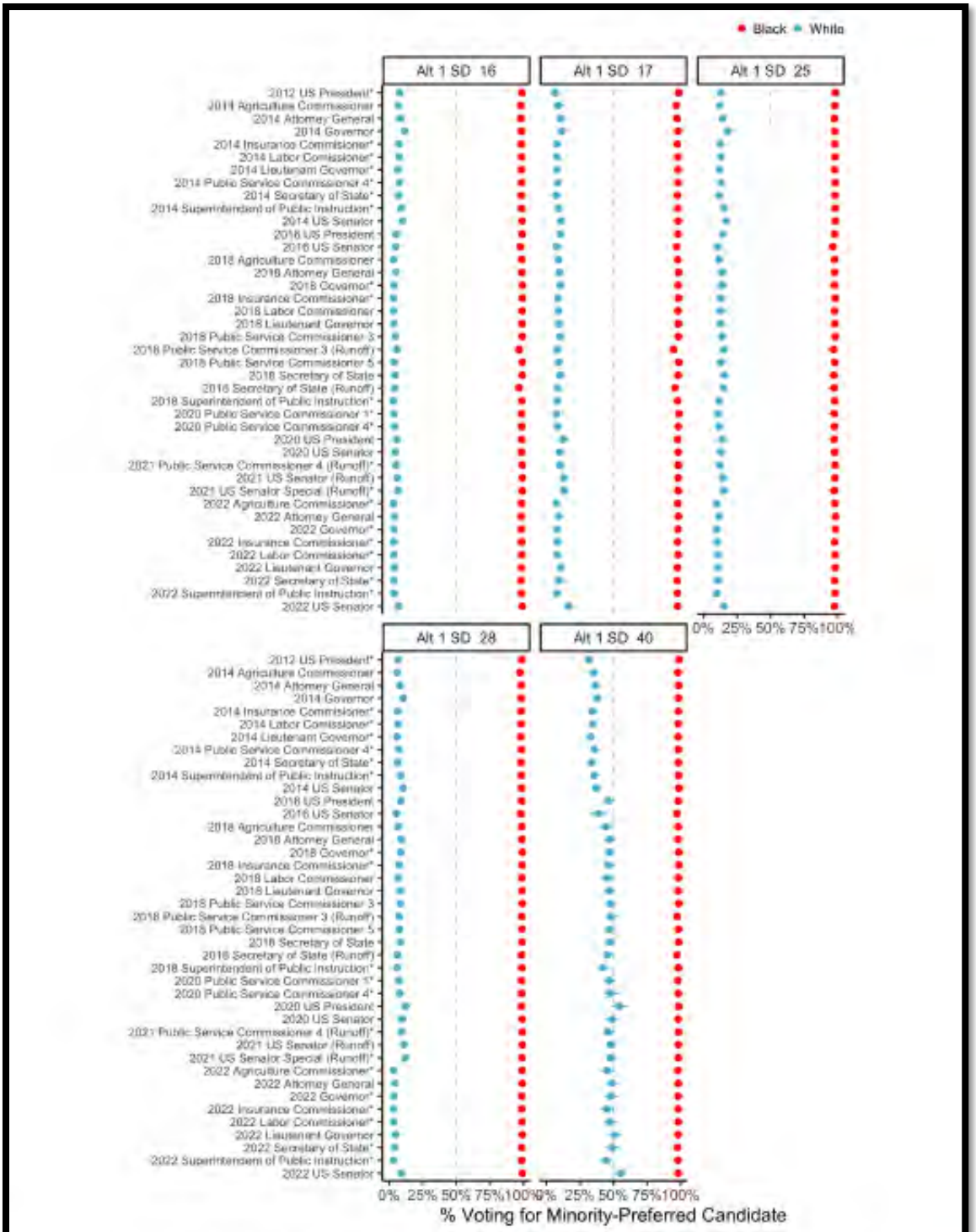


Figure 26: Ecological Inference Results — Illustrative Map 1 State Senate Districts (Historical Elections, Two-Party Vote Shares)

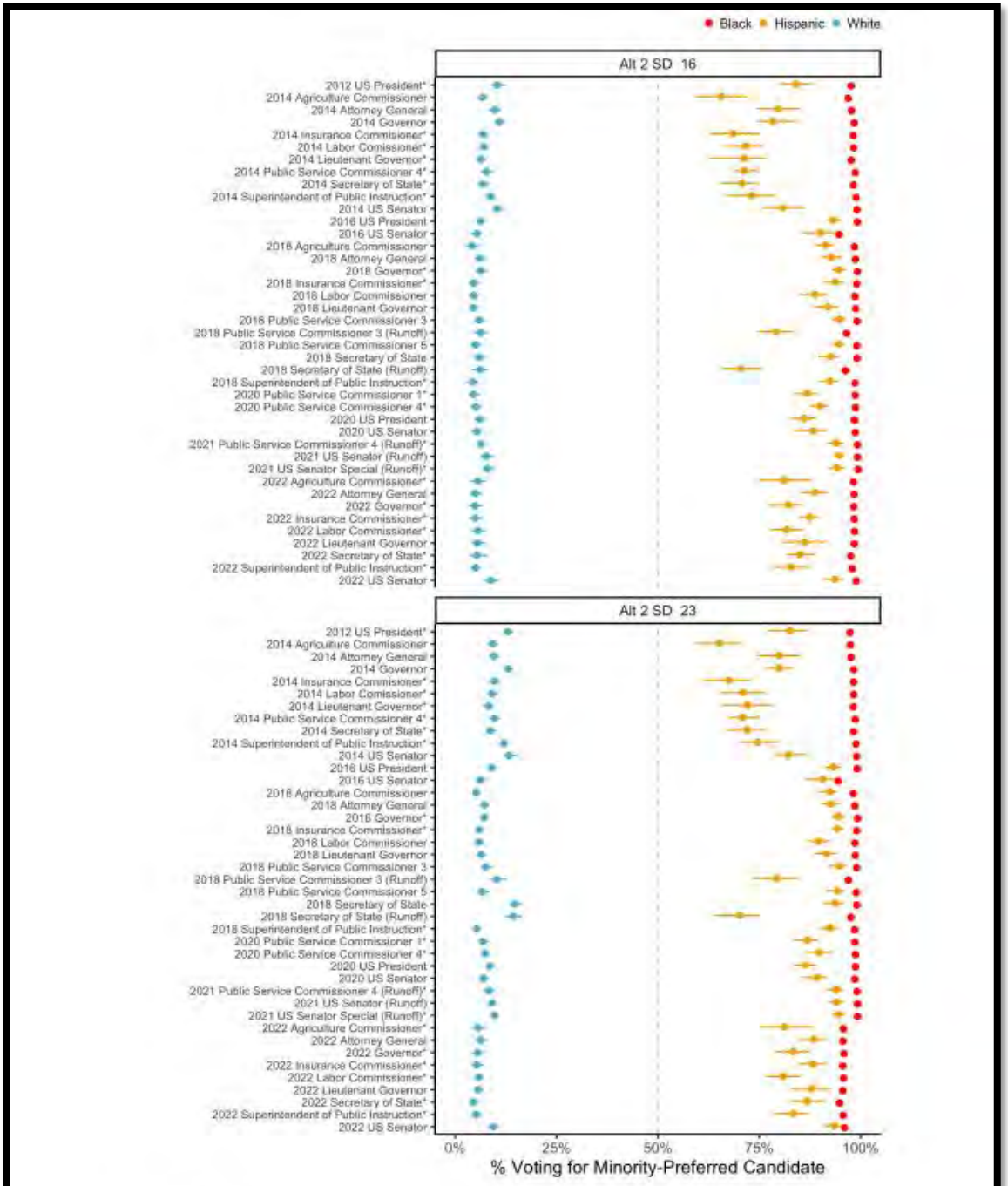


Figure 27: Ecological Inference Results — Illustrative Map 2 State Senate Districts (Historical Elections, Two-Party Vote Shares)



Id D W ) L J X U H V

6WDWH +RXVH 'LVWULFWV (YLGHQFH RI %ODFN $
&RKHVLYH 9RWLQJ

'U 6FKQHHU DQDO\]HG %ODFN FRKHVLRQ LQ WKH

IROORZLQJ GLVWULFWV LQ WKH (QDFWHG 6WDWH +

+' +' +' +' +' +' +' +' +'

+' +' +' DQG +'

'U 6FKQHHU FRQFOXGHG 539 EHWZHHQ %ODFN

YRWHUV LQ >(QDFWHG 6WDWH +RXVH 0DS GLVWUL

DQG @´

'U 6FKQHHU ³>(QDFWHG 6WDWH +RXVH 0DS G

DQG SUHVHQW FOHDU HYLGHQ

VHOHFWLQJ WKH PLQRULW\ FDQGLGDWHV DV WKHL

'U 6FKQHHU VWDWHG WKDW ³KRZ EODFN DQG %OD

VXSSRUWHG PLQRULW\ FDQGLGDWHV´ LQ +' DQG

'U 6FKQHHU DOVR H[DPLQHG ZKHWKHU WKH

DQG +LVSDQLF YRWHUV LQ HQDFWHG +'V DQ

'U 6FKQHHU GHWHUPLQHG WKDW SUHVHQW

HYLGHQFH RI 539 ZLWK %ODFN DQG +LVSDQLF YRW

FDQGLGDWHV DV WKHLU FDQGLGDWH RI FKRLFH ´

'U 6FKQHHU SURGXFHG ILYH ILJXUHV WKDW

SRODUL]LQJ YRWLQJ DQDO\VLV IRU DOO RI WKH (QDFWHG

DQDO\]HG L H +' +' +' +' +' +' +'

+' +' +' +' +' +' +' +'

+' Id DW )LJXUH )LJXUH )LJXUH )L

)LJXUH

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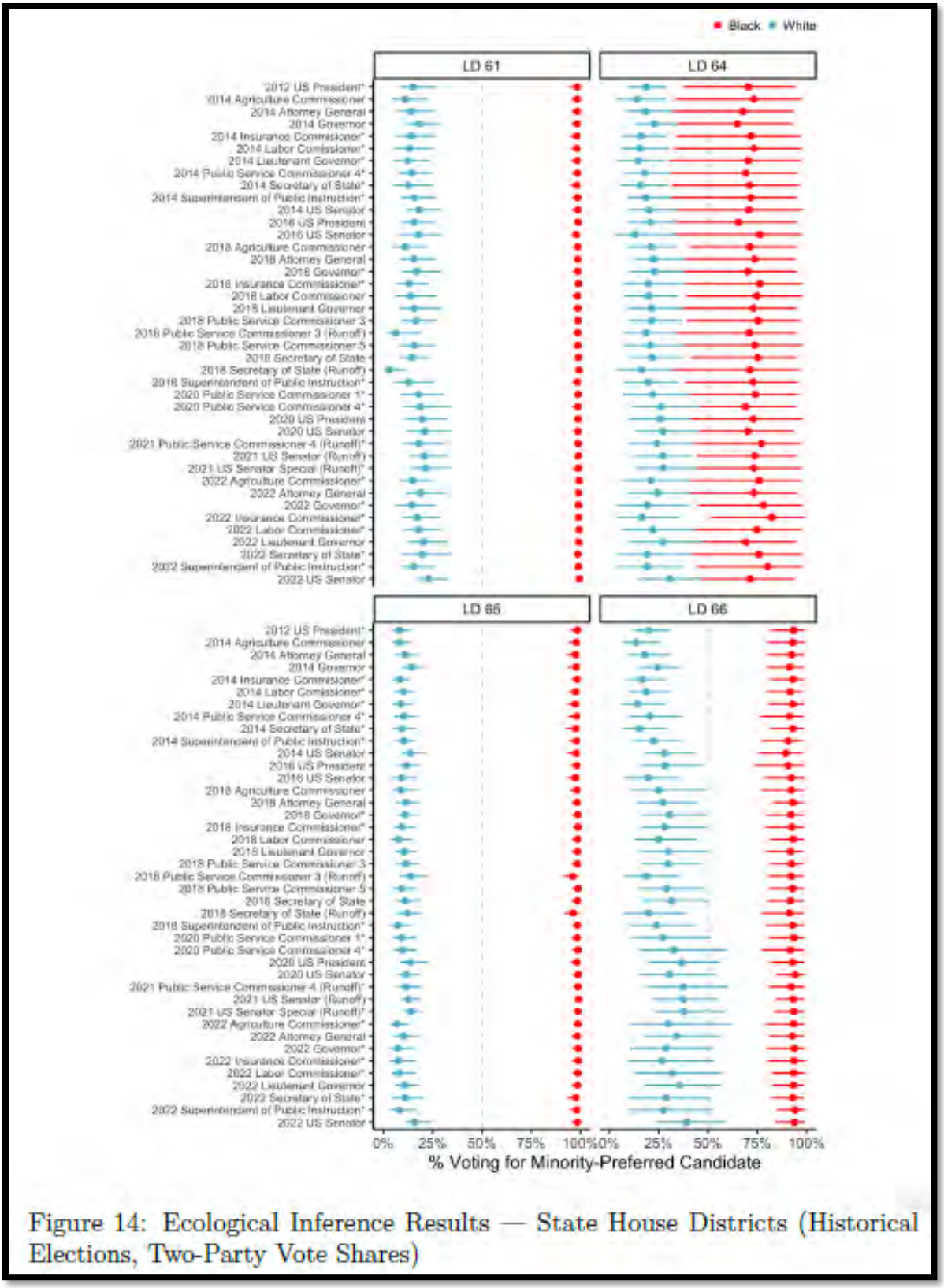


Figure 14: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

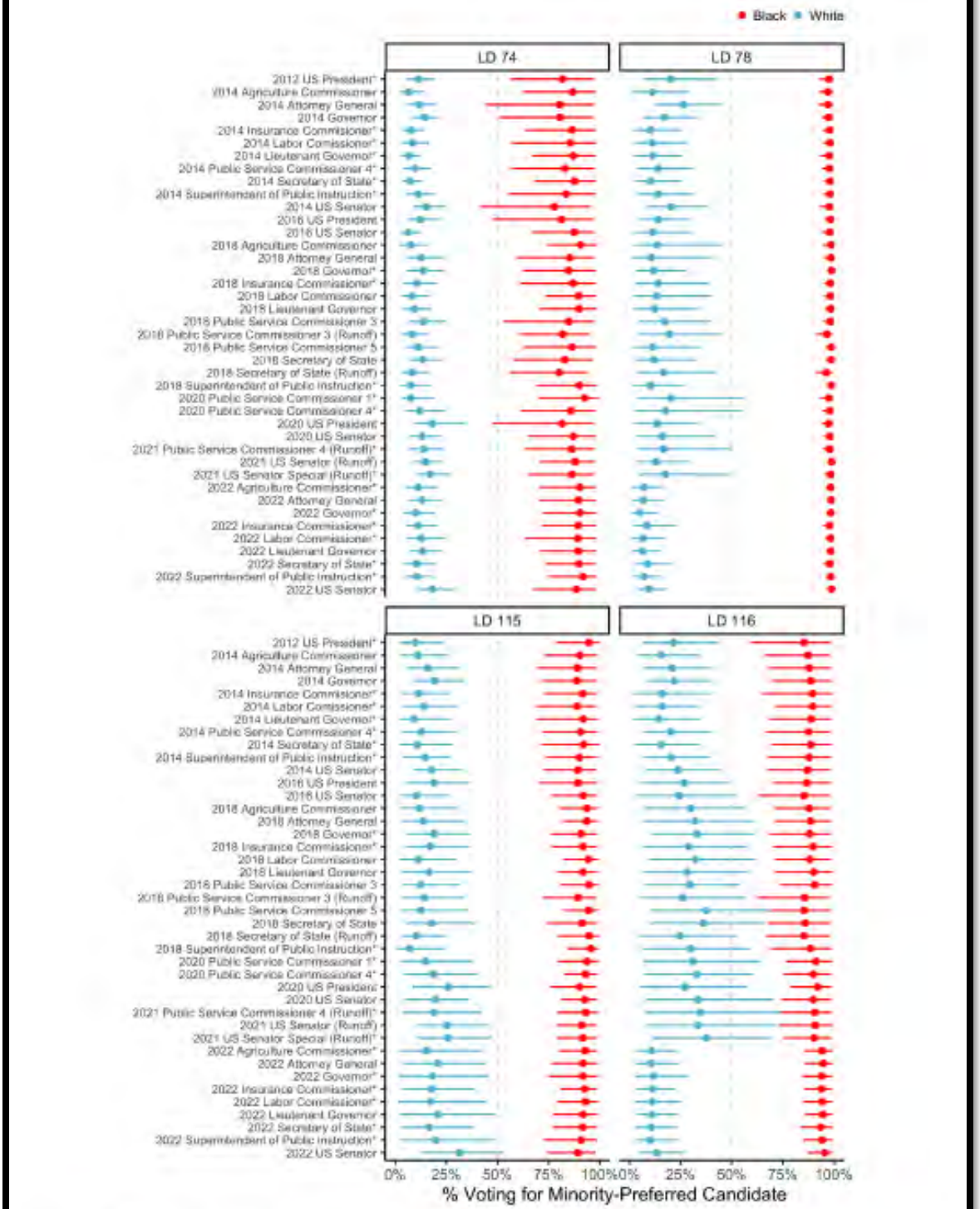


Figure 15: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

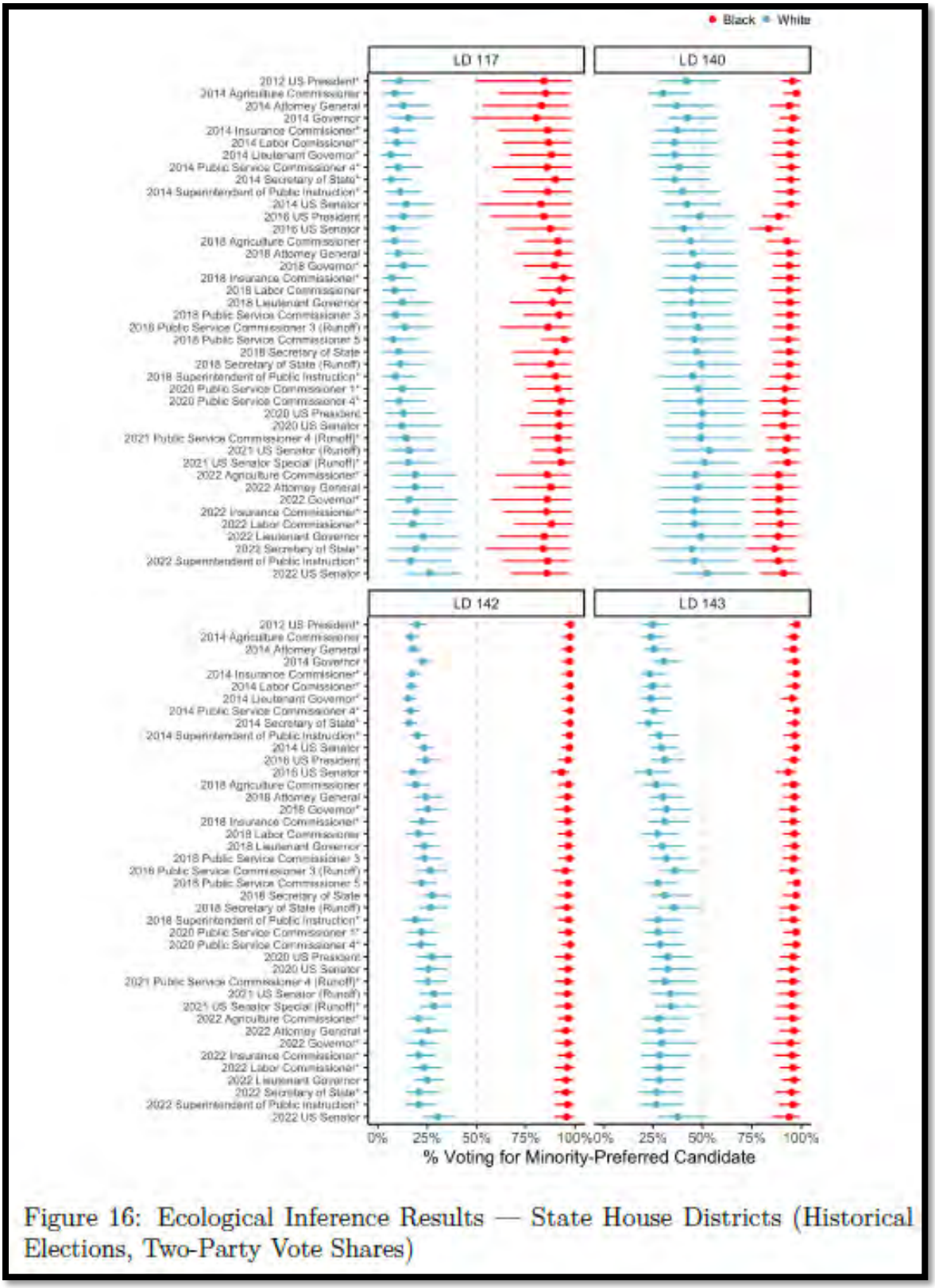


Figure 16: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

Figure 17: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

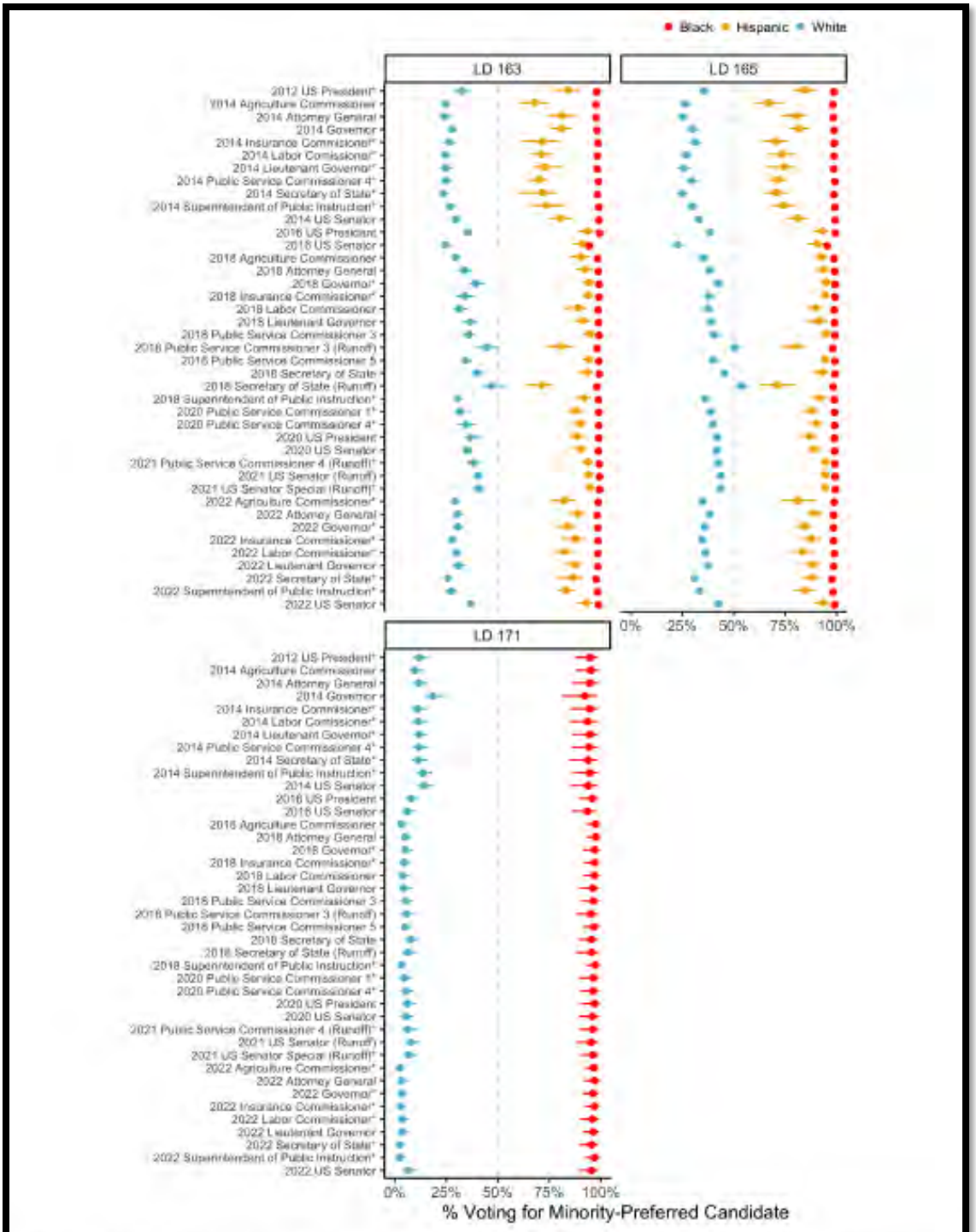


Figure 18: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

Id D W ) L J X U H ) L J X U H ) L J XLUJHX U H

'U 6FKQHHU DOVR DQDO\]HG ZKHWKHU WKHUH LV %O

+'V $OW Id DWDQG

'U 6FKQHHU VWDWHG WKDW WKHUH LV ³HYL

:KLWH YRWHUV LQ DOO Id GLW WULFWV , H[DPLQH>G@

'U 6FKQHHU DOVR DQDO\]HG ZKHWKHU WKHU

YRWLQJ LQ +'V $OW Id DWDQG

'U 6FKQHHU VWDWHG WKDW LQ +' $OW

+LVSDQLF YRWHUV VXSSRUW LQJ PLQRULW\ FDQGLG

'U 6FKQHHU SURGXFHG UHIOHFWV WKH UHV

DQDO\VLV

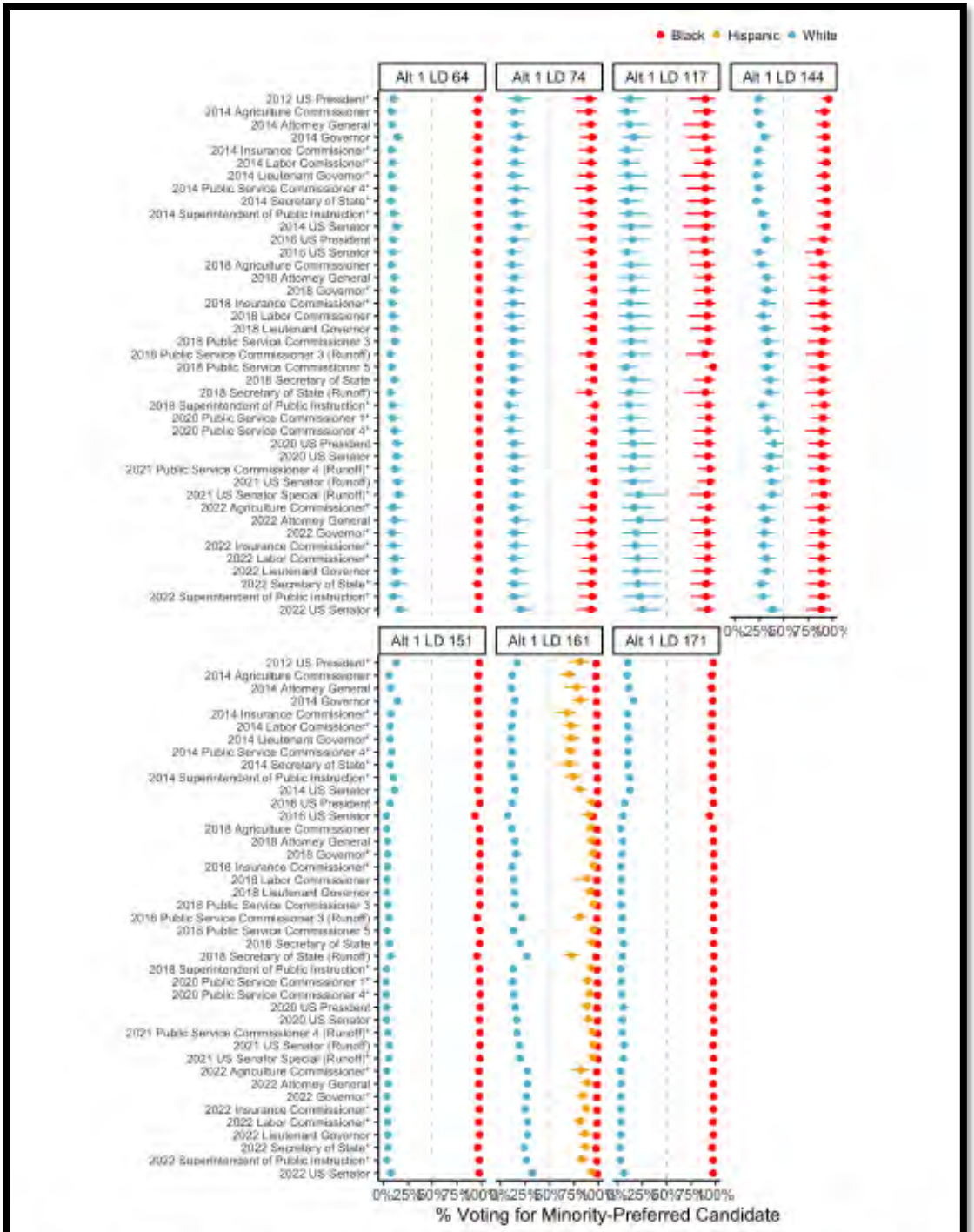


Figure 28: Ecological Inference Results — Illustrative Map 1 State House Districts (Historical Elections, Two-Party Vote Shares)

Id D W ) L J X U H

% *Gingles* 0DMRULW\ :KLWH 9RWHUV 9RWH DV D %ORF WR 8VXD
'HIHDW WKH &DQGLGDWHV RI &KRLFH RI *URXSV 0L

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:KLWH 9RWLQJ 2SSRVHV %ODFN 3UHIHUUHG
&DQGLGDWH

'U 6FKQHHU FRQFOXGHG WKDW WKHUH LV ³F

YRWLQJ DW WKH VWDWHZLGH OHYHO´ DQG WKDW ³+

VDPH FDQGLGDWHV RI FKRLFH DQG :KLWH YRWHUV

DW

'U 6FKQHHU RSLQHG WKDW ³SULPDU\ HOHFWLRQV

DQDO\VLV EXW LQ P\ YLHZ VWXG\LQJ WKHP LV QR

FRQFOXVLRQ DERXW UDFLDOO\ SRODUL]HG YRWLQJ LQ *HRU

'U 6FKQHHU RSLQHG WKDW ³LI UDFLDOO\ SR

SULPDU\ HOHFWLRQ LW GRHV QRW QHFHVVDULO\ P

RFFXU LQ WKH JHQHUDO HOHFWLRQ DQG YLFH YHU

'U 6FKQHHU RSLQHG WKDW ³LW LV VXIILFLHQW

LQ JHQHUDO HOHFWLRQV LQ RUGHU WR GHWHUPLQ

*HRUJLD JHQHUDO HOHFWLRQV ´

'U 6FKQHHU DOVR SURGXFHG D ILJXUH ZKL

UDFLDOO\ SRODUL]HG VWDWHZLGH HOHFWLRQV

7KH ILJXUH UHIOHFWV WKDW :KLWH YRWHUV

YRWH FRKHVLYHO\ IRU WKH VDPH FDQGLGDWH RI

FDQGLGDWH RI FKRLFH RI %ODFN YRWHUV

7KH ILJXUH IURP 'U 6FKQHHU¶V UHSRUW U

SUHVHQWHG DW SDJH  RI WKLV 6RI )DFW See Id

&OXVWHU/HYHO (YLGHQFH RI :KLWH &RKHVLYH
:KLWH 9RWLQJ LQ 2SSRVLWLRQ WR %ODFN 9RWHUV
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'U 6FKQHHU DQDO\]HG ZKHWKHU WKHUH LV

$WODQWD 6' *ZLQQHWW DQG 6' (DVW %ODFN %HOW

DQG +LVSDQLF YRWHUV¶ SUHIHUUHG FDQGLGDWHV RI

'U 6FKQHHU FRQFOXGHG >6' $WODQWD

(DVW %ODFN %HOW WKHUH LV@ 539 EHWZHHQ :KL

%ODFN YRWHUV FRKHVLYHO\ VXSSRUW D FDQGLGDW

FDQGLGDWH WKDW LV VPDOOHU )XUWKHUPRUH +LVSDQLF YRW

FDQGLGDWHV RI FKRLFH DV %ODFN YRWHUV ´

'U 6FKQHHU DOVR SURGXFHG D ILJXUH WKDW

SRODUL]HG YRWLQJ DQDO\VLV IRU 6' $WODQWD 6'

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7KH ILJXUH UHIOHFWV WKDW :KLWH YRWHUV
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WR WKH SUHIHUUHG FDQGLGDWH RI FKRLFH IRU
+LVSDQLF YRWHUV LQ 6' *ZLQQHW

7KH ILJXUH IURP 'U 6FKQHHU¶V UHSRUW U
SUHVHQWHG DW RISWKLV 6DSK HPHQW RI )DFWV

See id.

'U 6FKQHHU DOVR DQDO\]HG HZKLYHKYRWLQJ
+' $WODQWD +' 6RXW+KZHVW +' (DVW %ODFN %HOW DQG +
WKH %ODFN DQG +LVSDQLF YRWHUV¶ SUHIHUUHG F
DW

'U 6FKQHHU FRQFOXGHG WKDW WKHUH LV ³
DQG %ODFN YRWHUV+RXUH FVOXVWHUV WD,WH[DPLQH
FRKHVLYHO\ VXSSRUW D FDQGLGDWH RI FKRLFH D
%DVHG RQ P\ HVWLPDWHV WKLV LV WUXH LQ HYHU
WKDW , Hd[DPLQH ´

'U 6FKQHHU DOVR SURGXFHG D ILJXUH WKDW
SRODUL]HG YRWLQJ DQDO\VLV IRU +' $WODQWD +'
+' 6RXWKHDW )LJXUH

7KH ILJXUH UHIOHFWV WKDW :KLWH YRWHUV +HUV

(DVW %ODFN %HOW DQG +' 6RXWKHDVW YRWH FRK

LQ RSSRVLWLRQ WR WKH SUHIHUUHG FDQGLGDWH I

7KH ILJXUH IURP 'U 6FKQHHU¶V UHSRUW U

SUHVHQWHG DW RI 6WDWHPHQW RI )DFWV See id.

&RQJUHVVLRQDO 'LVWULFW (YLGHQFH RI :KLWH
9RWLQJ WKDW WKH :KLWH 2SSRVH %ODFN 9RW
%ORFWKDW WKH :KLWH 9RWHUV %ORFN
9RWLQJ %ORF

'U 6FKQHHU FRQFOXGHG WKDW %ODFN YR

RQH KDQG DQG :KLWH YRWHUV RQ WKH RWKHU KDQ

LQ WKH (QDFWHG &RQJUHVVLRQDO 0DS@ H J VW

>GLVWULFWV LQ WKH (QDFWHG &RQJUHVVLRQDO 0

'U 6FKQHHU VWDWHG WKDW LQ DOO RI

&RQJUHVVLRQDO 0DS H[FHSW IRU &' ³:KLWH YRWH

RI %ODFN YRWHUV LQ HYHU\ FRQWHVW DQG HQFH L

HVWLPDWHV IRU :KLWH YRWHUV QHYHU RYHUODS

VXSSRUW´

'U 6FKQHHU VWDWHG WKDW LQ &' ³>I@RU

D PLQRULW\ SUHIHUUHG FDQGLGDWH YRWHV DQG ³>I@RU :K

QHYHU HVWLPDWHG WR SUHIHU WKH FDQGLGDWH YRWH VKDU

'U 6FKQHHU VWDWHG WKDW LQ &' ³%OD

PLQRULW\ FDQGLGDWHV SUHIHUUHG RQ WKH ZKROH E\ ZKLWH YRWHUV

RSSRV>HG@ WKHVH FDQGLGDWHV RI FKRLFH ´ Id.

'U 6FKQHHU VWDWHG WKDW ³>R@YHUDOO

EHKDYLRU DFURVV %ODFN YRWHUV LQ VXSSRUW RI

SUHIHUUHG >FDQGLGDWHV@ ZKLOH ZKLWH YRWHUV RSSRVHG W

FDQGLGDWHV RI FKRLFH ´ Id.

'U 6FKQHHU DOVR SURYLGHG ILJXUHV WKDW UHIOHFW W

UDFLDOO\ SRODUL]HG YRWLQJ DQDO\VLV IRU DOO F

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7KH ILJXUHV UHIOHFW WKDW :KLWH YRWHUV

&RQJUHVVLRQDO 0DS H[FHSW IRU &' YRWH FRKHVL

LQ RSSRVLWLRQ WR WKH FKRLFH RI %ODFN YRWHUV

7KH ILYH ILJXUHV IURP 'U 6FKQHHU¶V UHSR

DUH SUHVHQWHG DW WKH HQG RI WKLV 6WDWHPHQW RI )DFWV See id.

'U 6FKQHHU DOVR ³H[DPLQH>G@ WKH HOHF

FRQJUHVVLRQDO GLVWULFW 7DEOH

'U 6FKQHHU ³XVH>G@ KLVWRULFDO HOHFWL

Id. DW

'U 6FKQHHU FRQFOXGHG DWOK HIW H³FEDOVLRQV R

YRWHUV KDYH FORVH WR QR FKDQFH RI HOHFWL

FRQJUHVVLRQDO GLVWULFWV ´

'U 6FKQHHU VWDWHG WKDW LQ (QDFWHG &

DQG :KLWH YRWHUV SUHIHU GLIIHUHQW FDQGLGDWHV

FRQGLWLRQV UHPDLQ VLPLODU WR KLVWRULFDO H

PLQRULW\ FDQGLGDWH ZRXOG QRW EH DEOH WR HO

SUHIHUUHG FDQGLGDWH ... ,\ H[DP

GLVWULFWV ´

'U 6FKQHHU DOVR SUHSDUHG D WDEOH UH

GLVWULFWV LQ WKH (QDFWHG &RQJUHVVLRQDO 0DS

%ODFN SUHIHUUHG FDQGLGDWH ZRXOG QRW UHFHLYH

'U 6FKQHHU DOVR FRQFOXGHG WKDW ³RQDO FXWRII XVHG LQ Y

LQGLFDWH D JUHDWHU GLVWULFW ´

'U 'XFKLQ DOVR FRPSDUHG ... WKH

GLVWULFWV LQ WKH (QDFWHG &RQJUHVVLRQDO 0DS

7R SHUIRUP KHU SHUIRUPDQFH DQDO\VLV '

SULPDU\ DQG JHQHUDO HOHFWLRQ UHVXOWV DQG

WKH UHOHYDQW SRSXODWLRQ¶V SUHIHUUHG FDQGLG

SULPDU\ HOHFWLRQV DQG DW OHD'XFKLQ¶V UHSRUW RI

'U 'XFKLQ FRQVLVWHQW ZLWK 'U 6FKQHHU

GLVWULFWV (QDFWHG &RQJUHVVLRQDO 0DS &' &'

&' &' DQG &'H 9$3 DOVR QRW KDYH DQ RSS

GHIHDW WKH 9$3 :KLWH 7DEOH

'U 6FKQHHU DQDO\]HG ZKHWKHU WKHUH LV

GLVWULFW WKDW 'U 'XFKLQ GUHZ LQ WKH 'HPRQVWUDW

WR WKH SUHIHUUHG FDQGLGDWH RI %

'U 6FKQHHU FRQFOXGHG WKDW H[FHSW IRU

HVVHQWLDOO\ XQLYHUVDO EORF YRWLQJ

GLVWULFWV ZKHQ D PLQRULW\ FDQGLGDWH

RSSRVH WKLV FDQGLGDWH ,Q HOHFWLRQV EHWZHH

FDQGLGDWHV %ODFN YRWHUV

RSSRVH WKHP ´

'U 6FKQHHU DOVR SURGXFHG D ILJXUH WKDW

SRODUL]HG YRWLQJ DQDO\VLV IRU 'HPRQVWUDWLYH

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FRKHVLYHO\ IRU WKH VDPH FDQGLGDWH RI FKRLFH

RI FKRLFH IRUld%ODFN YRWHUV

7KH ILJXUH IURP 'U 6FKQHHU¶V UHSRUW U

SUHWHQ DW SDUDJUDSK6WDWHPHQW RI )DFWV

6WDWH 6HQDWH 'LVWULFW RI :KLWH
9RWLQJ WKH :KLWH 2SSRVHQJ %ODFN 9RW
%ORFWKDW WKH :KLWH 8VXDOOLQJ %ORFN %O
9RWLQJ %ORF

'U 6FKQHHU ZKDWH WKLV LV :KLWH FR

RSSRVLWLRQ WRUWHG FDQGLGDWH RI FKRLFH IRU

GLVWULFWV LQ WKH (QDFWHG 6WDWH 6HQDWH 0DS

6' 6' 6' 6' 6' 6' 6' DQGld6DW

'U 6FKQHHU FRQFOXGHG WKDW DSDUW IURP

6' ³WKHUH LV HYLGHQFH RI UDFLDOO\ SRODUL]H

:KLWH YRWHUV LQ HYHU\ RWKHU 6WDWH 6HQDWH

VXSSRUWHG\ WKH PLQRULW\ FDQGLGDWH LQ HYHU\ HOH

WKRVH HOHFWLRQV ZLWK D PLQRULW\ FDQGLGDW

FDQGLGDWHd RI FKRLFH ´

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DQG H[KLELW FOHDU HYLGHQFH RI 539 ZL

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KLVWRULFDO HOHFWLRQ ZLWK D PLQRULW\ FDQGLG

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%ODFN YRWHUV FRKHULQJ DURXQG WKH PLQRULW\

FDQGLGDWH ´

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UDFLDOO\ SRODUL]HG YRWLQJ DQDO\VLV IRU DOO

ZKLFK KH DQDO\]HG L H 6' 6' 6' 6' 6'

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7KH ILJXUHV UHIOHFW WKDW :KLWH YRWHUV

6' DQG SRWHQWLDOO\ FRKHVLYHO\ IRU WKH VDPH

DQG LQ RSSRVLWLRQ WR FDQGLGDWH RI FKRLFH I

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7KH IRXU ILJXUHV IURP 'U 6FKQHHU¶V UHSR

DUH SUHVHQWHG DW SDUDJUDSK RI )DFWV

'U 6FKQHHU DOVR H[DPLQHG WKH WKUHH FRXQWLHV
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'U 6FKQHHU ³XVH>G@ KLVWRULFDO HOHFWL
Id
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FDQGLGDWH SUHIHUUHG E\ PLQRULW\ YRWHUV ZRXOG
EHWZHHQ DQG LQ 6'V Id DW DQG ´
'U 6FKQHHU DOVR SUHSDUHG D 6WDEOH 6 UHIO
6' 6' DQG ZKLFK VKRZV WKDW LQ HDFK RI WKH
HYLGHQFH LQGLFDWHV WKDW WKH %ODFN SUHIHUU
RI WKH YRWHV FDVW LQ FRQYHQWLRQDO FXWRII XVHG
LQ GLFWDWH D VDIH UDFLDOO\ PDMRULW\ GLVWULFW
'U 'XFKLQ DOVR FRPSOHWHG D SHUIRUPDQF
6' 6' DQG 'XFKLQ 5HS
'U 'XFKLQ FRQVLVWHQW ZLWK 'U 6FKQHHU
6' 6' DQG 'R 6'Q RW SURYLGH HIIHFWLYH
RSSRUWXQLW\ WR HOHFW WKHLU FDQGLGDWH

FDQGLGDWHV ³ZHUH RSSRVHG E\ :KLWH YRWHUV LQ

Id DW

'U 6FKQHHU DOVR SUHVHQWHG WKH HIIHFWLYHQHVV WK

UDFLDOO\ SRODUL]HG YRWLQJ DQDO\VLV IRU DOO

ZKLFK KH DQDO\]HG L H +' +' +' +' +'

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+' DQG +' Id DW )LJXUH )LJXUH

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7KH ILJXUHV UHIOHFW WKDW :KLWH YRWHUV

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FRKHVLYHO\ WKH VDPH FDQGLGDWH RI FKRLFH LQ RSS

RI FKRLFH IRU Id % ODFN YRWHUV )LJXUH )LJXUH

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7KH ILYH ILJXUHV IURP 'U 6FKQHHU¶V UHSRUW

DUH SUHVHQWHG DW WKH SODLQWLIIV¶ 6WDWHPHQW RI )DFWV

'U 6FKQHHU DOVR H[DPLQHG WKH HOHFWR

HQDFWHG VWDWH Id +RXVH GLVWULFWV

'U 6FKQHHU ³XVH>G@ KLVWRULFDO HOHFWL

Id

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EHWZHHQ DQG WHG 6WDWH +RXVH 0DS GLVWULFW

See & DQWHU 'HFO 6FKQHHU 5HSRUW DW (UUDWD

'U 6FKQHHU DOVR ³ORRNHG DW WKH SH

´ DQG GHWHUPLQHG WKDW WKH ³HIIHFWLYHQHVV

SHUIRUPDQFH DQDO\VLV WKDW , GLG IRU DOO RWK

SDVW HOHFWLRQV WKDW , H[DPLQHG ZHUH PLQRUL

FKRLFH ´ 6FKQHHU 'HS

'U 6FKQHHU SUHSDUHG UHIOHFWLQJ WKH UHV

+' +' DQG ZKLFK VKRZV WKDW LQ HDFK RI WK

HYLGHQFH LQGLFDWHV WKDW WKH %ODFN SUHIHUU

RI WKH YRWH FDVW LQ FRQWHVWV HQWLRQDO FXWRII XVHG LQ Y

LQGLFDWH D 6FKQHHU 7DEOH

'U 'XFKLQ DOVR FRPSOHWHG D SHUIRUPDQF

+' +' DQG 'XFKLQ 5HS

'U 'XFKLQ FRQWLQXHV 6FKQHHU GHWHUPLQ

6' 6' DQG 6' GR QRW SURYLGH %ODFN

RSSRUWXQLW\ WR HOHFW WKHLU SUHIHUUHG FDQGLGDW

& 7KH 539 ([SHUW 5HSRUW 'RHV 1RW 'LV
%ODFN DQG 6RPHWLPHV %ODFN 9RWHUV +LVSDQLF
6DPH &DQGLGDWHV RI &KRLFH :LWK ([WUH
&RKHVLRQ

'HIHQGDQWV¶ 539 H[SHUW LQ WKLV FDVH 'U

6FKHHU¶V ³HYLGHQWLDU\ EDVLV´ ZLV

SRODUL]HG YRWLQJ UHVSRQVLYH WR HDFK DGHT

+H VWDWHG WKDW KH LV ³ILQH ZLWK UHDF

6FKQHHU¶V DQDO\VLV

'U $OIRUG GRHV QRW GLVSXWH DQ\ RI 'U 6FKQ

OHYHOV RI YRWLQJ FRKHVLRQ WKDW +LVSDQLF

LQ WKLV FDVH LV 'U 6FKQHHU GLG QRW UXOH RXW

WKDW FRKHVLRQ

'U $OIRUG WHVWLILHG WKDW LQ *HRUJLD ³

FRKHVLRQ IDVKLRQ IRU GHPRFUDWLF FDQGLGDWHV

' 7KH /HJLVODWXUH 5HFRJQL]HG WKH ([LVWH
'XULQJ WKH 5HGLVWULFWLQJ 3URFHVV

&KDLU .HQQHG\ UHFRJQL]HG WKDW WKDW ³S

&RPPLWWHH XQGHUWRRN ³UHFRJQL]HG´ .HQQHG\ SULQ

'HS

**IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF GEORGIA ATLANTA DIVISION**

| | | |
|---|---|---|
| GEORGIA STATE CONFERENCE OF THE NAACP; GEORGIA COALITION FOR THE PEOPLE'S AGENDA, INC.; GALEO LATINO COMMUNITY DEVELOPMENT FUND, INC.,<br><br>*Plaintiffs*,<br><br>v.<br><br>STATE OF GEORGIA; BRIAN KEMP, in his official capacity as the Governor of the State of Georgia; BRAD RAFFENSPERGER, in his official capacity as the Secretary of State of Georgia,<br><br>*Defendants.* | ) | Civil Case No. 21-c5338-ELB-SCJ-SDG |

# STATEMENT OF MATERIAL FACTS WHICH PRESENT A DISPUTE OF FACTS IN OPPOSITION TO DEFENDANTS' MOTION FOR SUMMARY JUDGMENT

Plaintiffs respectfully submit this statement of material facts that present a dispute of facts in opposition to Defendants' motion for summary judgment.

## I. Standing

### A. Associational Standing

1. The NAACP was founded on February 12, 1909, and is the oldest, largest and most widely recognized grassroots-based civil rights organization. *See* Declaration of Jacob Canter ("Canter Decl.") ¶ 2 (Gerald Griggs ("Griggs Decl.") at ¶ 3).

2. The Georgia State Conference of the NAACP ("GA NAACP"), a unit of the National NAACP, is the oldest and one of the largest, most significant organizations promoting and protecting the civil rights of African Americans and other racial and ethnic minorities in Georgia. *Id.* at ¶ 4.

3. The GA NAACP is a non-partisan, interracial, nonprofit membership organization with a mission to "eliminate racial discrimination through democratic processes and ensure the equal political, educational, social, and economic rights of all persons, in particular African Americans." Protecting and promoting the voting

rights of Black voters, other voters of color, and underserved communities is essential to this mission. *Id.* at ¶ 5.

4. The GA NAACP is dedicated to protecting voting rights through legislative advocacy, communication, and outreach, including work to promote voter registration, voter education, GOTV efforts, and election protection. The GA NAACP advocates for census participation and fair redistricting maps. *Id.* at ¶ 6.

5. The, the GA NAACP has approximately 10,000 members across approximately 180 local units, residing in at least 120 counties in Georgia. *Id.* at ¶¶ 7-9; *see also* Griggs Dep. 34: 4-6.

6. The GA NAACP has numerous—often hundreds—of members in each district challenged as a racial gerrymander. Griggs Decl. at ¶¶ 10-11.

7. In each voting rights cluster analyzed by Plaintiffs' mapping expert, Dr. Moon Duchin, the GA NAACP has numerous—often hundreds—of members who reside in majority-white districts in the enacted cluster, but in majority-minority illustrative districts in the same cluster in one of Dr. Duchin's illustrative maps. *Id.* at 12. *See also* Canter Decl. ¶ 3 (Expert Report of Moon Duchin ("Duchin Rep.") at 25-39).

8. GALEO Latino Community Development Fund, Inc. ("GALEO") was founded in 2004 and works to "increase civic engagement and leadership

development of the Latinx community across Georgia." *See* Canter Decl. ¶ 4 (Declaration of Gerardo Gonzalez ("Gonzalez Decl.") at ¶ 3); *see also* Declaration of Crinesha Berry ("Berry Decl.") at ¶ 14 (Ex. 8).

9. Protecting and promoting the voting rights of Georgia's Latinx U.S. citizens is essential to this mission. The organization devotes significant time and resources to conducting voter registration drives, voter outreach, assistance with voter ID and "Get Out The Vote" efforts to increase turnout of Latinx voters, and advocacy for census participation and fair redistricting maps. *See* Gonzalez Decl. at ¶ 4; Berry Decl. at ¶ 14 (Ex. 8).

10. GALEO has over 230 members in Georgia, in over 35 counties and 70 cities. *See* Gonzalez Decl. at ¶ 5-7.

11. GALEO has at least one member in certain districts challenged as a racial gerrymander, including enacted Congressional Districts 2, 3, 4, 6, 8, 10, 13, 14; enacted Senate Districts 2, 4, 14, 48; and enacted House Districts 44, 48, 52, 104. *Id.* at ¶ 8.

12. The Georgia Coalition for the People's Agenda ("GCPA"), is a Georgia not-for-profit corporation with its principal place of business located in Atlanta, Georgia. *See* Canter Decl. ¶ 5 (Declaration of Helen Butler ("Butler Decl.") at ¶ 3).

13. The GCPA encourages voter registration and participation, particularly among Black and other underrepresented communities. The GCPA's support of voting rights is central to its mission. The organization has committed and continues to commit, time, and resources to conducting voter registration drives, voter education, voter ID assistance, election protection, census participation, fair redistricting maps, other get out the vote ("GOTV") efforts in Georgia, such as "Souls to the Polls," "Pews to the Polls" and other initiatives designed to encourage voter turnout, and impact litigation involving voting rights issues. *Id.* at ¶ 4; Berry Decl. at ¶ 14 (Ex. 7).

14. The GCPA is a coalition of more than 30 organizations, which collectively have more than 5,000 individual members across the state of Georgia in various cities and counties. *See* Butler Decl. at ¶ 5.

15. The GCPA has at least one member in certain districts challenged as racial gerrymanders, including: Congressional Districts 2, 3, 4, 8, 13 and Senate Districts 2 and 26. *Id.* at ¶ 8.

16. The GCPA has at least one member who resides in majority-white Congressional district 3 in the enacted plan but would reside in majority-minority CD 3 in one of Plaintiffs' mapping expert's illustrative plans. *Id*. at ¶ 9.

**B. Organizational Standing**

17. On November 14, 2022, counsel for Plaintiffs informed counsel for Defendants via email that "Plaintiffs agree to waive any argument that they can support organizational standing by showing financial diversion, on the condition that the State withdraws Interrogatory No. 3 and RFPs 10-12 and agrees not to seek similar evidence, i.e. via deposition questions on financial diversion." *See* Berry Decl. at ¶ 10 (Exhibit 6).

18. Counsel for Plaintiffs further noted that "Plaintiffs still intend to support organizational standing by showing diversion of non-financial resources, such as activities specifically for the redistricting plans that divert time, personnel, and other non-financial resources from Plaintiffs' usual activities." *See id*. (Exhibit 6).

19. On November 9, 2022, counsel for Defendants agreed to this. *See id*.

20. Each Plaintiff organization had to divert resources from core projects and activities as a result of the enactment of the redistricting plans. *See* Canter Decl. ¶ 6 (Deposition of Helen Butler ("Butler Dep.") 23:22-36:14; 50:04-54:09 (describing resources diverted from the GCPA's core activities and projects)); *see also* Canter Decl. ¶ 7 (Deposition of Cynthia Battles ("Battles Dep.") 16:08-24:11 (same)); Canter Decl. ¶ 8 (Deposition of Gerald Griggs ("Griggs Dep.") 26:03-33:14; 47:24-48:24 (describing resources diverted from the NAACP's core activities

and projects)); Canter Decl. ¶ 9 (Deposition of Gerardo Gonzalez ("Gonzalez Dep.") 41:05-59:24 (describing resources diverted from GALEO's core activities and projects)).

21. President Gerald Griggs of the GA NAACP testified during his deposition that "[t]o the best of [his] knowledge, prior to [his] time as the president and up till now, [GA NAACP has] had to shift [its] organizational philosophy and resources to [make] sure that the impact of the new maps [did] not substantially reduce the voting power of black people in communities of color throughout the State." Griggs Dep. 26: 8-13.

22. He also testified that the GA NAACP had to "shift [its] resources from [its] main pillars to focus directly on combating the significant impact of [redistricting]." *See* Griggs Dep. 26: 22-24.

23. He further testified that the GA NAACP "… had to shift resources from [its] focus, which was racial discrimination, civil rights violations, to focusing on making sure there was no dilution through the [redistricting] plan and implementation." *See* Griggs Dep. 28: 17-21.

24. With respect to voter education programs, President Griggs testified that GA NAACP had to "… shift [its] messaging strategy and our overall strategy to get people to understand that[…] many of the congressional districts that they now

live in will be drastically changed, so polling precincts will be changed, their representatives will be changed, and that they need to understand what the impact that would have on them. Voter registration drives, if you were registered to vote, especially with the voting purges, you would have to make sure your registration is still up to date and good, and that you have to make sure that you are still in whatever district you were in or you may have be moved to another district. So [GA NAACP] had to educate people, and […] had to make sure people were aware, and […] had to make sure people understood that they still had the opportunity, through the Town Halls and through the hearings, to be present to give voice to what was about to happen, but also be prepared for the outcome of what would happen. None of that [GA NAACP] would be doing but for the issue of re-districting…" *See* Griggs Dep. 29:23-30:20; *see also* 30:20-31:1 (describing activities GA NAACP would have done instead of focusing on redistricting).

25. President Griggs testified that a "substantial" number of volunteers were diverted from GA NAACP's normal efforts to combating effects of redistricting. *See* Griggs Dep. 31:9-17.

26. President Griggs further testified that GA NAACP had employees that "primarily focused on getting the message out and planning the programming around pushing back on [redistricting,] [s]o […] they were working on that more than they

were working on anything else that [was] a part of the pillars of [the GA NAACP] strategy to make sure we advance the lives of colored people in the State." *See* Griggs Dep. 32: 8-14.

27. Finally, President Griggs testified that without having to engage with redistricting the GA NAACP "… would have dedicated more resources to the actual voter mobilization and get out to vote earlier than [it] did, because [it was] focused on [redistricting] while in the middle of the municipal races. So [the GA NAACP] had to shift significant resources away from GOTV for municipal races to deal with special session as well as voter education of what was happening during that period in 2021." *See* Griggs Dep. 34: 13-21.

28. Gerardo Gonzalez, Chief Executive Officer (CEO) of the GALEO, testified during his deposition that after the enactment of the maps GALEO engaged in the effort to "educate and inform [its] community about the Georgia legislative efforts to diminish the voting strength of minority communities across the state of Georgia by unfairly cracking and packing [its] communities to dilute the growth of communities power in the legislative process through the redistricting process." Gonzales Dep. 43: 18-25; *see also* 44: 19-23 (testifying that GALEO had to educate its members "…about the impact that [the redistricting had] on [its] community with the cracking and packing and why [GALEO] believed that happened." He also

testified that GALEO had to "inform and educate [its] community about the new districts in which they were going to be voting").

29. He further testified that in response to the enactment of the maps GALEO's messaging had to change "adding another topic to what [they] were talking to voters about [was] a diversion of resources that [they were] doing associated with the work that [they were] doing" because "had the districts not changed, that's not something [GALEO] would have talked about because [its members] would be able to exercise their right to vote without having to understand that there was a new district that they were voting in." Gonzales Dep. 48:3-12.

30. He also testified that following the enactment of the maps, among other hostile legislative actions, GALEO "increase[d] [its] outreach efforts" which was a change or expansion in the number of volunteers GALEO utilizes in outreach efforts. Specifically noting that GALEO "had to increase [its] number of volunteers in [its] targeted outreach to [its] community to ensure that [it was] adequately educating and informing [its] community about the changes in districts, as well as changes in law." Gonzales Dep. 56:1-12; 56:17-21.

31. Finally, he testified that since the 2020 census, GALEO staff has increased from four people to fifteen, and that as a result of efforts by the Georgia legislature to dilute the ability of the minority community to exercise its right to vote

GALEO had to "increase … staff resource allocation to ensure [it] can continue to engage and educate [its] community about exercising the right to vote, given the changes in the law…" including, but not limited to, the redistricting process. Gonzales Dep. 58: 13-24.

32. Helen Butler, Executive Director of GCPA, testified during her deposition that GCPA"…[has] a very limited staff…[and] had to assign and prioritize the activities of [its] staff and volunteers that work with [them] to be able to accomplish a lot of things that were impacted by the redistricting[, which…] took [GCPA's] time and energies away from doing … other activities [like…] trying to get our citizen review boards adopted throughout the state." Butler Dep. 24:15-22.

33. She further testified that GCPA had to "try to prioritize [its] efforts that [it] normally [did] in a normal election cycle with voter registration, education, mobilization, and election protection [while …] trying to accomplish educating the public about the redistricting process, how it was happening, how it would impact the communities [such that GCPA] had to really reorganize and reprioritize [its] limited staff and volunteers that could do the work." Butler Dep. 24:24-25; 25:1-7.

34. While not able to list a specific percentage, Ms. Butler testified that "a large portion of [GCPA] activities had to be diverted to holding different town hall hearings" and that at least one employee had to "spend most of her time at hearings,

trying to get people educated about the process, how they could have an impact, trying to help people know -- get tools to really draw their own maps to be engaged in the redistricting process because [it was] critical." Butler Dep. 25:13-21; *see also* Battles Dep. 16:08-17:22 (describing changes in responsibilities in light of redistricting).

35. She also testified that a "…large portion of that, our time and resources, were diverted to ... [d]oing the meetings, developing materials, all of those things that we [GCPA] had to do, that could have been spent on the other issues that [GCPA does], like criminal justice, like education equity, like improving our economic equity in the [] the state [such that GCPA ] could not do those effectively [because GCPA] had to devote more time to the redistricting process." Butler Dep. 26:6-13.

36. She added that while GCPA sometimes host townhalls, since redistricting "[GCPA has] been doing, more frequently, town halls with regards to redistricting to make sure [GCPA] reach[es] the people so that they know who is representing them and how it impacts their communities." Butler Dep. 35:13-17.

37. She further explained that while GCPA generally engages in phone banking and texting "… the messaging has [had] to be diverted to other things, not issues like education equity, not like criminal justice… [g]etting those citizen review boards that [GCPA has] been trying to do or economic justice equity issues, [instead

GCPA was] spending more time doing [phone banking and texting with] regards to polling changes and […] how redistricting has impacted the communities." Butler Dep. 35:23-36:7.

38. Ms. Butler testified that programs that the GCPA would not be able to commit to due to its work combating the effects of the redistricting maps included "education initiatives, working with parents with regards to schools and involvement in schools getting community schools[,]" "economic empowerment [initiatives]" and "getting Medicaid expansion for health care." Butler Dep. 52:13-53:17.

## II. The Sequence of Events Leading to the Passage of the Redistricting Plans and Procedural and Substantives Departures.

### A. Historical Background

39. There is a long history of discrimination in Georgia affecting voting. *See* Canter Decl. ¶ 10 (Expert Report of Dr. Peyton McCrary ("McCrary Rep.") ¶ 11).

40. Since 1945, numerous redistricting plans in Georgia have been struck down as racially discriminatory. *See* McCrary Rep. ¶¶ 11, 17-18, 21-26. Canter Decl. ¶ 11 (Expert Report of Dr. Joseph Bagley ("Bagley Rep.") at 13-31, 33-34).

41. Between 1965 and 2013, the Department of Justice blocked 177 proposed changes to election law by Georgia and its counties and municipalities

Under Section 5 of the Voting Rights Act. McCrary Rep. ¶ 31. Of these Section 5 objections, 48 blocked redistricting plans. *Id*.

42. In 2018, a three-judge panel sitting in the Northern District of Georgia concluded that plaintiffs in a racial gerrymandering action had introduced "compelling evidence" that "race predominated the redistricting process," through testimonial and documentary evidence related to the conduct of Dir. Wright and others that work at the LCRO. Bagley Rep. 39-40; *see also Georgia State Conf. of NAACP v. Georgia*, 312 F. Supp. 3d 1357, 1364-65 (N.D. Ga. 2018).

**B. The "Town Halls"**

43. Dr. Joseph Bagley is an Assistant Professor of History at Georgia State University, Perimeter College. Bagley Rep. at 3.

44. Dr. Bagley's specific areas of study are United States constitutional and legal history, politics, and race relations, with a focus on the Deep South. *Id*.

45. Dr. Bagley analyzed, among other things, the sequence of events and legislative history leading to the passage of the redistricting plans. *Id*. at 6.

46. During the summer of 2021, the Senate Committee on Reapportionment and Redistricting and the House Committee on Reapportionment and Redistricting formed a joint Reapportionment Committee for the purpose of holding a series of redistricting "Town Halls." *Id*. at 43-56.

47. Dr. Bagley reviewed the public testimony given at each of the town halls. *Id*. at 41-56.

48. Dr. Bagley opined that throughout the town hall process: "The public was widely critical of holding these meetings before the release of the Census data and the publication of maps. They called for ample time for analysis and feedback and map-submission after the fact." *Id*. at 41.

49. Dr. Bagley opined that throughout the town hall process: "The public was relentless in its call for a more transparent process, in general." *Id*.

50. Dr. Bagley opined that throughout the town hall process: "The public and members of the committee wanted more of a dialogue than a one-way-street of taking community comment at hearings." *Id*. at 42.

51. Dr. Bagley opined that throughout the town hall process: "Hearings were not held, according to members of the public and the committees, in the most populous areas of the state where they should have been." *Id*.

52. Dr. Bagley opined that, throughout the process, members of the public testified that "[m]aps ought to reflect the growth of Georgia's minority po[p]u[la]tion." *Id*.

53. Dr. Bagley opined that members of the public asked the Committee not to "engage in packing and cracking [of minority populations] . . . ." *Id*.

54. Dr. Bagley opined that the Committee's refusal to change the town hall process in the face of these public complaints constitutes evidence of procedural and substantive departures. *See Id*. *See also* Bagley Dep. 118:04-118:11.

**C. Legislative History**

55. On September 23, 2021, Governor Brian Kemp ordered a special session of the General Assembly to commence on November 3, 2021. Bagley Rep. at 57.

56. Five days later, the Legislative Congressional and Reapportionment Office ("LCRO") publicly posted the first draft congressional map—sponsored by Senator Kennedy and Lieutenant Governor Duncan. *Id*.

57. On November 2nd, 2021, just one day before the start of the special session, the LCRO published draft House and Senate plans sponsored by Chair Rich and Chair Kennedy, respectively. *Id*. at 58.

58. Between September 23 and November 3, 2021, the legislature did not hold any town halls to solicit public feedback. *See generally,* Bagley Rep. at 43-58.

59. The Senate Legislative and Congressional Reapportionment Committee held a hearing and solicited public comment just two days after the draft senate plan was released to the public. *Id*. at 58-62.

60. The House Legislative and Congressional Reapportionment Committee held a hearing and solicited public comment on the same day it released a revised house map to the public. *Id*. 66-68.

61. The Senate Legislative and Congressional Reapportionment Committee held a hearing and solicited public comment on a congressional map that had been released to the public just hours before the meeting. *Id*. at 73.

62. SB 2EX—the congressional map—was sent to the Governor for his signature on November 30, 2021, just three weeks after the start of the special session. *See* Canter Decl. ¶ 12 https://www.legis.ga.gov/legislation/60894, related to the Congressional map, was passed by the Senate on November 9, 2021.

63. SB 1EX—the senate map—was sent to the Governor's Office on November 30, 2021, just three weeks after the start of the special session. *See* Canter Decl. ¶ 13 https://www.legis.ga.gov/legislation/60894/.

64. HB 1EX—the state house map—was sent to the Governor for his signature on November 29, 2021, just three weeks after the start of the special session. *See* Canter Decl. ¶ 14 https://www.legis.ga.gov/legislation/60897.

65. The Governor delayed signing the redistricting plans for almost a month, until December 30, 2021. *See* Canter Decl. ¶ 15 (Def. Suppl. Resp. to Plaintiffs Second Set of Interrogatories at 4-5).

66. Based on his analysis of the legislative history, *id.* at 58-88, Dr. Bagley opined that "The public made consistent demands for more transparency, but the process was still carried out behind closed doors with staff and counsel," which were ignored. Bagley Rep. at 56. He also opined that Chair Rich's statement that the VRA was "unfair" is contemporaneous evidence relevant to intentional discrimination. *Id*. at 57.

67. The legislature used the 2001 redistricting process as an excuse for ignoring the public's calls for transparency, which Dr. Bagley opined "is both a procedural and substantive departure – substantively, there is nothing in the committee guidelines that instructs committees or the General Assembly as a whole to fashion its behavior and actions, procedurally, based on previous cycles." *Id*.

68. Dr. Bagley opined that his analysis revealed the public was concerned with the packing and cracking of populations of color. *Id*.

69. Dr. Bagley opined that the public was "concern[ed] that women of color, specifically… congresswoman Lucy McBath, were being targeted." *Id*.

70. Dr. Bagley opined that members of the public were concerned that "Voters of color were being manipulated again for partisan advantage in places like Henry, Cobb, and Gwinnett counties." *Id*. at 56.

71. Based on his analysis, Dr. Bagley opined that "Staff in the LCRO and leadership on the respective committees were not as responsive to legislators of color as they were to the majority, which was all-white save for a handful of Latino and East Asian members, and none were Black." *Id*. at 57.

**D. Demographic Trends in Georgia**

72. Between 2010 and 2020 Georgia's population grew, driven almost entirely by an increase in the population of people of color. Duchin Rep. at 8

73. The share of Black and Hispanic residents in Georgia expanded from 39.75% to 42.75%; the white population decreased from 5,413,920 to 5, 362,156 between the 2010 and 2020 census data releases; and the Georgia population is 31.73% Black. *Id.*

74. Despite the population growth of persons of color in Georgia, the newly enacted Congressional plan reduces the number of performing districts for Black and Latino-preferred candidates from 6/14 to 5/14, and the Senate plan has the same number of performing districts for Black and Latino-preferred candidates. Duchin Rep. at 10, 19.

**E. The Map Drawing Process**

75. Gina Wright, the director of the Legislative and Congressional Reapportionment Office ("LCRO"), was primarily responsible for the technical

aspects of drawing the legislative maps. Canter Decl. ¶ 16 (Deposition of Gina Wright ("Wright Dep.") 8:24-9:02).

76. Rob Strangia is the Geographic Information Systems ("GIS") specialist at the LCRO, who participated in the mapdrawing process. Canter Decl. ¶ 17 (Deposition of Robert Strangia ("Strangia Dep." 19:14-20:24).

77. Mr. Strangia created a formula to estimate political data at the block level, but this data is not accurate at the block level. However, the legislature had access to racial data at the block level that is accurate. *Id.* at 97:17-103:23.

78. Director Wright testified that she did not use email to communicate about redistricting maps because she did not want to "create… a record." Wright Dep. 19:16-20:03.

79. Dir. Wright kept drafts for all three of her maps private in her office until the drafting process was completed, and when Director Wright drew draft Congressional districts at the direction of legislators, racial data was projected onto the computer screens where the map lines were being drawn. Wright Dep. 39:17-40:1 (private in office); Wright Dep. 10:25-11:21; Wright Dep. 14:11-20 (Rep. Rich); Wright Dep. 27:17-32:4; Wright Dep. 115:25-116:16; Wright Dep. 36:14-24, Wright Dep. 63:18-21; Wright Dep. 145:11-22; Wright Dep. 149:25-150:9.

80. When Director Wright drew draft Congressional districts with legislators, she and the legislators could immediately see how line changes impacted the racial balance of districts. Wright Dep. 115:25-118:25 (data changed on screen when making changes to maps); 126:03-127:04 (same).

81. When Director Wright drew draft Senate districts at the direction of legislators, racial data was projected onto the computer screens where the map lines were being drawn. Wright Dep. 37:22-38:20; 40:3-41:19; 42:16-43:1; Wright Dep. 54:3-56:13; Wright Dep. 57:16-21; Wright Dep. 36:14-24, Wright Dep. 63:18-21; Wright Dep. 145:11-22; Wright Dep. 149:25-150:13.

82. When Director Wright drew draft Senate districts with legislators, she and the legislators could immediately see how line changes impacted the racial balance of districts. Wright Dep. 116:23-118:25; 126:03-127:04.

83. When Director Wright drew draft House districts at the direction of legislators, racial data was projected onto the computer screens where the map lines were being drawn. Wright Dep. 64:14-66; Wright Dep. 36:14-24, Wright Dep. 63:18-21; Wright Dep. 145:11-22; Wright Dep. 149:25-150:13.

84. When Director Wright drew draft House districts with legislators, she and the legislators could immediately see how line changes impacted the racial balance of districts. Wright Dep. 116:23-118:25; 126:03-127:04.

85. Dan O'Connor, a data analyst with the LCRO, testified during his deposition that a district in Georgia that was roughly 30% black would tend to elect Democrats and that the figure was consistent from 2014 to the present. Canter Decl. ¶ 18 (Deposition of Daniel O'Connor ("O'Connor Dep.") 30:9-33:18).

86. He also testified that if a legislator wanted to redraw such a district so that it was more likely to elect a Republican instead of a Democrat it would be necessary to lower the amount of BVAP in that district. *Id.* at 40:23-41:11.

87. He further testified that in order to lessen the BVAP in such a district one would need to either move BVAP out of the district and put it in another district or move WVAP into the district to dilute the amount of BVAP in the district. *Id*. at 41:12-24.

## III. Material Facts in Support of Racial Gerrymandering Claims

### A. Dr. Duchin's Methodology

88. Dr. Moon Duchin is a Professor of Mathematics and a Senior Fellow in the Jonathan M. Tisch College of Civic Life at Tufts University, where she is the Director of the MGGG Redistricting Lab, focused on geometric and computational aspects of redistricting. Duchin Rep. at 3.

89. Dr. Duchin has been accepted as an expert in vote dilution cases on the issue of *Gingles* preconditions by a three judge panels in Alabama, and on racial

gerrymandering issues by a three-judge panel in South Carolina. *See* Canter Decl. ¶ 19 (Deposition of Moon Duchin ("Duchin Dep." Ex. 4 at 8).

90. Dr. Duchin analyzed the Congressional, Senate, and House maps to determine whether there is evidence that race predominated over traditional redistricting principles in the drawing of certain districts. Duchin Rep. at 3-4. *See also* Duchin. Dep. 166:02-166:17.

91. To do so, Dr. Duchin primarily used two methods: First, Dr. Duchin examined core retention and population displacement from the benchmark plan to the enacted plan in order to detect evidence of "racially imbalanced transfer[s] of population in rebalancing the districts," and whether those transfers "impact[ed] the districts' effectiveness for electing Black and Latino candidates of choice." Duchin Rep. at 67-71; Duchin. Dep. 166:02-166:08.

92. Dr. Duchin opined that racially imbalanced population transfers in and out of a district are evidence that race predominates over traditional redistricting principles. Duchin Dep. 180:18-180:23.

93. Second, Dr. Duchin looked at political subdivision splits—including precinct splits and county splits—to determine whether those splits provide evidence of "cracking" and "packing" that suggests race predominated over traditional

redistricting principles in the drawing of certain districts. Duchin Rep. § 10.2; Deposition of Moon Duchin ("Duchin Dep.") 166:09-12.

94. Dr. Duchin opined that "[i]t is extremely frequent for precinct splits to show major racial disparity," as well as that "racially distinctive precinct splits provide particularly strong evidence that race has predominated over other principles in the creation of the map." Duchin Rep. at 5, 79.

95. Dr. Duchin also analyzed community testimony to review whether there were community of interest justifications for certain decisions that she determined were evidence of race-conscious decision-making. Duchin Rep. at 79-80; Duchin Dep. 166:13-166:17.

### B. Core Retention and Population Displacement in the Congressional Plan

96. CD 6 "was nearly at ideal size before the redistricting, having 771,431 residents enumerated in the census —less than seven thousand off from the target size." Duchin Rep. at 67.

97. CD 6 was nevertheless "subjected to major reconfiguration, with at least 40,000 people from the benchmark district reassigned to each of districts 4, 5, 7, and 11, while at least 40,000 different people were drawn in from each of districts 7, 9, and 11." *Id.*

98. Larger proportions of Black and Hispanic population and neighborhoods were moved out of CD 6, and population from whiter suburban areas were moved into CD 6. *Id*. at 68.

99. The largest reassignment of population out of CD 6 went to CD 4, approximately 200,000 Georgians. *Id.*

100. The transfer of population from CD 6 to CD 4 was 37.5% Black or Latino. *Id*.

101. The largest transfer of population into CD 6 was from CD 7, approximately 200,000 Georgians. *Id.*

102. The population transferred into CD 6 from CD 7 was 16.1% Black or Latino. *Id.*

103. Under the benchmark plan, CD 6 performed for Black and Latino voters. *Id.*

104. The changes to CD 6 added whiter suburban/exurban/rural areas to the district. *Id*. at 68, Figure 31.

105. Dr. Duchin opined that CD 6 was cracked through "racially distinctive swaps of population" that diluted the voting power of Black and Latino voters. Duchin Dep. 173:1-173:25.

106. Dr. Duchin opined that the racially distinctive population swaps in CD 6 are evidence that race predominated over traditional redistricting principles in the drawing of CD 6. Duchin Dep. 182:15-182:19.

107. Dr. Duchin determined that core retention and population displacement in CD 14 were "distinctive in terms of density and racial composition." *Id.*

108. CD 14 expanded into Cobb County to include two majority-Black cities: Powder Springs and Austell. *Id*. at 68, Figure 31 (included below).

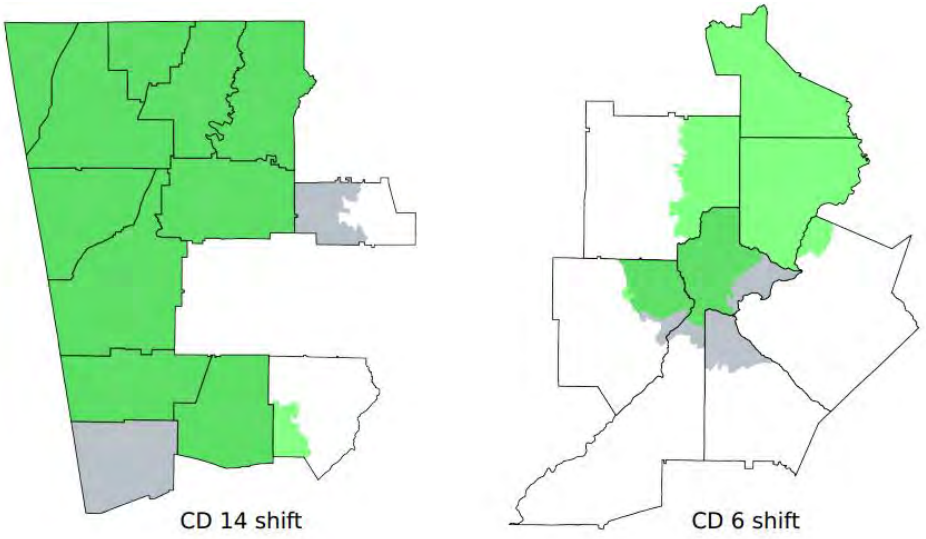



Figure 30: These before-and-after plots show benchmark configurations in gray, while new district placement is in light green. We can see that CD 14 made a new incursion into Cobb County while shedding rural Haralson and part of Pickens County. Meanwhile, CD 6 went sharply the other way, withdrawing from its metro Atlanta coverage and picking up rural counties to the north. Compare to Figure 31.

109. Dr. Duchin opined that "incursion of CD 14 into Cobb is emphatically not required by adherence to traditional redistricting principles." *Id*. at 69.

110. The Duncan-Kennedy map—the first Congressional map released by the Senate Redistricting Committee—did not include Powder Springs and Austell in CD 14. *Id*. *See also* Duchin Dep. 177:14-178:15; Canter Decl. ¶ 20 (Deposition of Senator Kennedy ("Kennedy Dep.") 117:25-118:01).

111. Dr. Duchin determined that "dense African-American neighborhoods" in Powder Springs and Austell were "submerged among more numerous, dissimilar communities [in] CD 14," which could not be justified by compactness concerns. Duchin Rep. at 68; Duchin Dep. 175:11-20.

112. Dr. Duchin reviewed community testimony and determined that community of interest justifications could not account for including Powder Springs and Austell in CD 14. Duchin Rep. at 79-80.

113. Dr. Duchin determined that her core retention and population displacement analysis of CD 14 provided evidence that race predominated over traditional redistricting principles in the drawing of CD 14. Duchin Dep. 182:15-19.

### C. Core Retention and Population Displacement in the Enacted Senate Plan.

114. Dr. Duchin analyzed core retention and population displacement in the enacted Senate Plan. Duchin Rep. at 69-70.

#### i. SD 48

115. Benchmark SD 48 was represented by Michelle Au, who was the candidate of choice of voters of color. *Id.*

116. Roughly two-thirds—over 130,000 people—of benchmark SD 48 was moved into enacted SD 7, of whom 37.8% were Black and Latino. *Id.*

117. The retained population of SD 48 has only a 17.8% BHVAP share. *Id.*

118. No territory moved into SD 48 has a BHVAP share over 23.5%. *Id.*

119. Dr. Duchin opined that the new SD 48 is highly ineffective for Black and Latino voters. *Id.*

120. Dr. Duchin opined that SD 48's racially imbalanced population displacement could not be explained by a desire to improve SD 48's compactness as compared to the benchmark SD 48. *Id*. at 70, Figure 32.

121. Dr. Duchin opined that her core retention and population displacement analysis of SD 48 is evidence that race predominated over traditional redistricting principles in the drawing of SD 48. Duchin Depo. 180:18-182:14; 189:02-189:24.

**1. SD 17**

122. Dr. Duchin analyzed the core retention and population displacement of the enacted SD 17, which had previously been an effective district for Black and Latino voters. Duchin Rep. at 70.

123. SD 17 retained only about half of its residents even though it was only mildly overpopulated. *Id.*

124. Approximately half of the outgoing population from SD 17 was Black and Latino. *Id.*

125. The incoming Black and Latino population to SD 17 was much lower than 50% of the incoming population. *Id.*

126. The new SD 17 is now ineffective for Black and Latino voters. *Id.*

127. Dr. Duchin determined that no district that received population from SD 17 thereby became effective for Black and Latino voters. *Id.*

128. Dr. Duchin opined that a desire to create a more compact SD 17 as compared to the benchmark SD 17 cannot explain the racially imbalanced population flows to and from SD 17. *Id.*, Figure 32. *See also* Wright Dep. 181:21-183:1 (describing Ex. 9); Wright Dep. Ex. 9.

129. Dr. Duchin determined that her core retention and population displacement analysis of SD 48 is evidence that race predominated over traditional redistricting principles in the drawing of SD 48. Duchin Dep. 180:18-182:14; 189:02-189:24.

**2. SD 56**

130. Dr. Duchin analyzed the core retention and population displacement of enacted SD 56, which had recently become competitive for Black and Latino voters. Duchin Rep. at 69.

131. Benchmark SD 56 was almost entirely placed into enacted SD 14. *Id.*

132. However, incumbent Republican John Albers was able to remain in the district. *Id.*

133. Dr. Duchin opined that the population flow from benchmark SD 56 to enacted SD 14 was racially imbalanced. *Id.*

134. Approximately 35.5% of the population moved from benchmark SD 56 to enacted SD 14 was BHVAP. *Id.*

135. Each territory moved into SD 56 contained under 19% BHVAP. *Id.*

136. The new SD 56 is not competitive for Black and Latino voters. *Id.*

137. Dr. Duchin determined that her core retention and population displacement analysis of SD 56 is evidence that race predominated over traditional redistricting principles in the drawing of SD 56. Duchin Dep. 180:18-182:14; 189:02-189:24.

### D. Core Retention and Population Displacement in the Enacted House Plan.

#### 1. HDs 35, 44, 48, 49, 52, 104, and 109

138. Dr. Duchin analyzed core retention and population displacement in the enacted House Plan. Duchin Rep. at 70-71.

139. Dr. Duchin identified seven house districts that had become competitive for Black and Latino voters because of demographic shifts over the last ten-years: HDs 35, 44, 48, 49, 52, 104, and 109. *Id*. at 70.

140. Dr. Duchin determined that five of these districts—HDs 44, 48, 49, 52, and 104—were "rebuilt to be ineffective for Black and Latino voters" because of "racially imbalanced population transfers." *Id*. at 70.

141. Dr. Duchin produced a table that demonstrates the largest district-to-district reassignments for BHVAP for HDs 44, 48, 49, 52, and 104:

| Benchmark HD | Outward | Inward |
|---|---|---|
| 44 | .425 (to HD 35) | .226 (from HD 20) |
| 48 | .464 (to HD 51) | .201 (from HD 49) |
| 49 | .227 (to HD 47) | .127 (from HD 48) |
| 52 | .436 (to HD 54) | .245 (from HD 79) |
| 104 | .715 (to HD 102) | .363 (from HD 103) |

Table 40: This table records the BHVAP share of the largest district-to-district reassignment for the five "dismantled" House districts that were formerly swingy, now made ineffective.

*Id*. at 71, Table 40.

142. Dr. Duchin opined that racially imbalanced population flows from and into HDs 44, 48, 49, 52, and 104 could neither be "explained by traditional districting principles like compactness or respect for county lines" nor by "respect for municipal boundaries." *Id.* at 71, Figure 33.

### E. Political Subdivision Splits in the Congressional Plan.

143. Cobb County is split across four districts, with CD 13 and CD 14 receiving portions of Cobb that are over 60% Black and Latino by VAP, while CD 6 contains a part of Cobb that is about 18.5% BHVAP. *Id*. at 71.

144. Dr. Duchin determined this evidence is consistent with a "packing and cracking strategy." *Id*.

145. CD 2 and CD 8 split Bibb County. *Id*. at 72.

146. Dr. Duchin determined that minutely race conscious decisions were "evident along the boundary of CD 2 and CD 8 in Bibb County," as demonstrated by the figure below:

| County | District | BVAP | BHVAP |
|---|---|---|---|
| Bibb | CD 2 | .6349 | .6710 |
| | CD 8 | .3098 | .3394 |

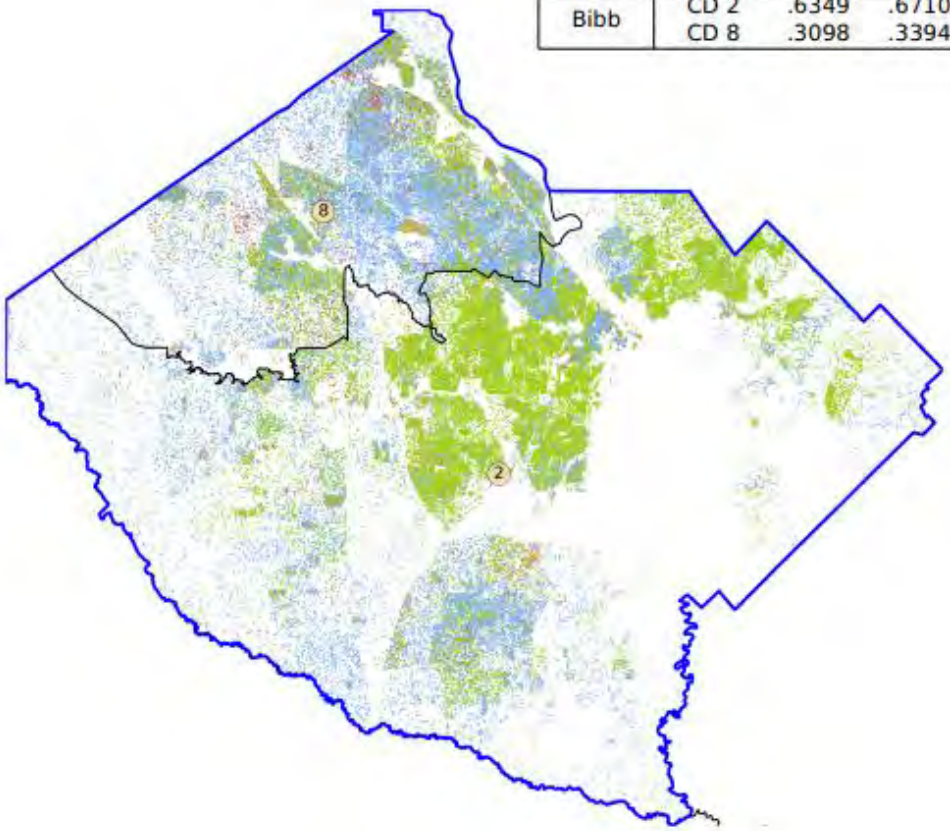



Figure 34: Minutely race-conscious decisions are evident along the boundary of CD 2 and CD 8 in Bibb County.




*Id*. at 72, Figure 34; *see also* Figure 2 at 9 (containing key to dot figure.)

147. Dr. Duchin analyzed all county splits involving CD 3, 6, 13, and 14. *Id*. at 73; Table 41.

148. Dr. Duchin determined that all of the splits—with the exception of the Clayton County split-- are "consistent with an overall pattern of cracking in CD 3

and CD 6, packing in CD 13, and submerging a small and diverse urban community in CD 14," as demonstrated below:

| County | District | BVAP | BHVAP |
|---|---|---|---|
| Cherokee | CD 6 | .0304 | .0814 |
| | CD 11 | .0817 | .1902 |
| Clayton | CD 5 | .7280 | .8649 |
| | CD 13 | .7190 | .8266 |
| Cobb | CD 6 | .1092 | .1848 |
| | CD 11 | .2654 | .3850 |
| | CD 13 | .4458 | .6271 |
| | CD 14 | .4646 | .5644 |
| Douglas | CD 3 | .2970 | .3719 |
| | CD 13 | .5762 | .6647 |
| Fayette | CD 3 | .2094 | .2720 |
| | CD 13 | .5762 | .6647 |
| Fulton | CD 5 | .4769 | .5379 |
| | CD 6 | .1574 | .2568 |
| | CD 7 | .1175 | .1777 |
| | CD 13 | .8829 | .9171 |
| Gwinnett | CD 6 | .1336 | .2645 |
| | CD 7 | .3234 | .5450 |
| | CD 9 | .2061 | .3433 |
| Henry | CD 3 | .4678 | .5259 |
| | CD 10 | .4414 | .4948 |
| | CD 13 | .5710 | .6324 |
| Muscogee | CD 2 | .5262 | .5851 |
| | CD 3 | .1909 | .2578 |

Table 41: All county splits involving CD 3, 6, 13, and 14. With the exception of the Clayton split, which is unremarkable in demographic terms, each of these is consistent with an overall pattern of cracking in CD 3 and CD 6, packing in CD 13, and submerging a small and diverse urban community in CD 14. See Appendix C for a complete list of county splits.

*Id*.

149. Dr. Duchin analyzed the Newton County split involving CD 4 and CD 10. *Id*. at 74.

150. Dr. Duchin determined that in "Newton County, CD 4 and CD 10 are divided by a line that is consistent with packing the former district and cracking the latter," as demonstrated by the figure below:

| County | District | BVAP | BHVAP |
|---|---|---|---|
| Newton | CD 4 | .6098 | .6644 |
| | CD 10 | .2631 | .2960 |

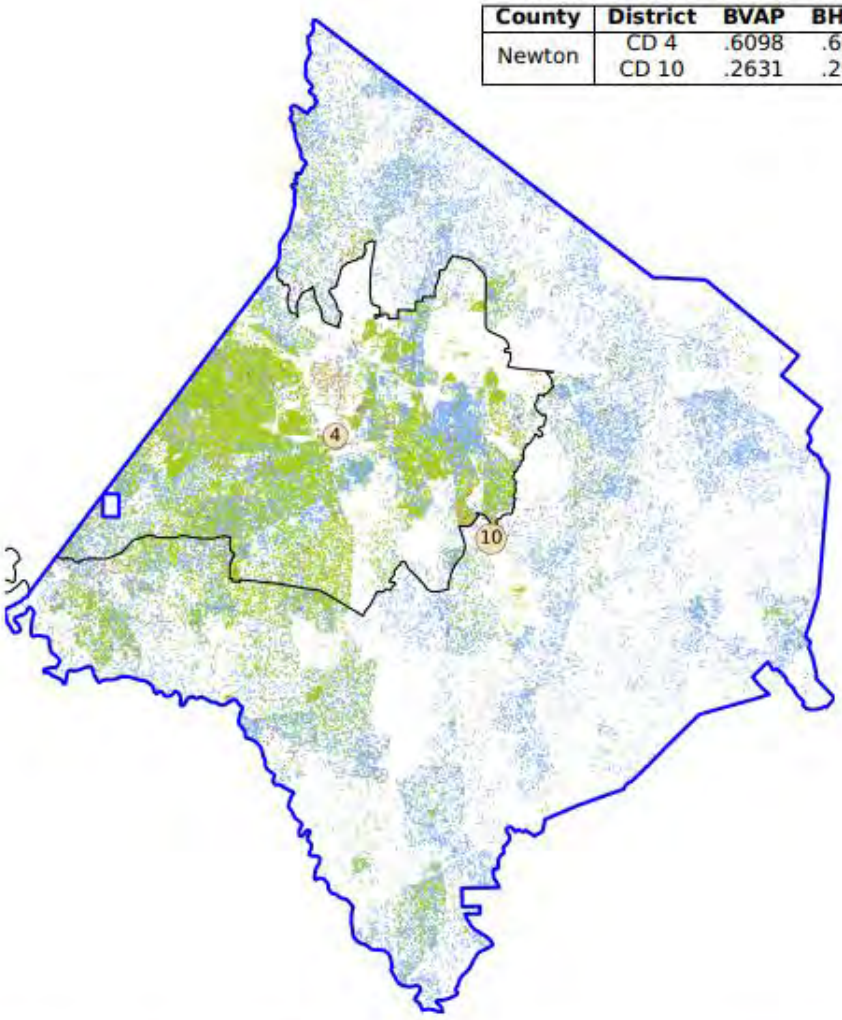



Figure 35: In Newton County, CD 4 and CD 10 are divided by a line that is consistent with packing the former district and cracking the latter.

*Id*. at 74, Figure 35.

151. Dr. Duchin also analyzed precinct splits in the Congressional map. *Id*. at 75.

152. Dr. Duchin opined that "for the purposes of investigating racial gerrymandering, the splits to state precincts can be especially revealing: these are the units at which cast votes are reported, so finer divisions are usually made in view of demographics but not voting behavior—that is, these highlight the predominance of race over even partisan concerns." *Id*; *see also* Duchin Dep. 186: 17-23.

153. Dr. Duchin opined that specific precinct splits on the border of CD 6 and CD 11 "show significant racial disparity consistent with an effort to diminish the electoral effectiveness of CD 6," as demonstrated by the table below:

| State precinct | District | BVAP | BHVAP |
|---|---|---|---|
| MARIETTA 5A | CD 6 | .1975 | .4938 |
| | CD 11 | .4232 | .5803 |
| MARIETTA 6A | CD 6 | .1391 | .6607 |
| | CD 11 | .4738 | .5464 |
| SEWELL MILL 03 | CD 6 | .2225 | .3042 |
| | CD 11 | .4064 | .5548 |

Table 42: Three examples of split precincts on the CD 6 / CD 11 border that show significant racial disparity, consistent with an effort to diminish the electoral effectiveness of CD 6 for Black voters. (Note that CD 6 receives a higher share of BHVAP in Marietta 6A, but a far lower share of BVAP.)

Duchin Rep. at 75, Table 42.

154. Dr. Duchin opined that several precinct splits on the CD 4 and CD 10 border "stand out both in demographic and geographic terms," which provide evidence of the "packing of CD 4 and cracking of CD 10," as demonstrated by the table below:

| State precinct | District | BVAP | BHVAP |
|---|---|---|---|
| ALCOVY | CD 4 | .4010 | .4499 |
| | CD 10 | .0512 | .0620 |
| CITY POND | CD 4 | .5912 | .6554 |
| | CD 10 | .3923 | .4192 |
| OXFORD | CD 4 | .6444 | .6932 |
| | CD 10 | .0929 | .1213 |
| DOWNS | CD 4 | .6429 | .7024 |
| | CD 10 | .4429 | .4930 |

Table 43: Four examples of split precincts on the CD 4 / CD 10 border, all consistent with packing of CD 4 and cracking of CD 10.

*Id*. at 75, Table 43.

**F. Political Subdivision Splits in the Senate Plan.**

155. In the enacted Senate Plan, fourteen counties have at least a 20-point BHVAP disparity in BHVAP across county splits. *Id*. at 77.

156. Dr. Duchin analyzed the split of Bibb County involving SD 18, SD 25, and SD 26. *Id*., Figure 37.

157. Dr. Duchin determined that the racial disparities in the split of Bibb County involving SD 18, SD 25, and SD 26 are evidence that SD 26 was packed, as demonstrated by the table below:

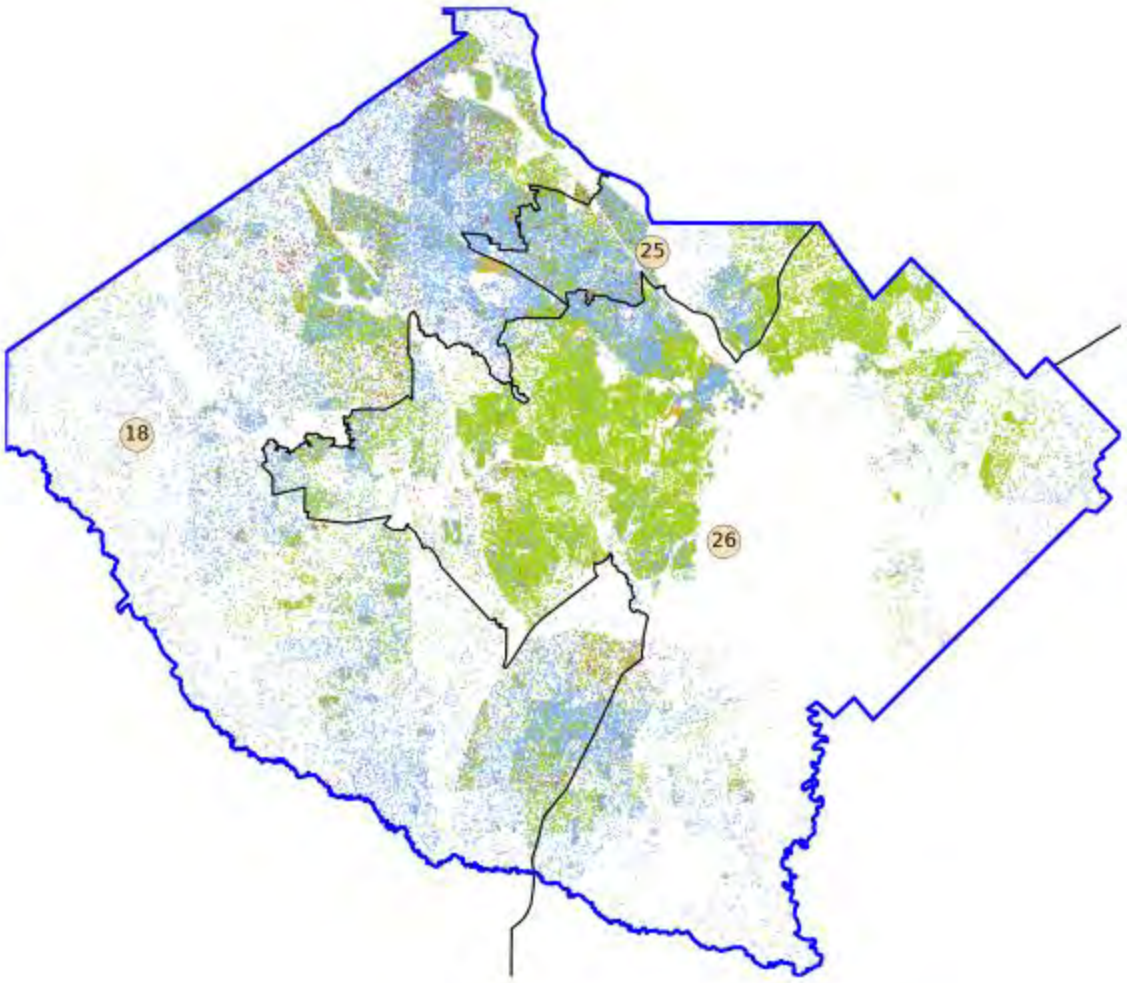



Figure 37: This figure shows the separation of Bibb County in a way that packs SD 26.

*Id*.

158. Dr. Duchin analyzed the split of Chatham County involving SDs 1, 2, and 4. *Id.* at 78, Figure 38

159. SD 2 is an effective district for Black and Latino Voters, and SDs 1 and 4 are not. *Id.*

160. Dr. Duchin determined that the "pieces of Chatham County look to be clearly racially sorted into Senate districts in a way that ensures that Black and Latino voters can only have effective influence in one of the constituent district," as demonstrated below:

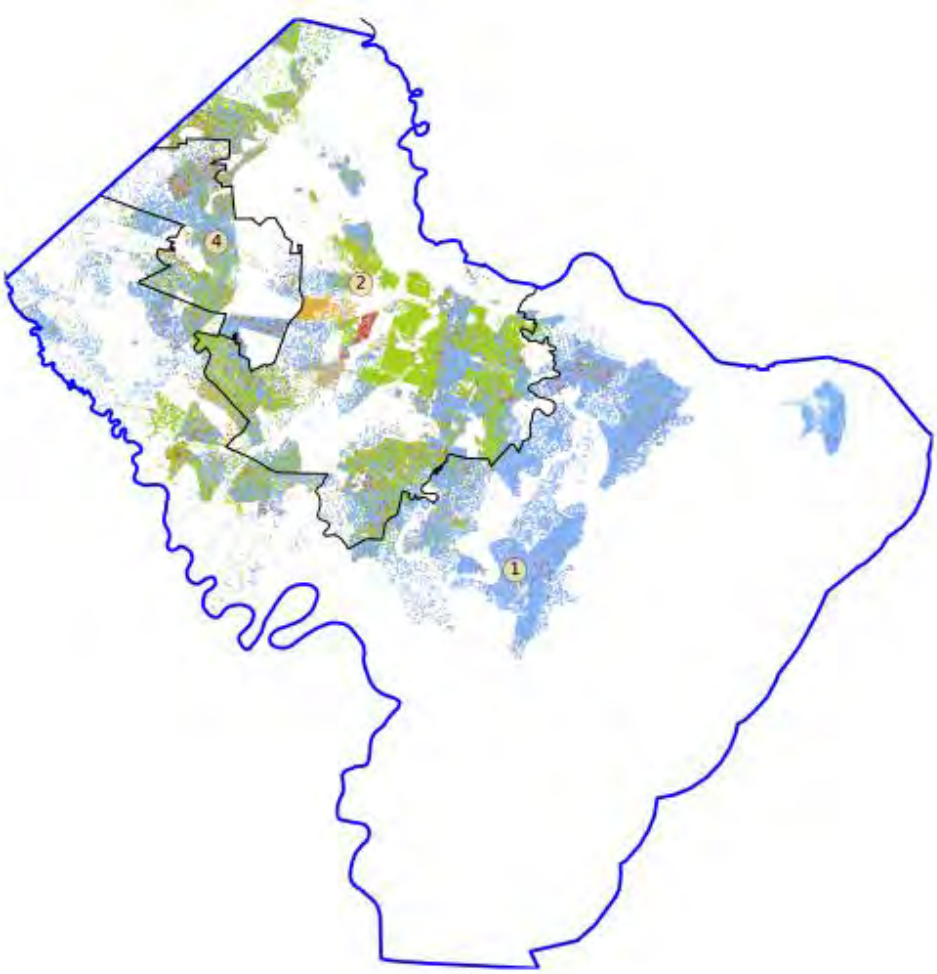



Figure 38: The pieces of Chatham County look to be clearly racially sorted into Senate districts in a way that ensures that Black and Latino voters can only have effective influence in one of the constituent districts. Indeed, SD 2 is an effective district, while SD 1 and SD 4 are not.

*Id*.

### G. Dr. Duchin Concluded Race Was Used to Achieve Partisan Outcomes in the State's Enacted Plans.

161. Dr. Duchin examined, among other things, the claims from certain Defendant witnesses that partisan politics, and not race, motivated the legislature in drawing certain congressional, senate, and house districts. Canter Decl. ¶ 21 (Duchin Rebuttal & Supplemental Report ("Duchin Rebuttal Rep.") at 6-10).

162. Dr. Duchin ran algorithmic experiments to test the hypothesis that the legislature drew the congressional, senate, and house maps based not upon race but upon pursuing partisan advantage. *Id.* at 7-9.

163. To examine the effects of partisanship, Dr. Duchin "generated 100,000 statewide plans at each level of redistricting with an exploratory algorithm seeking larger numbers of Trump-favoring districts from the 2020 Presidential election." *Id.* at 7.

164. These alternative partisan-advantage plans were drawn respectful of traditional districting principles, including compactness, population balance and county preservation, but did not include race data. *Id.*

165. Because Dr. Duchin did not input race data into her algorithm, she was able to explore "whether plans selected for partisanship—but with no race data—tend to have the same hallmarks of racial sorting that [she] found in the enacted plans." *Id.*

166. Dr. Duchin then plotted the Black Voting Age Population in each of the districts in the enacted plans against the sets of partisan advantage districts created by her algorithms. *Id.* at 8.

167. Dr. Duchin opined that "if a plan were drawn by using minority racial population to secure partisan advantage in a state with roughly 50-50 partisan support," we would expect to see "cracking" of the minority group in those districts in the middle range of partisan advantage. *Id.*

168. Dr. Duchin's experiment did show that, in the middle range of partisan advantage districts in congressional, state Senate, and state House, the enacted plan's Black VAP showed clear signs or "cracking," i.e., "reduced Black population relative to the comparison plans. *Id*.

169. Dr. Duchin opined that her algorithmic experiment suggests that the legislature did not pursue a "race neutral advantage [in the congressional map], but rather a highly race-conscious pursuit of partisan advantage." *Id*. at 8, Figure 5.

170. Dr. Duchin reached the same conclusion as to the Senate and House maps, finding that "The same signature of cracking is visible here as in the Congressional boxplot." *Id.* at 9.

171. Dr. Duchin then drew random congressional, Senate, and House plans from the middle-range districts of her Trump-favoring collections and compared the BVAP in those districts to the middle-range districts of the enacted plan. *Id.* at 10.

172. Dr. Duchin concluded that the enacted plan had lower BVAP than all of the randomly selected congressional plans and virtually all of the randomly selected Senate and House plans. *Id.*

173. Dr. Duchin concluded that, based on her experiments, there were many thousands of examples with even greater partisan tilt than in the enacted plan that could have been drawn, but which did "not show the marked signs of racial sorting that are found in the enacted plan." *Id.*

174. Dr. Duchin calculated that the probability of the enacted plan being as low in BVAP compared to the randomly-selected congressional plans was less than .00007. *Id.*

175. Dr. Duchin calculated that the probability of the enacted plan being as low in BVAP compared to the randomly-selected Senate plans was less than .00000004. *Id.*

176. Dr. Duchin calculated that the probability of the enacted plan being as low in BVAP compared to the randomly-selected House plans was less than .00000000006. *Id.*

177. Dr. Duchin also found indications corroborating the hypothesis that race was used to achieve partisan outcomes in the state's enacted plans in the high numbers of split precincts, because vote history is not available at a sub-precinct level. *Id.*

## IV. The First *Gingles* Precondition

### A. Dr. Duchin's Methodology

178. Dr. Duchin examined whether Plaintiffs could meet the first *Gingles* precondition. Duchin Dep. 28:07-30:02; Duchin Rep. at 3-4. To do so, Dr. Duchin analyzed whether it was possible to draw additional majority minority districts in Georgia's congressional, senate, and house maps while respecting traditional redistricting principles. Duchin Rep. at 3-4.

179. In drawing her maps, Dr. Duchin first used a method called "computational redistricting," which uses computer programs to generate various maps. Duchin Dep. 18:15-19:02. Dr. Duchin runs this "algorithmic exploration" to serve as a base for latter mapping in order to "get a sense of what's possible in different parts of" Georgia. *Id.* 19:03-19:14.

180. After the "algorithmic exploration" generated base maps, Dr. Duchin hand drew maps in order to balance traditional redistricting principles and create

maps that are "remediable." Duchin Dep. 65:06-77:12; 121:01-121:12; 123:13-123:15.

181. Dr. Duchin examined quantifiable and unquantifiable traditional redistricting principles. Duchin Dep. 28:12-28:20; 65:10-71:06; 79:13-79:17; 155:12-155:21; Duchin Rep. at 20-24, 79-80.

182. Dr. Duchin used the redistricting guidelines published by both chambers of the Georgia legislature to select which quantifiable and unquantifiable redistricting principles to analyze, as reflected by the figure below:

A. GENERAL PRINCIPLES FOR DRAFTING PLANS
1. Each congressional district should be drawn with a total population of plus or minus one person from the ideal district size.
2. Each legislative district of the General Assembly should be drawn to achieve a total population that is substantially equal as practicable, considering the principles listed below.
3. All plans adopted by the Committee will comply with Section 2 of the Voting Rights Act of 1965, as amended.
4. All plans adopted by the Committee will comply with the United States and Georgia Constitutions.
5. Districts shall be composed of contiguous geography. Districts that connect on a single point are not contiguous.
6. No multi-member districts shall be drawn on any legislative redistricting plan.
7. The Committee should consider:
   a. The boundaries of counties and precincts;
   b. Compactness; and
   c. Communities of interest.
8. Efforts should be made to avoid the unnecessary pairing of incumbents.
9. The identifying of these criteria is not intended to limit the consideration of any other principles or factors that the Committee deems appropriate.

Duchin Rep. at 20.

183. Some of these principles are mandatory, such as compliance with the population balance for congressional and legislative districts, compliance with the Voting Rights Act, compliance with the U.S. and Georgia Constitutions, contiguity,

and ensuring that there are no multi-member districts. *Id*. Others are not mandatory, such as consideration of the boundaries of counties, compactness, communities of interest; the last is to make "efforts" to avoid the "unnecessary" pairing of incumbents. *Id*.

184. To determine communities of interest, Dr. Duchin analyzed a voluminous record of public testimony. Duchin Dep. 68:18-69:10. This community of interest testimony informed Dr. Duchin's hand-drawing process. *Id*. 70:08-70:71:06; 79:09-79:16; 163:15-163:25.

185. This testimony included public input reflecting concerns that the ultimately-enacted CD 6 would be blending communities that have interests more common in rural communities—such as the Army Corp. of Engineers—with communities that have interests more common in suburban areas—such as public transportation. Duchin Rep. 79-80.

186. This testimony also included public input reflected concerns that the ultimately-enacted CD 14 would be blending communities that have interests more common in rural communities—such as manufacturing and agriculture—with communities that have interests more common in urban areas—such as housing. *Id*.

187. For her demonstrative Congressional plan, Dr. Duchin drew an alternative map covering the entire state. Duchin Dep. 21:01-21:13.

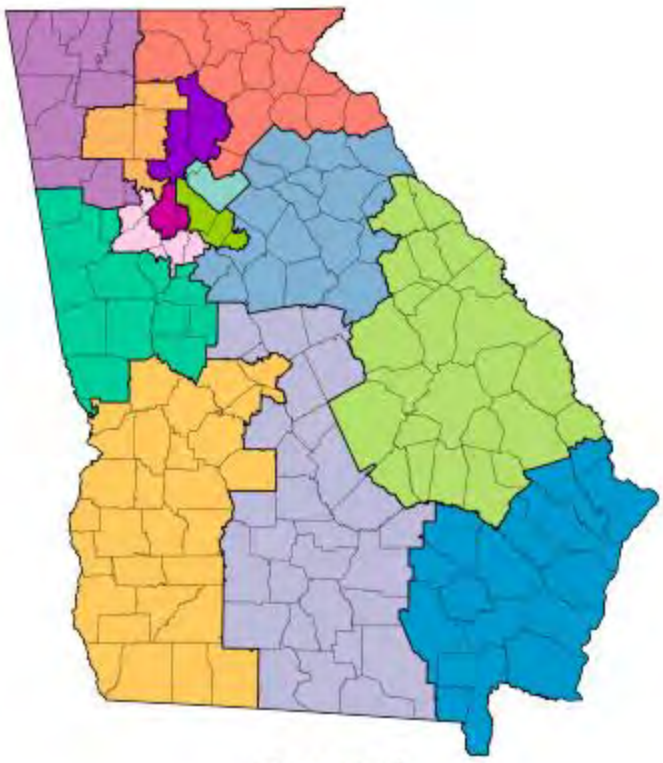
188. For her demonstrative senate and house plans, Dr. Duchin divided the Enacted Plan into modules. Under this modular approach, Dr. Duchin drew alternative maps in geographic areas covered by certain clusters of districts within certain modules in the enacted plan. Duchin Dep. 60:05-60:22; Duchin Rep. at 13, 14-15.

**B. Numerosity**

**1. Dr. Duchin Drew Additional Majority Minority Congressional Districts.**

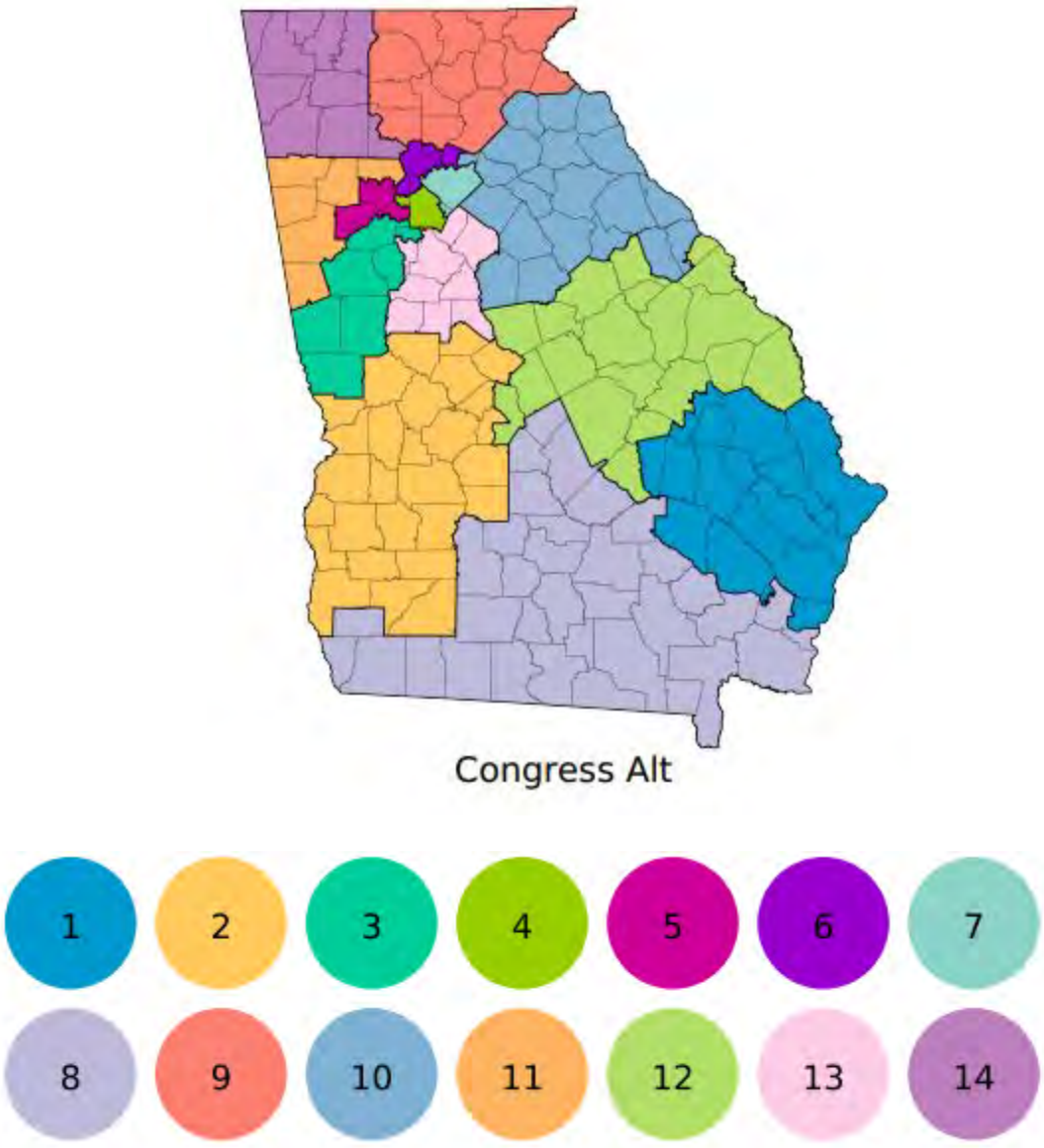
189. The enacted congressional plan contained two majority BVAP districts (CD 4 and CD 13). Duchin Rep.at 25 (Table 11).

190. Three additional districts in the enacted congressional plan are majority Black and Hispanic voting age population ("BHVAP") (CD 2, CD 5, and CD 7). *Id.* CD 7 is not majority Black and Hispanic Citizen Voting Age Population ("BHCVAP"). *Id. See also id.* at 11, Figure 3.



Enacted

191. Dr. Duchin provided one alternative congressional plan ("Alt 1 CD") that created additional majority-minority districts when compared to the enacted plan. *Id*. *See also id.* at 11, Figure 3.




192. Alt 1 CD creates four majority BVAP districts (Alt 1 CDs 3, 4, 5, 13). Duchin Rep.at 25 (Table 11).

193. Alt 1 CD also creates two majority BHVAP districts, (Alt 1 CDs 2 and 7). *Id.*

194. Each of the majority BHVAP districts in Alt 1 CD are also majority BHCVAP districts. *Id*.

195. Alt 1 CD thus creates an additional majority-minority district: Alt 1CD 3, as demonstrated by the chart and figure below. *Id.*

| | CD Enacted (Statewide) | | | | | | **CD Alt 1** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 1 | 28.2% | 6.8% | 35.0% | 60.4% | 0.285 | 0.456 | 30.3% | 6.9% | 37.2% | 58.5% | 0.312 | 0.633 |
| 2 | 49.3% | 5.1% | 54.4% | 42.7% | 0.267 | 0.458 | 47.7% | 4.7% | 52.4% | 44.5% | 0.315 | 0.494 |
| 3 | 23.3% | 5.3% | 28.6% | 66.8% | 0.275 | 0.461 | 51.2% | 7.2% | 58.4% | 37.4% | 0.278 | 0.411 |
| 4 | 54.5% | 10.1% | 64.6% | 28.3% | 0.246 | 0.307 | 50.6% | 8.2% | 58.8% | 33.8% | 0.295 | 0.481 |
| 5 | 49.6% | 6.7% | 56.3% | 37.9% | 0.322 | 0.512 | 50.1% | 11.4% | 61.5% | 33.4% | 0.216 | 0.424 |
| 6 | 9.9% | 9.1% | 19.0% | 66.6% | 0.198 | 0.424 | 13.7% | 10.9% | 24.6% | 57.1% | 0.232 | 0.346 |
| 7 | 29.8% | 21.3% | 51.1% | 32.8% | 0.386 | 0.496 | 34.3% | 22.4% | 56.7% | 29.4% | 0.351 | 0.518 |
| 8 | 30.0% | 6.1% | 36.1% | 60.5% | 0.210 | 0.338 | 27.3% | 6.9% | 34.2% | 63.0% | 0.227 | 0.377 |
| 9 | 10.4% | 12.9% | 23.3% | 68.3% | 0.253 | 0.380 | 4.6% | 11.5% | 16.1% | 77.9% | 0.403 | 0.512 |
| 10 | 22.6% | 6.5% | 29.1% | 66.2% | 0.284 | 0.558 | 17.6% | 6.9% | 24.5% | 69.8% | 0.335 | 0.576 |
| 11 | 17.9% | 11.2% | 29.1% | 64.0% | 0.207 | 0.480 | 17.6% | 7.6% | 25.2% | 68.1% | 0.283 | 0.364 |
| 12 | 36.7% | 4.9% | 41.6% | 54.6% | 0.278 | 0.502 | 39.2% | 4.6% | 43.8% | 51.9% | 0.181 | 0.489 |
| 13 | 66.7% | 10.5% | 77.2% | 18.8% | 0.157 | 0.380 | 52.0% | 6.8% | 58.8% | 37.8% | 0.276 | 0.510 |
| 14 | 14.3% | 10.6% | 24.9% | 71.3% | 0.373 | 0.426 | 7.6% | 11.0% | 18.6% | 77.0% | 0.514 | 0.484 |
| Avg | | | | | 0.267 | 0.441 | | | | | 0.301 | 0.473 |

196. Defendants' mapping expert, Dr. Morgan, testified he had no basis to dispute that it was possible to draw additional majority-minority districts in the Congressional plan. Canter Decl. ¶ 22 (Deposition of John Morgan ("Morgan Dep.") 20:22-23:25).

197. This chart, and others like it, reflect voting age population ("VAP") comparisons by district in the enacted plans and Dr. Duchin's created illustrative plans. Duchin Rep. at 25; *see also Id.* at 81.

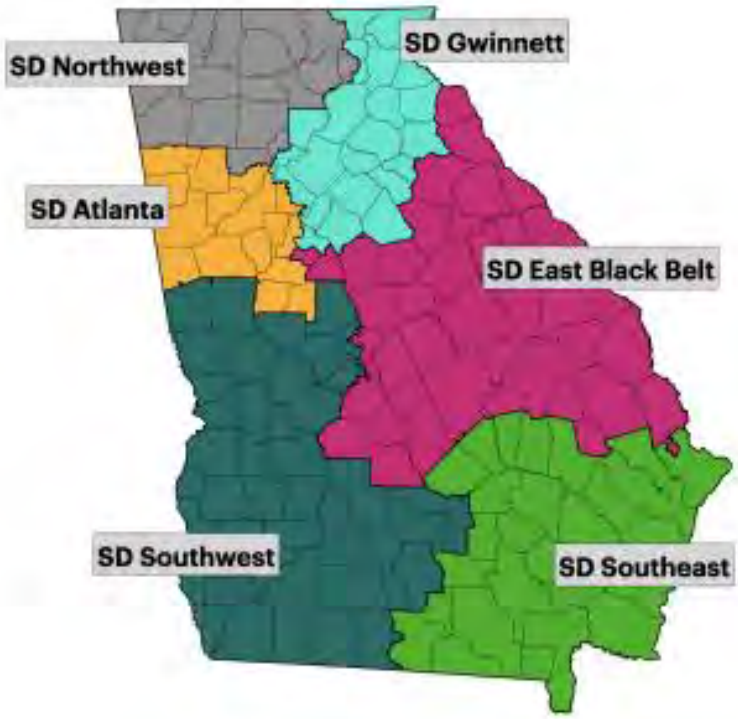
198. This chart, and others like it, compare the enacted and illustrative plans on a variety of metrics including Black voting age population ("BVAP"), Hispanic

voting age population ("HVAP"), White voting age population ("WVAP"), citizen voting age population ("CVAP"). Duchin Dep. 22:7-16; 46:6-7; Duchin Rep. at 7, 25, 81.

199. This chart, and others like it, compare the enacted and illustrative plans, using the two most common compactness metrics are the Polsby-Popper score and the Reock score. These are both contour-based scores that rely on the outline of the district on a map. Polsby-Popper is a ratio formed by comparing the district's area to its perimeter via the formula $4\pi A/P^2$. Reock considers how much of the smallest bounding circle is filled out by the district's area. Duchin Rep. at 21.

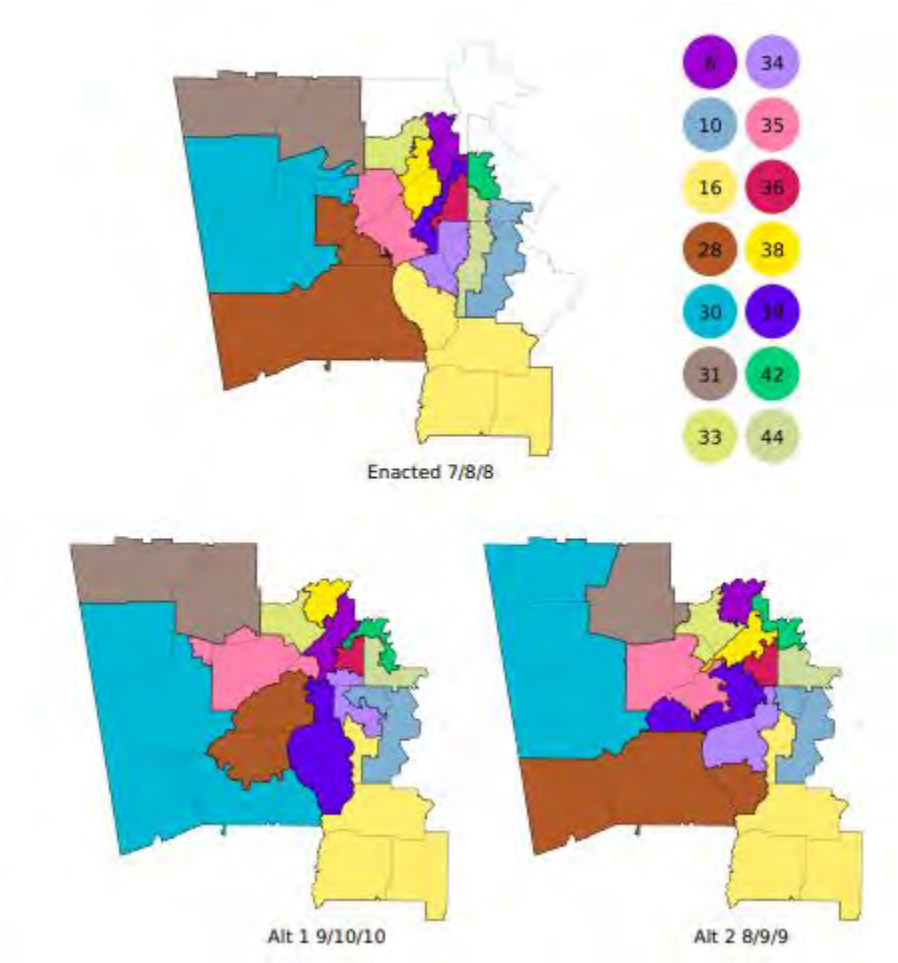
**2. Dr. Duchin Drew Additional Majority Minority Senate Districts.**

200. Dr. Duchin analyzed six clusters of senate districts: SD Northwest, SD Gwinnett, SD Atlanta, SD East Black Belt, SD Southwest, and SD Southeast.




*Id*. at 13 (Figure 5).

201. In the SD Atlanta region, Dr. Duchin provides two alternative maps ("SD Alt 1 Atlanta" and "SD Alt 2 Atlanta") that create additional majority-minority districts. *Id*. at 26-27.




*Id*. at 26 (Figure 8).

202. Defendants' expert, Dr. Morgan, testified he has no basis to dispute that Dr. Duchin was able to draw additional majority-minority senate districts. Morgan Dep. 24:02-24; *see also* Canter Decl. ¶ 23 (Expert Report of John Morgan ("Morgan Rep." at 24, 27 (Charts 5 and 6)); Morgan Dep. 29:10-30:04; Morgan Dep. 79:08-12; Morgan Dep. 82:15-18.

203. The enacted SD Atlanta cluster contains 7 majority BVAP districts (SDs 10, 34, 35, 36, 38, 39, and 44). Duchin Rep. at 27 (Table 12 and Table 13).

204. The enacted SD Atlanta cluster contains an additional majority BHVAP district (SD 33). *Id.*

205. SD Alt 1 Atlanta contains 10 majority BVAP districts (SDs Alt 1 Atlanta 6, 10, 16, 28, 33, 34, 35, 36, 39, and 44). *Id.* (Table 12).

206. SD Alt 2 Atlanta contains 8 majority BVAP districts (SDs Alt 2 Atlanta 10, 33, 34, 35, 36, 38, 39, 44) and 1 majority BHVAP district (SD Alt 2 Atlanta 16). *Id.* (Table 13).

207. The tables below provide a comparison between the enacted senate plan and SD Alt 1 Atlanta and SD Alt 2 Atlanta:

| | SD Atlanta Enacted | | | | | | SD Alt 1 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 6 | 23.9% | 8.2% | 32.1% | 57.8% | 0.236 | 0.405 | 50.1% | 6.1% | 56.2% | 39.8% | 0.169 | 0.246 |
| 10 | 71.5% | 5.2% | 76.7% | 19.6% | 0.231 | 0.281 | 59.5% | 11.0% | 70.5% | 23.4% | 0.238 | 0.420 |
| 16 | 22.7% | 5.0% | 27.7% | 66.9% | 0.314 | 0.368 | 50.2% | 6.2% | 56.4% | 40.9% | 0.254 | 0.354 |
| 28 | 19.5% | 6.4% | 25.9% | 69.4% | 0.246 | 0.445 | 50.6% | 6.8% | 57.4% | 39.3% | 0.335 | 0.489 |
| 30 | 20.9% | 6.1% | 27.0% | 69.4% | 0.407 | 0.597 | 14.3% | 5.1% | 19.4% | 76.9% | 0.286 | 0.361 |
| 31 | 20.7% | 7.4% | 28.1% | 68.3% | 0.379 | 0.366 | 19.7% | 7.2% | 26.9% | 69.4% | 0.470 | 0.395 |
| 33 | 43.0% | 22.9% | 65.9% | 30.2% | 0.215 | 0.401 | 50.4% | 18.1% | 68.5% | 27.9% | 0.381 | 0.528 |
| 34 | 69.5% | 12.7% | 82.2% | 13.4% | 0.335 | 0.451 | 72.2% | 11.6% | 83.8% | 11.5% | 0.163 | 0.326 |
| 35 | 71.9% | 7.5% | 79.4% | 18.8% | 0.263 | 0.472 | 50.9% | 8.0% | 58.9% | 38.2% | 0.347 | 0.400 |
| 36 | 51.3% | 7.1% | 58.4% | 36.2% | 0.305 | 0.321 | 50.0% | 5.7% | 55.7% | 38.8% | 0.339 | 0.452 |
| 38 | 65.3% | 8.4% | 73.7% | 21.9% | 0.208 | 0.361 | 27.9% | 15.4% | 43.3% | 46.1% | 0.271 | 0.487 |
| 39 | 60.7% | 5.6% | 66.3% | 27.9% | 0.128 | 0.166 | 51.2% | 5.4% | 56.6% | 38.6% | 0.277 | 0.357 |
| 42 | 30.8% | 8.6% | 39.4% | 51.4% | 0.321 | 0.479 | 35.8% | 9.6% | 45.4% | 43.5% | 0.112 | 0.289 |
| 44 | 71.3% | 8.6% | 79.9% | 15.3% | 0.185 | 0.180 | 61.6% | 3.6% | 65.2% | 31.0% | 0.237 | 0.356 |
| Avg | | | | | 0.270 | 0.378 | | | | | 0.277 | 0.390 |

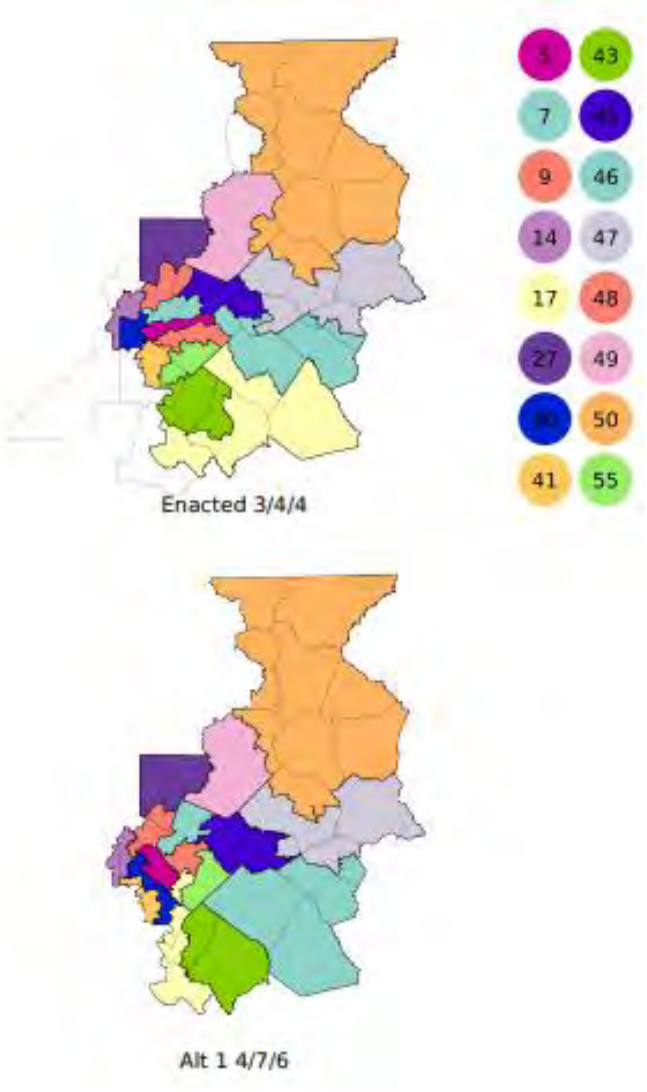
Table 12: SD Atlanta Alt 1 splits 8 counties within the cluster compared to 7 in the enacted plan and has a better discrete compactness score, with 2017 cut edges rather than 2197, to go with comparable Polsby-Popper and superior Reock compactness.

| | SD Atlanta Enacted | | | | | | SD Alt 2 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 6 | 23.9% | 8.2% | 32.1% | 57.8% | 0.236 | 0.405 | 28.0% | 14.9% | 42.9% | 46.7% | 0.256 | 0.477 |
| 10 | 71.5% | 5.2% | 76.7% | 19.6% | 0.231 | 0.281 | 59.7% | 9.8% | 69.5% | 23.3% | 0.307 | 0.416 |
| 16 | 22.7% | 5.0% | 27.7% | 66.9% | 0.314 | 0.368 | 48.4% | 6.1% | 54.5% | 42.4% | 0.258 | 0.366 |
| 28 | 19.5% | 6.4% | 25.9% | 69.4% | 0.246 | 0.445 | 15.8% | 6.1% | 21.9% | 72.8% | 0.347 | 0.371 |
| 30 | 20.9% | 6.1% | 27.0% | 69.4% | 0.407 | 0.597 | 15.7% | 6.6% | 22.3% | 74.2% | 0.473 | 0.508 |
| 31 | 20.7% | 7.4% | 28.1% | 68.3% | 0.379 | 0.366 | 25.9% | 6.7% | 32.6% | 63.6% | 0.591 | 0.636 |
| 33 | 43.0% | 22.9% | 65.9% | 30.2% | 0.215 | 0.401 | 50.6% | 18.2% | 68.8% | 27.4% | 0.224 | 0.463 |
| 34 | 69.5% | 12.7% | 82.2% | 13.4% | 0.335 | 0.451 | 54.4% | 11.9% | 66.3% | 27.9% | 0.246 | 0.381 |
| 35 | 71.9% | 7.5% | 79.4% | 18.8% | 0.263 | 0.472 | 60.9% | 7.5% | 68.4% | 29.3% | 0.206 | 0.490 |
| 36 | 51.3% | 7.1% | 58.4% | 36.2% | 0.305 | 0.321 | 54.0% | 6.8% | 60.8% | 33.6% | 0.263 | 0.466 |
| 38 | 65.3% | 8.4% | 73.7% | 21.9% | 0.208 | 0.361 | 51.0% | 5.6% | 56.6% | 37.6% | 0.154 | 0.260 |
| 39 | 60.7% | 5.6% | 66.3% | 27.9% | 0.128 | 0.166 | 86.5% | 5.5% | 92.0% | 7.0% | 0.118 | 0.271 |
| 42 | 30.8% | 8.6% | 39.4% | 51.4% | 0.321 | 0.479 | 17.0% | 10.7% | 27.7% | 61.4% | 0.144 | 0.282 |
| 44 | 71.3% | 8.6% | 79.9% | 15.3% | 0.185 | 0.180 | 76.3% | 3.2% | 79.5% | 18.7% | 0.374 | 0.456 |
| Avg | | | | | 0.270 | 0.378 | | | | | 0.283 | 0.417 |

Table 13: SD Atlanta Alt 2 splits 6 counties within the cluster and has just 1985 cut edges, better than the enacted plan's 7 and 2197, while also improving on both contour-based compactness scores.

*Id*. (Table 12 and Table 13).

208. Dr. Duchin provided an alternative map in Gwinnett ("SD Alt 1 Gwinnett") that created additional majority-minority districts:




*Id.* at 28 (Figure 9).

209. Defendants' expert, Dr. Morgan, testified he has no basis to dispute that Dr. Duchin was able to draw additional majority-minority senate districts. Morgan Dep. 24:02-20; *see also* Morgan Rep. at 24, 27 (Charts 5 and 6); Morgan Dep. 29:10-30:4; Morgan Dep. 79:08-12; Morgan Dep. 82:15-18.

210. The enacted SD Gwinnett cluster contains 3 majority BVAP districts (SDs 41, 43, and 55) and 1 additional majority BHVAP district (SD 5). ~~Morgan Rep. at 29 (Table 14)~~ Moon Duchin ("Duchin Rep.") at 29 (Table 14).

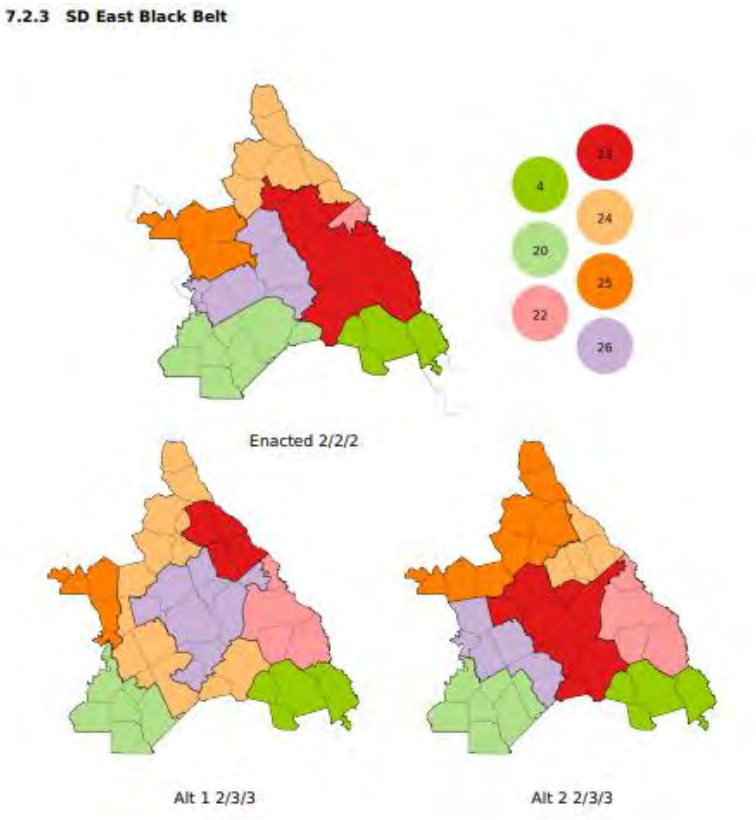
211. SD Alt 1 Gwinnett creates 5 majority BVAP districts (SDs Alt 1 Gwinnett 17, 40, 41, 43, and 55), and 2 majority BHVAP districts (SDs Alt 1 Gwinnett 5 and 9). *Id.*

212. The table below compares the enacted SD Gwinnett cluster to SD Alt 1 Gwinnett:

| | SD Gwinnett Enacted | | | | | | **SD Alt 1** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 5 | 29.9% | 41.7% | 71.6% | 15.7% | 0.207 | 0.166 | 20.3% | 34.6% | 54.9% | 28.0% | 0.285 | 0.384 |
| 7 | 21.4% | 16.6% | 38.0% | 37.8% | 0.339 | 0.344 | 17.1% | 14.3% | 31.4% | 45.5% | 0.278 | 0.401 |
| 9 | 29.5% | 18.8% | 48.3% | 35.8% | 0.213 | 0.233 | 29.3% | 27.0% | 56.3% | 26.2% | 0.234 | 0.498 |
| 14 | 19.0% | 12.1% | 31.1% | 57.1% | 0.242 | 0.273 | 18.1% | 11.4% | 29.5% | 57.6% | 0.208 | 0.296 |
| 17 | 32.0% | 5.1% | 37.1% | 59.4% | 0.168 | 0.342 | 51.1% | 6.6% | 57.7% | 35.9% | 0.113 | 0.188 |
| 27 | 5.0% | 10.2% | 15.2% | 71.5% | 0.456 | 0.499 | 4.7% | 10.2% | 14.9% | 70.8% | 0.500 | 0.497 |
| 40 | 19.2% | 21.6% | 40.8% | 46.3% | 0.345 | 0.508 | 50.1% | 17.7% | 67.8% | 25.1% | 0.130 | 0.208 |
| 41 | 62.6% | 6.7% | 69.3% | 21.4% | 0.302 | 0.509 | 57.3% | 10.0% | 67.3% | 23.3% | 0.149 | 0.279 |
| 43 | 64.3% | 6.9% | 71.2% | 26.5% | 0.346 | 0.635 | 52.0% | 7.0% | 59.0% | 38.3% | 0.420 | 0.537 |
| 45 | 18.6% | 13.1% | 31.7% | 55.5% | 0.305 | 0.350 | 19.8% | 12.1% | 31.9% | 58.8% | 0.226 | 0.380 |
| 46 | 16.9% | 7.0% | 23.9% | 69.9% | 0.207 | 0.365 | 16.5% | 5.0% | 21.5% | 73.4% | 0.416 | 0.514 |
| 47 | 17.4% | 9.6% | 27.0% | 67.5% | 0.187 | 0.353 | 16.7% | 8.7% | 25.4% | 68.5% | 0.176 | 0.326 |
| 48 | 9.5% | 7.0% | 16.5% | 52.2% | 0.342 | 0.348 | 10.1% | 6.4% | 16.5% | 54.8% | 0.266 | 0.387 |
| 49 | 8.0% | 21.9% | 29.9% | 65.6% | 0.341 | 0.461 | 8.1% | 24.6% | 32.7% | 62.8% | 0.382 | 0.573 |
| 50 | 5.6% | 8.8% | 14.4% | 81.5% | 0.228 | 0.450 | 5.4% | 6.1% | 11.5% | 84.3% | 0.232 | 0.462 |
| 55 | 66.0% | 8.7% | 74.7% | 20.6% | 0.271 | 0.333 | 50.0% | 13.9% | 63.9% | 30.0% | 0.419 | 0.451 |
| Avg | | | | | 0.281 | 0.386 | | | | | 0.277 | 0.399 |

*Id.*

213. Dr. Duchin provided two alternative maps for the SD East Black Belt cluster ("SD Alt 1 East Black Belt" and "SD Alt 2 East Black Belt") that create additional majority-minority districts.




*Id*. at 30 (Figure 10).

214. Defendants' expert, Dr. Morgan, testified he has no basis to dispute that Dr. Duchin was able to draw additional majority-minority senate districts. Morgan Dep. 24:02-20; *see also* Morgan Rep. at 24, 27 (Charts 5 and 6); Morgan Dep. 29:10-30:04; Morgan Dep. 79:08-12; Morgan Dep. 82:15-18.

215. The enacted SD East Black Belt region contains two majority BVAP districts (SDs 22 and 26). *See* Duchin Rep. at 31 (Table 15 and Table 6).

216. SD Alt 1 East Black Belt contains three majority BVAP districts (SDs Alt 1 East Black Belt 22, 25, and 26). *Id*. (Table 15).

217. SD Alt 2 East Black Belt contains two majority BVAP districts (SDs Alt 2 East Black Belt 22 and 26) and one majority BHVAP district (SD Alt 2 East Black Belt 23). *Id*. (Table 16).

218. The table below provides a comparison between the enacted SD East Black Belt cluster and SD Alt 1 East Black Belt and SD Alt 2 East Black Belt:

| | SD East Black Belt Enacted | | | | | | **SD Alt 1** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 4 | 23.4% | 5.5% | 28.9% | 66.8% | 0.265 | 0.471 | 23.5% | 5.5% | 29.0% | 66.7% | 0.284 | 0.495 |
| 20 | 31.3% | 3.5% | 34.8% | 61.7% | 0.358 | 0.404 | 34.4% | 5.1% | 39.5% | 56.5% | 0.231 | 0.498 |
| 22 | 56.5% | 5.3% | 61.8% | 34.4% | 0.288 | 0.404 | 50.5% | 3.8% | 54.3% | 42.6% | 0.241 | 0.455 |
| 23 | 35.5% | 4.5% | 40.0% | 56.9% | 0.164 | 0.365 | 23.0% | 5.6% | 28.6% | 64.6% | 0.466 | 0.497 |
| 24 | 19.9% | 4.4% | 24.3% | 69.8% | 0.213 | 0.366 | 25.0% | 3.5% | 28.5% | 69.1% | 0.083 | 0.229 |
| 25 | 33.5% | 3.7% | 37.2% | 59.9% | 0.241 | 0.386 | 50.0% | 4.0% | 54.0% | 43.4% | 0.174 | 0.344 |
| 26 | 57.0% | 4.2% | 61.2% | 36.6% | 0.203 | 0.469 | 50.1% | 3.7% | 53.8% | 43.4% | 0.209 | 0.472 |
| Avg | | | | | 0.247 | 0.409 | | | | | 0.241 | 0.427 |

Table 15: SD East Black Belt Alt 1 has more cut edges than the state (1301 vs. 1021 from the enacted plan), paired with a comparable Polsby-Popper and a superior Reock score. This alternative plan splits seven counties while the state splits four within the cluster.

| | SD East Black Belt Enacted | | | | | | **SD Alt 2** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 4 | 23.4% | 5.5% | 28.9% | 66.8% | 0.265 | 0.471 | 23.4% | 5.5% | 28.9% | 66.8% | 0.265 | 0.471 |
| 20 | 31.3% | 3.5% | 34.8% | 61.7% | 0.358 | 0.404 | 32.5% | 4.9% | 37.4% | 58.7% | 0.304 | 0.586 |
| 22 | 56.5% | 5.3% | 61.8% | 34.4% | 0.288 | 0.404 | 50.4% | 3.5% | 53.9% | 42.9% | 0.264 | 0.432 |
| 23 | 35.5% | 4.5% | 40.0% | 56.9% | 0.164 | 0.365 | 47.4% | 4.1% | 51.5% | 45.8% | 0.231 | 0.441 |
| 24 | 19.9% | 4.4% | 24.3% | 69.8% | 0.213 | 0.366 | 23.1% | 5.6% | 28.7% | 64.5% | 0.327 | 0.458 |
| 25 | 33.5% | 3.7% | 37.2% | 59.9% | 0.241 | 0.386 | 28.2% | 4.5% | 32.7% | 64.3% | 0.176 | 0.311 |
| 26 | 57.0% | 4.2% | 61.2% | 36.6% | 0.203 | 0.469 | 51.2% | 3.1% | 54.3% | 43.5% | 0.205 | 0.331 |
| Avg | | | | | 0.247 | 0.409 | | | | | 0.253 | 0.433 |

Table 16: SD East Black Belt Alt 2 has just two county splits, compared to four in the state's plan. With just 1008 cut edges, it also executes a clean sweep of compactness scores relative to the enacted plan.

*Id*.

### 3. Dr. Duchin Drew Additional Majority Minority House Districts.

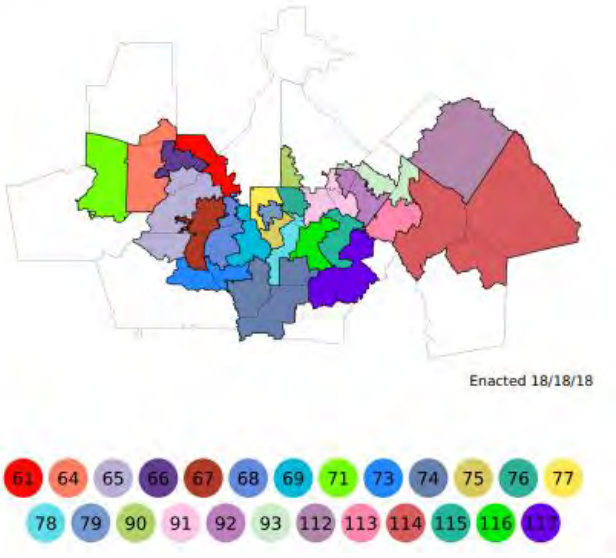
219. Dr. Duchin analyzed seven House clusters: HD Atlanta, HD Cobb, HD DeKalb, HD Gwinnett, HD Southwest, HD East Black Belt, HD Southeast. *Id*. at 14-15.

Figure 7: Seven "modular" House clusters made up of groups of enacted districts.

*Id*. at 15 (Figure 7).

220. Dr. Duchin provided two alternative maps ("HD Alt 1 Atlanta" and "HD Alt 2 Atlanta") for the HD Atlanta cluster that created additional majority-minority districts:

**7.3.1 HD Atlanta**



Alt 1 20/20/20

Alt 2 19/20/20

*Id*. at 32-33 (Figures 11 and 12).

221. Defendants' expert Dr. Morgan testified he has no basis to dispute that it is possible to draw additional majority-minority house districts. Morgan Dep. 24:22-24:09; *see also* Morgan Rep., 18, 21 (Charts 2 and 3); Morgan Dep. 29:10-30:04; Morgan Dep. 79:4-12; Morgan Dep. 82:15-18.

222. The enacted HD Atlanta cluster contains 18 majority BVAP districts (HDs 61, 65, 66, 67, 68, 69, 75, 76, 77, 78, 79, 90, 91, 92, 93, 113, 115, and 116). *See* Duchin Rep. at 34 (Table 17 and Table 18).

223. HD Alt 1 Atlanta contains 20 majority BVAP districts (HDs Alt 1 Atlanta 61, 64, 65, 66, 67, 69, 74, 75, 76, 77, 78, 79, 90, 91, 92, 93, 113, 115, 116, 117). *Id*. (Table 17).

224. HD Alt 2 Atlanta contains 19 majority BVAP districts (HDs Alt 2 Atlanta 64, 65, 66, 67, 68, 69, 75, 76, 77, 78, 79, 90, 91, 92, 93, 113, 115, 116, 117), and one majority BHVAP district (HD Alt 2 Atlanta 61). *Id.* (Table 18).

225. The tables below provide comparisons between HD Atlanta enacted and HD Atlanta Alt 1 and HD Atlanta Alt 2.

| | HD Atlanta Enacted | | | | | | **HD Alt 1** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 61 | 74.3% | 7.6% | 81.9% | 16.8% | 0.198 | 0.247 | 50.1% | 10.0% | 60.1% | 37.1% | 0.229 | 0.265 |
| 64 | 30.7% | 7.4% | 38.1% | 57.8% | 0.361 | 0.365 | 50.9% | 6.5% | 57.4% | 40.0% | 0.132 | 0.263 |
| 65 | 62.0% | 4.5% | 66.5% | 31.5% | 0.172 | 0.454 | 81.7% | 4.7% | 86.4% | 12.5% | 0.222 | 0.350 |
| 66 | 53.4% | 9.5% | 62.9% | 33.9% | 0.246 | 0.356 | 51.0% | 9.0% | 60.0% | 36.2% | 0.256 | 0.386 |
| 67 | 58.9% | 7.8% | 66.7% | 30.9% | 0.122 | 0.357 | 89.9% | 5.4% | 95.3% | 4.4% | 0.195 | 0.515 |
| 68 | 55.7% | 6.3% | 62.0% | 33.9% | 0.172 | 0.318 | 13.7% | 6.6% | 20.3% | 71.5% | 0.310 | 0.518 |
| 69 | 63.6% | 5.4% | 69.0% | 26.9% | 0.247 | 0.403 | 51.9% | 8.8% | 60.7% | 34.0% | 0.339 | 0.409 |
| 71 | 19.9% | 6.2% | 26.1% | 69.8% | 0.352 | 0.441 | 19.9% | 6.2% | 26.1% | 69.8% | 0.350 | 0.441 |
| 73 | 12.1% | 7.0% | 19.1% | 72.6% | 0.198 | 0.278 | 11.8% | 6.4% | 18.2% | 75.9% | 0.335 | 0.417 |
| 74 | 25.5% | 5.6% | 31.1% | 64.4% | 0.247 | 0.496 | 50.8% | 6.9% | 57.7% | 39.7% | 0.205 | 0.461 |
| 75 | 74.4% | 11.3% | 85.7% | 11.3% | 0.285 | 0.420 | 54.2% | 7.7% | 61.9% | 34.1% | 0.133 | 0.230 |
| 76 | 67.2% | 13.2% | 80.4% | 10.5% | 0.509 | 0.524 | 61.6% | 20.0% | 81.6% | 11.2% | 0.460 | 0.409 |
| 77 | 76.1% | 12.2% | 88.3% | 7.6% | 0.211 | 0.396 | 89.6% | 5.0% | 94.6% | 3.5% | 0.211 | 0.292 |
| 78 | 71.6% | 8.9% | 80.5% | 15.0% | 0.194 | 0.210 | 64.2% | 11.3% | 75.5% | 15.4% | 0.256 | 0.414 |
| 79 | 71.6% | 16.0% | 87.6% | 7.1% | 0.209 | 0.498 | 73.3% | 14.6% | 87.9% | 8.0% | 0.370 | 0.444 |
| 90 | 58.5% | 4.3% | 62.8% | 34.0% | 0.286 | 0.359 | 58.5% | 4.3% | 62.8% | 34.0% | 0.286 | 0.359 |
| 91 | 70.0% | 5.9% | 75.9% | 22.0% | 0.202 | 0.447 | 50.3% | 5.2% | 55.5% | 40.7% | 0.245 | 0.384 |
| 92 | 68.8% | 4.7% | 73.5% | 24.1% | 0.198 | 0.361 | 87.6% | 3.5% | 91.1% | 8.3% | 0.260 | 0.543 |
| 93 | 65.4% | 9.6% | 75.0% | 22.9% | 0.112 | 0.260 | 62.1% | 10.4% | 72.5% | 25.4% | 0.160 | 0.232 |
| 112 | 19.2% | 3.3% | 22.5% | 73.7% | 0.522 | 0.619 | 19.2% | 3.3% | 22.5% | 73.7% | 0.522 | 0.619 |
| 113 | 59.5% | 6.7% | 66.2% | 31.8% | 0.318 | 0.501 | 51.0% | 5.1% | 56.1% | 41.2% | 0.338 | 0.425 |
| 114 | 24.7% | 3.7% | 28.4% | 68.8% | 0.283 | 0.502 | 32.8% | 4.4% | 37.2% | 60.3% | 0.267 | 0.438 |
| 115 | 52.1% | 7.0% | 59.1% | 36.9% | 0.226 | 0.436 | 50.2% | 6.0% | 56.2% | 38.6% | 0.193 | 0.282 |
| 116 | 58.1% | 7.3% | 65.4% | 27.2% | 0.280 | 0.407 | 54.8% | 8.0% | 62.8% | 29.6% | 0.333 | 0.478 |
| 117 | 36.6% | 5.4% | 42.0% | 54.5% | 0.275 | 0.408 | 51.0% | 7.2% | 58.2% | 39.0% | 0.409 | 0.511 |
| Avg | | | | | 0.257 | 0.402 | | | | | 0.281 | 0.403 |

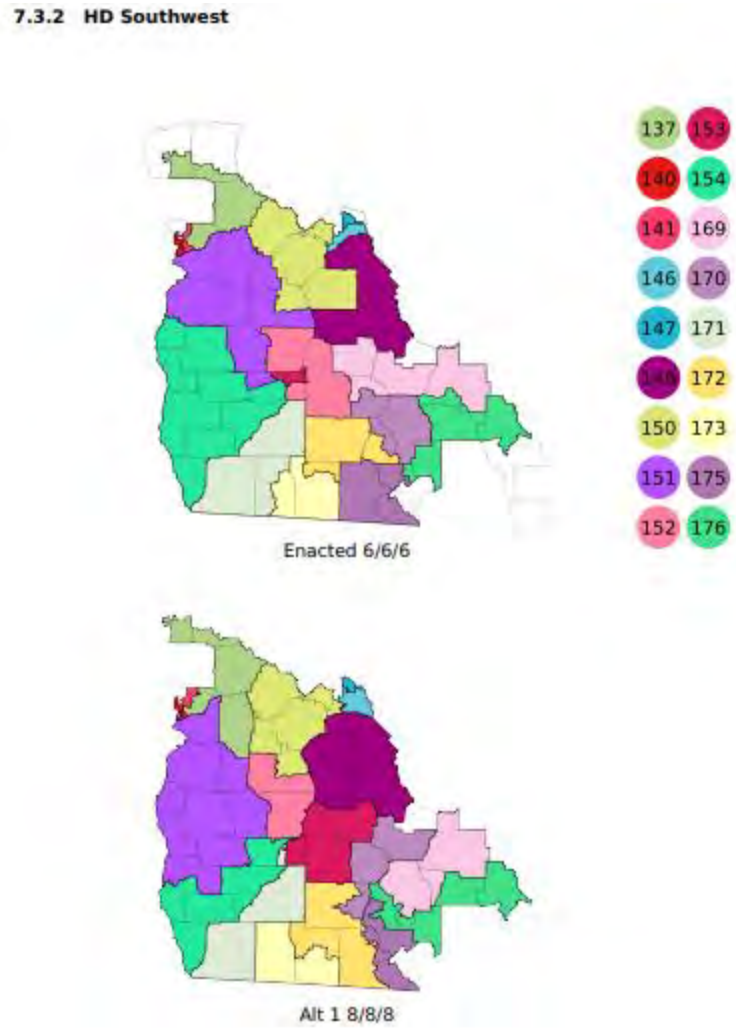
Table 17: In HD Atlanta, the enacted plan has 10 county splits and 2221 cut edges. Alt 1 maintains 10 county splits and improves to 1988 cut edges.

| | HD Atlanta Enacted | | | | | | **HD Alt 2** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 61 | 74.3% | 7.6% | 81.9% | 16.8% | 0.198 | 0.247 | 47.4% | 10.1% | 57.5% | 39.6% | 0.290 | 0.276 |
| 64 | 30.7% | 7.4% | 38.1% | 57.8% | 0.361 | 0.365 | 50.5% | 6.8% | 57.3% | 40.0% | 0.201 | 0.271 |
| 65 | 62.0% | 4.5% | 66.5% | 31.5% | 0.172 | 0.454 | 67.6% | 4.1% | 71.7% | 26.6% | 0.302 | 0.458 |
| 66 | 53.4% | 9.5% | 62.9% | 33.9% | 0.246 | 0.356 | 51.2% | 9.1% | 60.3% | 36.0% | 0.336 | 0.407 |
| 67 | 58.9% | 7.8% | 66.7% | 30.9% | 0.122 | 0.357 | 90.4% | 5.3% | 95.7% | 4.0% | 0.131 | 0.428 |
| 68 | 55.7% | 6.3% | 62.0% | 33.9% | 0.172 | 0.318 | 58.2% | 6.8% | 65.0% | 31.0% | 0.168 | 0.329 |
| 69 | 63.6% | 5.4% | 69.0% | 26.9% | 0.247 | 0.403 | 54.6% | 6.3% | 60.9% | 34.4% | 0.310 | 0.538 |
| 71 | 19.9% | 6.2% | 26.1% | 69.8% | 0.352 | 0.441 | 19.9% | 6.2% | 26.1% | 69.8% | 0.352 | 0.441 |
| 73 | 12.1% | 7.0% | 19.1% | 72.6% | 0.198 | 0.278 | 11.9% | 7.0% | 18.9% | 73.6% | 0.373 | 0.498 |
| 74 | 25.5% | 5.6% | 31.1% | 64.4% | 0.247 | 0.496 | 12.8% | 5.7% | 18.5% | 75.5% | 0.192 | 0.320 |
| 75 | 74.4% | 11.3% | 85.7% | 11.3% | 0.285 | 0.420 | 61.4% | 12.0% | 73.4% | 17.6% | 0.225 | 0.404 |
| 76 | 67.2% | 13.2% | 80.4% | 10.5% | 0.509 | 0.524 | 70.4% | 13.2% | 83.6% | 9.6% | 0.352 | 0.416 |
| 77 | 76.1% | 12.2% | 88.3% | 7.6% | 0.211 | 0.396 | 77.0% | 12.6% | 89.6% | 7.0% | 0.491 | 0.510 |
| 78 | 71.6% | 8.9% | 80.5% | 15.0% | 0.194 | 0.210 | 68.6% | 8.4% | 77.0% | 21.0% | 0.325 | 0.540 |
| 79 | 71.6% | 16.0% | 87.6% | 7.1% | 0.209 | 0.498 | 73.1% | 15.5% | 88.6% | 7.5% | 0.357 | 0.549 |
| 90 | 58.5% | 4.3% | 62.8% | 34.0% | 0.286 | 0.359 | 58.5% | 4.3% | 62.8% | 34.0% | 0.286 | 0.359 |
| 91 | 70.0% | 5.9% | 75.9% | 22.0% | 0.202 | 0.447 | 53.0% | 5.2% | 58.2% | 38.4% | 0.231 | 0.369 |
| 92 | 68.8% | 4.7% | 73.5% | 24.1% | 0.198 | 0.361 | 69.6% | 6.9% | 76.5% | 21.3% | 0.174 | 0.330 |
| 93 | 65.4% | 9.6% | 75.0% | 22.9% | 0.112 | 0.260 | 85.5% | 7.2% | 92.7% | 7.0% | 0.201 | 0.329 |
| 112 | 19.2% | 3.3% | 22.5% | 73.7% | 0.522 | 0.619 | 19.2% | 3.3% | 22.5% | 73.7% | 0.522 | 0.619 |
| 113 | 59.5% | 6.7% | 66.2% | 31.8% | 0.318 | 0.501 | 53.9% | 5.6% | 59.5% | 37.9% | 0.153 | 0.355 |
| 114 | 24.7% | 3.7% | 28.4% | 68.8% | 0.283 | 0.502 | 24.9% | 3.8% | 28.7% | 68.6% | 0.235 | 0.487 |
| 115 | 52.1% | 7.0% | 59.1% | 36.9% | 0.226 | 0.436 | 50.3% | 6.9% | 57.2% | 39.8% | 0.304 | 0.475 |
| 116 | 58.1% | 7.3% | 65.4% | 27.2% | 0.280 | 0.407 | 53.2% | 7.9% | 61.1% | 31.0% | 0.382 | 0.452 |
| 117 | 36.6% | 5.4% | 42.0% | 54.5% | 0.275 | 0.408 | 50.1% | 6.5% | 56.6% | 38.4% | 0.155 | 0.323 |
| Avg | | | | | 0.257 | 0.402 | | | | | 0.282 | 0.419 |

Table 18: With 9 county splits and 1995 cut edges, Alt 2 dominates the enacted plan.

*Id.*

226. Dr. Duchin drew an alternative map for HD Southwest (HD Alt 1 Southwest) that created additional majority-minority districts:




*Id*. at 35 (Figure 13).

227. Defendants' expert Dr. Morgan testified he has no basis to dispute that it is possible to draw additional majority-minority house districts. Morgan Dep. 24:22-24:09*; see also* Morgan Rep. 18, 21 (Charts 2 and 3); Morgan Dep. 29:10-30:04; Morgan Dep. 79:08-12; Morgan Dep. 82:15-18.

228. The enacted HD Southwest contains six majority BVAP districts (HDs 137, 140, 141, 150, 153, and 154). Duchin Rep. at 36 (Table 19).

229. HD Alt 1 Southwest contains eight majority BVAP districts (HDs Alt 1 Southwest 137, 140, 141, 150, 151, 153, 154, 171). *Id*. (Table 19).

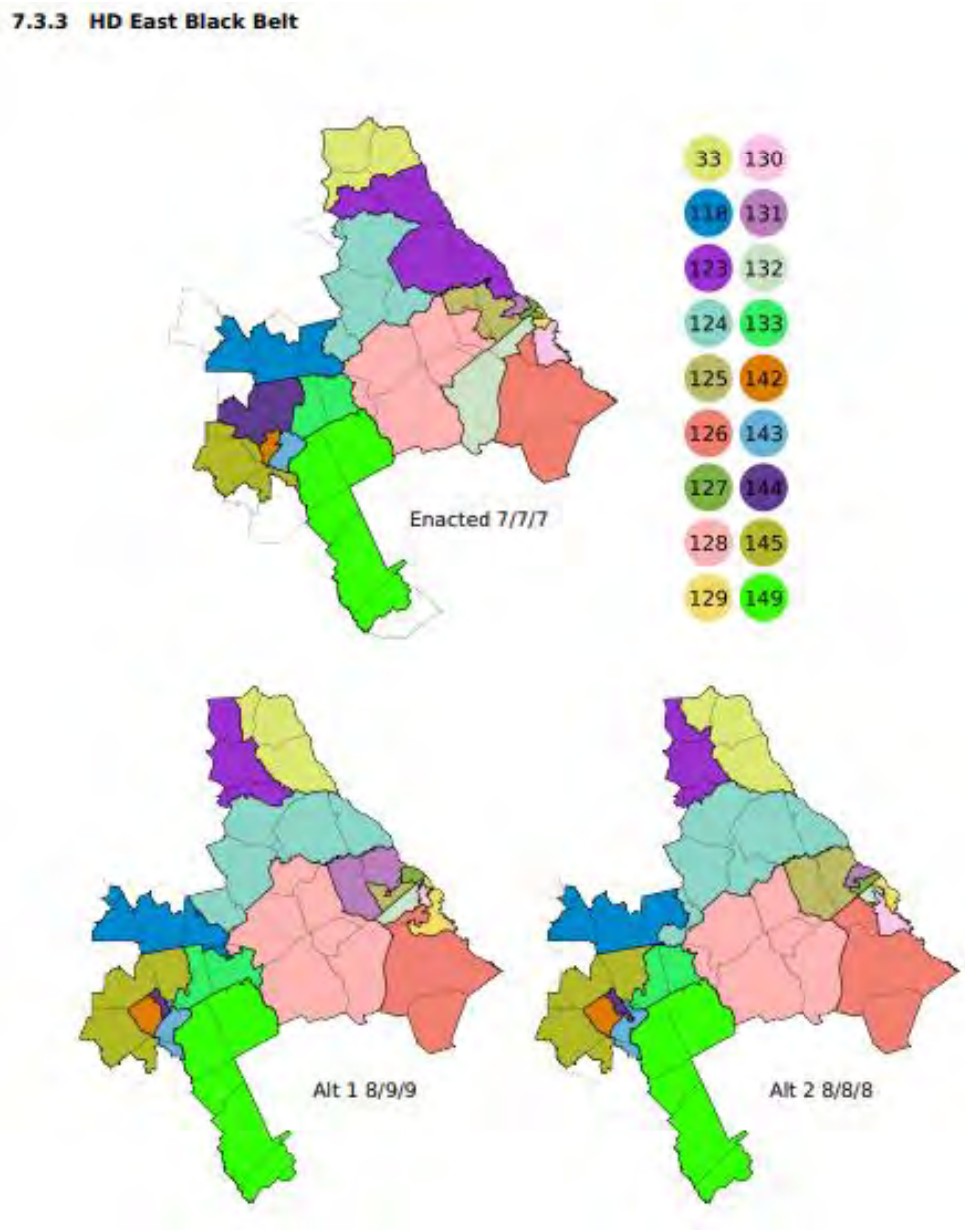
230. The table below provides a comparison between the enacted HD Southwest cluster and HD Alt 1 Southwest:

| | HD Southwest Enacted | | | | | | **HD Alt 1** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 137 | 52.1% | 4.5% | 56.6% | 40.8% | 0.165 | 0.328 | 51.7% | 3.7% | 55.4% | 42.0% | 0.143 | 0.259 |
| 140 | 57.6% | 8.0% | 65.6% | 31.7% | 0.192 | 0.289 | 57.1% | 7.9% | 65.0% | 32.4% | 0.197 | 0.257 |
| 141 | 57.5% | 6.6% | 64.1% | 31.8% | 0.200 | 0.261 | 53.6% | 6.7% | 60.3% | 35.5% | 0.299 | 0.423 |
| 146 | 27.6% | 4.7% | 32.3% | 61.8% | 0.195 | 0.257 | 23.3% | 4.9% | 28.2% | 64.4% | 0.208 | 0.468 |
| 147 | 30.1% | 7.2% | 37.3% | 55.3% | 0.261 | 0.331 | 31.8% | 7.2% | 39.0% | 55.1% | 0.220 | 0.341 |
| 148 | 34.0% | 3.1% | 37.1% | 60.4% | 0.235 | 0.438 | 38.6% | 3.4% | 42.0% | 56.1% | 0.388 | 0.590 |
| 150 | 53.6% | 6.1% | 59.7% | 38.3% | 0.275 | 0.439 | 51.2% | 5.3% | 56.5% | 41.5% | 0.250 | 0.544 |
| 151 | 42.4% | 7.3% | 49.7% | 47.2% | 0.222 | 0.528 | 51.0% | 7.5% | 58.5% | 38.6% | 0.275 | 0.424 |
| 152 | 26.1% | 2.3% | 28.4% | 67.9% | 0.297 | 0.394 | 34.2% | 3.2% | 37.4% | 58.7% | 0.314 | 0.473 |
| 153 | 67.9% | 2.5% | 70.4% | 27.7% | 0.297 | 0.298 | 52.9% | 2.7% | 55.6% | 43.0% | 0.400 | 0.536 |
| 154 | 54.8% | 1.7% | 56.5% | 42.2% | 0.332 | 0.410 | 50.1% | 2.1% | 52.2% | 45.7% | 0.175 | 0.261 |
| 169 | 29.0% | 7.7% | 36.7% | 61.0% | 0.226 | 0.283 | 24.0% | 9.0% | 33.0% | 64.6% | 0.296 | 0.456 |
| 170 | 24.2% | 8.7% | 32.9% | 64.2% | 0.342 | 0.531 | 26.8% | 12.5% | 39.3% | 57.9% | 0.223 | 0.285 |
| 171 | 39.6% | 4.6% | 44.2% | 53.9% | 0.368 | 0.347 | 51.0% | 4.0% | 55.0% | 43.4% | 0.249 | 0.275 |
| 172 | 23.3% | 13.4% | 36.7% | 61.0% | 0.316 | 0.437 | 25.1% | 9.4% | 34.5% | 63.1% | 0.217 | 0.375 |
| 173 | 36.3% | 5.4% | 41.7% | 55.7% | 0.378 | 0.564 | 35.4% | 5.6% | 41.0% | 56.4% | 0.412 | 0.424 |
| 175 | 24.2% | 5.0% | 29.2% | 66.5% | 0.374 | 0.472 | 21.0% | 5.7% | 26.7% | 68.7% | 0.143 | 0.273 |
| 176 | 22.7% | 8.2% | 30.9% | 66.2% | 0.160 | 0.335 | 23.8% | 6.2% | 30.0% | 67.1% | 0.116 | 0.227 |
| Avg | | | | | 0.269 | 0.386 | | | | | 0.252 | 0.383 |

Table 19: HD Southwest Alt 1 splits 12 counties within the cluster, to the state's 10 split counties. Its 2290 cut edges are more than the state's 2094, though the Reock scores are nearly identical.

*Id.*

231. Dr. Duchin provided two alternative HD East Black Belt maps ("HD Alt 1 East Black Belt" and "HD Alt 2 East Black Belt") that created additional majority-minority districts:




*Id*. at 37 (Figure 14).

232. Defendants' expert Dr. Morgan testified he has no basis to dispute that it is possible to draw additional majority-minority house districts. Morgan Dep.

24:22-24:09; *see also* Morgan Rep. 18, 21 (Charts 2 and 3); Morgan Dep. 29:10-30:04; Morgan Dep. 79:08-12; Morgan Dep. 82:15-18.

233. The enacted HD East Black Belt contains seven majority BVAP districts (HDs 126, 128, 129, 130, 132, 142, and 143). Duchin Rep. at 38 (Table 20 and Table 21).

234. HD Alt 1 East Black Belt contains eight majority BVAP districts (HDs Alt 1 East Black Belt 126, 128, 129, 130, 132, 142, 142, and 144). HD Alt 1 East Black also contains a majority BHVAP district (HD Alt 1 East Black Belt 133). *Id.* (Table 20)

235. HD Alt 2 East Black Belt also contains eight majority BVAP districts (HD Alt 2 East Black Belt 126, 128, 129, 130, 132, 142, 142, 144). *Id.* (Table 21).

236. The tables below compare the enacted East Black Belt clusters with HD Alt 1 East Black Belt and HD Alt 2 East Black Belt:

| | HD East Black Belt Enacted | | | | | | HD Alt 1 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 33 | 11.2% | 3.1% | 14.3% | 82.3% | 0.371 | 0.487 | 18.7% | 3.8% | 22.5% | 74.6% | 0.405 | 0.343 |
| 118 | 23.6% | 3.7% | 27.3% | 69.7% | 0.223 | 0.350 | 23.2% | 3.1% | 26.3% | 70.6% | 0.218 | 0.329 |
| 123 | 24.3% | 4.3% | 28.6% | 68.1% | 0.178 | 0.295 | 13.3% | 5.8% | 19.1% | 76.3% | 0.281 | 0.357 |
| 124 | 25.6% | 6.2% | 31.8% | 65.0% | 0.233 | 0.442 | 28.4% | 4.7% | 33.1% | 64.4% | 0.224 | 0.362 |
| 125 | 23.7% | 7.7% | 31.4% | 63.0% | 0.173 | 0.409 | 24.1% | 8.0% | 32.1% | 61.5% | 0.255 | 0.328 |
| 126 | 54.5% | 3.2% | 57.7% | 40.0% | 0.414 | 0.516 | 52.5% | 3.5% | 56.0% | 41.6% | 0.322 | 0.534 |
| 127 | 18.5% | 4.8% | 23.3% | 68.1% | 0.201 | 0.351 | 14.6% | 4.9% | 19.5% | 70.1% | 0.585 | 0.546 |
| 128 | 50.4% | 1.7% | 52.1% | 46.5% | 0.319 | 0.601 | 50.1% | 1.6% | 51.7% | 46.7% | 0.357 | 0.628 |
| 129 | 54.9% | 4.3% | 59.2% | 37.2% | 0.254 | 0.482 | 51.9% | 3.5% | 55.4% | 40.7% | 0.108 | 0.314 |
| 130 | 59.9% | 3.9% | 63.8% | 33.7% | 0.255 | 0.508 | 54.4% | 4.3% | 58.7% | 38.7% | 0.253 | 0.451 |
| 131 | 17.6% | 5.9% | 23.5% | 68.2% | 0.283 | 0.377 | 27.1% | 5.1% | 32.2% | 63.3% | 0.285 | 0.604 |
| 132 | 52.3% | 7.8% | 60.1% | 35.6% | 0.296 | 0.270 | 53.6% | 8.2% | 61.8% | 33.1% | 0.293 | 0.243 |
| 133 | 36.8% | 2.1% | 38.9% | 58.4% | 0.415 | 0.543 | 48.7% | 2.0% | 50.7% | 47.2% | 0.178 | 0.385 |
| 142 | 59.5% | 3.7% | 63.2% | 34.8% | 0.229 | 0.353 | 50.8% | 3.7% | 54.5% | 42.3% | 0.539 | 0.605 |
| 143 | 60.8% | 4.7% | 65.5% | 32.3% | 0.299 | 0.502 | 52.4% | 6.3% | 58.7% | 38.4% | 0.176 | 0.332 |
| 144 | 29.3% | 2.6% | 31.9% | 63.0% | 0.325 | 0.510 | 50.4% | 4.3% | 54.7% | 41.3% | 0.299 | 0.298 |
| 145 | 35.7% | 5.9% | 41.6% | 55.1% | 0.194 | 0.376 | 23.1% | 2.8% | 25.9% | 71.1% | 0.204 | 0.422 |
| 149 | 32.1% | 5.7% | 37.8% | 61.0% | 0.223 | 0.325 | 32.1% | 5.7% | 37.8% | 61.0% | 0.223 | 0.325 |
| Avg | | | | | 0.271 | 0.428 | | | | | 0.289 | 0.411 |

Table 20: The Alt 1 map has 10 split counties within the HD East Black Belt cluster, while the enacted plan has 9. Its 1775 cut edges improves on the state's 1887, while also being more compact by Polsby-Popper.

| | HD East Black Belt Enacted | | | | | | HD Alt 2 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 33 | 11.2% | 3.1% | 14.3% | 82.3% | 0.371 | 0.487 | 18.3% | 3.5% | 21.8% | 75.2% | 0.370 | 0.323 |
| 118 | 23.6% | 3.7% | 27.3% | 69.7% | 0.223 | 0.350 | 27.0% | 4.1% | 31.1% | 65.9% | 0.229 | 0.342 |
| 123 | 24.3% | 4.3% | 28.6% | 68.1% | 0.178 | 0.295 | 13.7% | 6.0% | 19.7% | 75.8% | 0.293 | 0.395 |
| 124 | 25.6% | 6.2% | 31.8% | 65.0% | 0.233 | 0.442 | 25.5% | 3.8% | 29.3% | 68.1% | 0.234 | 0.381 |
| 125 | 23.7% | 7.7% | 31.4% | 63.0% | 0.173 | 0.409 | 30.2% | 6.1% | 36.3% | 60.1% | 0.396 | 0.670 |
| 126 | 54.5% | 3.2% | 57.7% | 40.0% | 0.414 | 0.516 | 50.7% | 4.2% | 54.9% | 42.3% | 0.394 | 0.494 |
| 127 | 18.5% | 4.8% | 23.3% | 68.1% | 0.201 | 0.351 | 17.6% | 6.2% | 23.8% | 67.2% | 0.267 | 0.264 |
| 128 | 50.4% | 1.7% | 52.1% | 46.5% | 0.319 | 0.601 | 50.2% | 1.5% | 51.7% | 46.8% | 0.409 | 0.672 |
| 129 | 54.9% | 4.3% | 59.2% | 37.2% | 0.254 | 0.482 | 50.4% | 3.6% | 54.0% | 41.8% | 0.248 | 0.323 |
| 130 | 59.9% | 3.9% | 63.8% | 33.7% | 0.255 | 0.508 | 57.1% | 4.7% | 61.8% | 35.4% | 0.231 | 0.325 |
| 131 | 17.6% | 5.9% | 23.5% | 68.2% | 0.283 | 0.377 | 17.6% | 5.7% | 23.3% | 67.8% | 0.318 | 0.373 |
| 132 | 52.3% | 7.8% | 60.1% | 35.6% | 0.296 | 0.270 | 54.4% | 7.1% | 61.5% | 34.1% | 0.219 | 0.278 |
| 133 | 36.8% | 2.1% | 38.9% | 58.4% | 0.415 | 0.543 | 46.6% | 2.1% | 48.7% | 49.0% | 0.296 | 0.438 |
| 142 | 59.5% | 3.7% | 63.2% | 34.8% | 0.229 | 0.353 | 50.1% | 3.8% | 53.9% | 42.9% | 0.436 | 0.605 |
| 143 | 60.8% | 4.7% | 65.5% | 32.3% | 0.299 | 0.502 | 52.9% | 6.3% | 59.2% | 38.0% | 0.143 | 0.316 |
| 144 | 29.3% | 2.6% | 31.9% | 63.0% | 0.325 | 0.510 | 51.0% | 4.2% | 55.2% | 40.8% | 0.226 | 0.243 |
| 145 | 35.7% | 5.9% | 41.6% | 55.1% | 0.194 | 0.376 | 23.1% | 2.8% | 25.9% | 71.1% | 0.190 | 0.359 |
| 149 | 32.1% | 5.7% | 37.8% | 61.0% | 0.223 | 0.325 | 32.1% | 5.7% | 37.8% | 61.0% | 0.223 | 0.325 |
| Avg | | | | | 0.271 | 0.428 | | | | | 0.285 | 0.396 |

Table 21: Alt 2 eliminates one county split relative to the enacted plan and has a sharply improved 1604 cut edges.

*Id*. (Table 20 and Table 21).

237. Dr. Duchin also provided alternative maps for the HD Southeast cluster ("HD Alt 1 Southeast") that contains additional majority-minority districts:

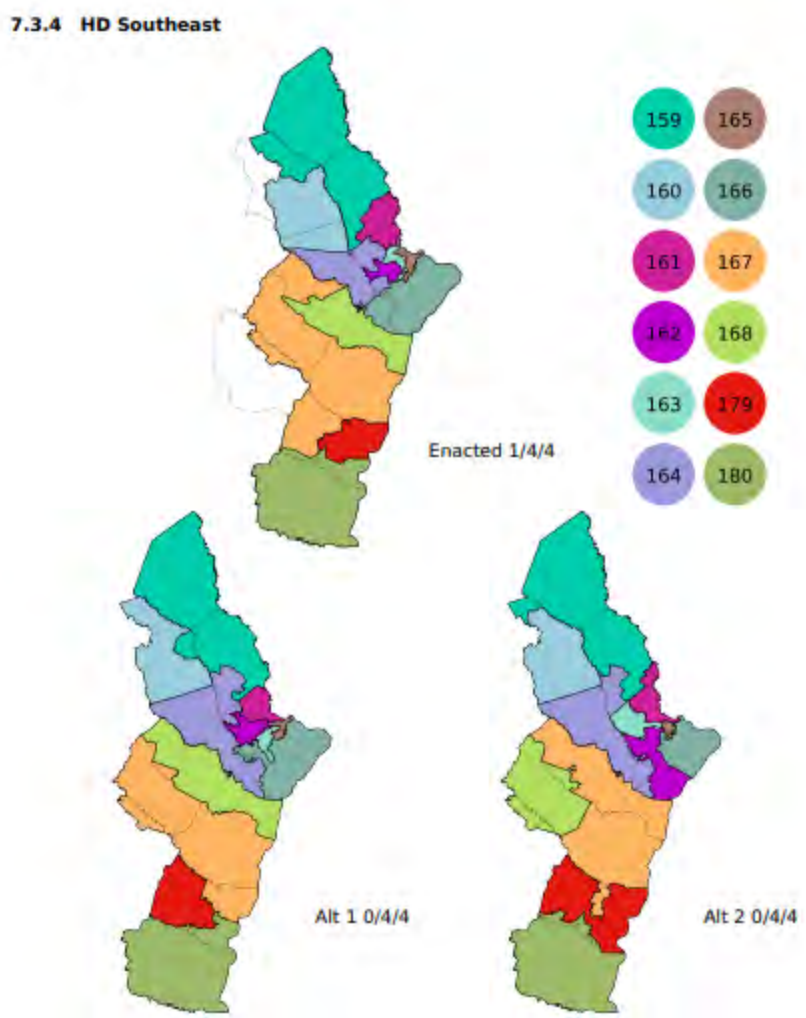



Figure 15: HD Southeast (12 districts).

*Id*. at 39 (Figure 15).

238. Defendants' expert Dr. Morgan testified he has no basis to dispute that it is possible to draw additional majority-minority house districts. Morgan Dep. 24:22-24:09; *see also* Morgan Rep. at 24, 27 (Charts 2 and 3); Morgan Dep. 29:10-30:04; Morgan Dep. 79:08-12; Morgan Dep. 82:15-18.

239. Enacted HD Southeast contains one majority BVAP district (HD 165) and three majority BHVAP districts (HDs 162, 163, 168). Duchin Rep. at 40 (Table 22 and Table 23).

240. HD Alt 1 Southeast contains five majority BHVAP districts (HDs Alt 1 Southeast 161, 162, 163, 165 and 168). *Id.* (Table 22).

241. HD Alt 2 Southeast also contains five majority BHVAP districts (HDs Alt 2 Southeast 161, 162, 163, 165 and 168). *Id*. (Table 23).

242. The table below provides a comparison of the enacted HD Southeast cluster and HD Alt 1 Southeast and HD Alt 2 Southeast:

| | HD Southeast Enacted | | | | | | **HD Alt 1** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 159 | 24.5% | 2.9% | 27.4% | 69.4% | 0.219 | 0.345 | 22.2% | 3.7% | 25.9% | 70.5% | 0.204 | 0.358 |
| 160 | 22.6% | 5.0% | 27.6% | 68.5% | 0.369 | 0.483 | 26.6% | 5.1% | 31.7% | 64.7% | 0.242 | 0.373 |
| 161 | 27.1% | 6.8% | 33.9% | 60.2% | 0.306 | 0.511 | 42.1% | 8.8% | 50.9% | 42.7% | 0.359 | 0.475 |
| 162 | 43.7% | 9.6% | 53.3% | 40.6% | 0.211 | 0.366 | 39.9% | 10.5% | 50.4% | 42.6% | 0.147 | 0.372 |
| 163 | 45.5% | 7.4% | 52.9% | 41.9% | 0.175 | 0.271 | 44.0% | 6.9% | 50.9% | 43.7% | 0.244 | 0.335 |
| 164 | 23.5% | 8.5% | 32.0% | 60.6% | 0.167 | 0.299 | 12.9% | 5.1% | 18.0% | 76.5% | 0.143 | 0.309 |
| 165 | 50.3% | 5.3% | 55.6% | 39.2% | 0.162 | 0.230 | 47.3% | 4.7% | 52.0% | 42.9% | 0.189 | 0.380 |
| 166 | 5.7% | 4.1% | 9.8% | 84.7% | 0.364 | 0.429 | 7.2% | 4.7% | 11.9% | 82.4% | 0.245 | 0.459 |
| 167 | 22.3% | 7.4% | 29.7% | 66.0% | 0.192 | 0.417 | 20.0% | 6.2% | 26.2% | 70.1% | 0.266 | 0.327 |
| 168 | 46.3% | 10.3% | 56.6% | 39.3% | 0.258 | 0.243 | 45.9% | 10.7% | 56.6% | 39.2% | 0.236 | 0.246 |
| 179 | 27.0% | 6.4% | 33.4% | 63.7% | 0.417 | 0.451 | 32.0% | 7.5% | 39.5% | 56.9% | 0.433 | 0.539 |
| 180 | 18.2% | 5.6% | 23.8% | 71.2% | 0.396 | 0.606 | 17.0% | 5.4% | 22.4% | 72.8% | 0.348 | 0.594 |
| Avg | | | | | 0.270 | 0.388 | | | | | 0.255 | 0.397 |

Table 22: HD Southeast Alt 1 has fewer county splits (5 vs. 6) and a better cut edges score (1122 vs. 1245) than the enacted plan.

| | HD Southeast Enacted | | | | | | **HD Alt 2** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HD | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock | Black VAP | Hisp VAP | BH VAP | White VAP | Polsby Popper | Reock |
| 159 | 24.5% | 2.9% | 27.4% | 69.4% | 0.219 | 0.345 | 22.0% | 3.6% | 25.6% | 70.7% | 0.192 | 0.356 |
| 160 | 22.6% | 5.0% | 27.6% | 68.5% | 0.369 | 0.483 | 26.3% | 5.1% | 31.4% | 64.9% | 0.333 | 0.515 |
| 161 | 27.1% | 6.8% | 33.9% | 60.2% | 0.306 | 0.511 | 41.6% | 10.0% | 51.6% | 42.2% | 0.180 | 0.332 |
| 162 | 43.7% | 9.6% | 53.3% | 40.6% | 0.211 | 0.366 | 43.0% | 8.5% | 51.5% | 42.5% | 0.191 | 0.341 |
| 163 | 45.5% | 7.4% | 52.9% | 41.9% | 0.175 | 0.271 | 42.7% | 7.7% | 50.4% | 43.1% | 0.282 | 0.411 |
| 164 | 23.5% | 8.5% | 32.0% | 60.6% | 0.167 | 0.299 | 13.4% | 5.5% | 18.9% | 75.6% | 0.168 | 0.290 |
| 165 | 50.3% | 5.3% | 55.6% | 39.2% | 0.162 | 0.230 | 45.5% | 5.0% | 50.5% | 44.4% | 0.229 | 0.501 |
| 166 | 5.7% | 4.1% | 9.8% | 84.7% | 0.364 | 0.429 | 7.2% | 4.1% | 11.3% | 83.0% | 0.391 | 0.653 |
| 167 | 22.3% | 7.4% | 29.7% | 66.0% | 0.192 | 0.417 | 36.5% | 7.4% | 43.9% | 52.5% | 0.204 | 0.331 |
| 168 | 46.3% | 10.3% | 56.6% | 39.3% | 0.258 | 0.243 | 40.9% | 10.8% | 51.7% | 44.3% | 0.327 | 0.555 |
| 179 | 27.0% | 6.4% | 33.4% | 63.7% | 0.417 | 0.451 | 18.7% | 6.0% | 24.7% | 71.6% | 0.196 | 0.454 |
| 180 | 18.2% | 5.6% | 23.8% | 71.2% | 0.396 | 0.606 | 18.6% | 5.7% | 24.3% | 70.7% | 0.346 | 0.577 |
| Avg | | | | | 0.270 | 0.388 | | | | | 0.253 | 0.443 |

Table 23: Alt 2 also has just 5 county splits, to go with 1263 cut edges.

*Id*. (Table 22 and Table 23).

### C. Compactness and Traditional Redistricting Principles

243. Dr. Duchin concluded that it is possible to draw these additional majority-minority districts in the congressional, senate, and house plans while comporting with traditional redistricting principles. Duchin Rep. at 5; Duchin Dep. 65:06-66:09.

244. Defendants' expert Dr. Morgan testified that he has no basis to dispute that Dr. Duchin's illustrative majority-minority districts are "reasonably configured." Morgan Dep. at 21:12-28:08; *see also* Morgan Rep. at 18, 21-22, 24, 27-28 (Charts 2, 3, 5, 6, and 7).

245. Dr. Duchin testified that throughout the map-drawing process, she balanced these redistricting principles. Duchin Dep. 122:08-18.

246. Dr. Duchin examined several of the qualitative and quantitative redistricting principles codified by the Georgia legislature. Duchin Rep. at 20-24.

247. All of the districts in all of Dr. Duchin's illustrative congressional, senate, and house district are contiguous. Duchin Rep. at 20.

248. As demonstrated by the chart below, Dr. Duchin tightly balanced the populations of each of her illustrative congressional, senate, and house maps:

| | Maximum positive deviation | Maximum negative deviation | Top-to-bottom deviation |
|---|---|---|---|
| EnactedCD | +1 | −1 | 2 |
| DuncanKennedy | +2 | −1 | 3 |
| CD Alt | +1 | −1 | 2 |
| EnactedSD | +1879 | −1964 | 3843 (2.01%) |
| SD Alt Eff 1 | +2457 | −2598 | 5055 (2.64%) |
| SD Alt Eff 2 | +2547 | −2490 | 5037 (2.63%) |
| SD Alt Eff 3 | +3200 | −3305 | 6505 (3.40%) |
| EnactedHD | +797 | −833 | 1630 (2.74%) |
| HD Alt Eff 1 | +1194 | −1176 | 2370 (3.98%) |
| HD Alt Eff 2 | +1222 | −1097 | 2319 (3.90%) |
| HD Alt Eff 3 | +1173 | −1026 | 2199 (3.70%) |

*Id*. at 20 (Table 7).

249. Dr. Duchin compared the overall average district compactness scores of the enacted plans and each of her illustrative plans under the Polsby-Popper, Reock, and "cut edges" approach, as demonstrated by the chart below:

| | **avg Polsby-Popper** (higher is better) | **avg Reock** (higher is better) | **Block cut edges** (lower is better) |
|---|---|---|---|
| **BenchmarkCD** | 0.238 | 0.452 | 5775 |
| **EnactedCD** | 0.267 | 0.441 | 5075 |
| **DuncanKennedy** | 0.295 | 0.471 | 4665 |
| **CD Alt** | 0.301 | 0.473 | 4665 |
| **BenchmarkSD** | 0.250 | 0.421 | 12,549 |
| **EnactedSD** | 0.287 | 0.418 | 11,005 |
| **SD Alt Eff 1** | 0.287 | 0.427 | 10,897 |
| **SD Alt Eff 2** | 0.296 | 0.440 | 10,349 |
| **SD Alt EFf 3** | 0.295 | 0.431 | 10,479 |
| **BenchmarkHD** | 0.244 | 0.382 | 24,001 |
| **EnactedHD** | 0.278 | 0.391 | 22,014 |
| **HD Alt Eff 1** | 0.261 | 0.391 | 21,843 |
| **HD Alt Eff 2** | 0.263 | 0.399 | 21,907 |
| **HD Alt Eff 3** | 0.279 | 0.403 | 20,917 |

Table 8: Compactness scores for each plan submitted with January 13 Report.

Canter Decl ¶ 28 (Moon Duchin Notice of Errata ("Duchin Errata") at 2 (April 26, 2023)).

250. Dr. Duchin opined that overall compactness scores of her illustrative districts are comparable or better than the enacted plan, as demonstrated by the tables above. Duchin Rep. at 6 (Figure 1) and 21 (Table 8); Duchin Dep. 103:09-106:05; Duchin Rep. at 25 (Table 11); Duchin Rep. at 27 (Table 12); *Id*. (Table 13); *Id*. at 29 (Table 14); *Id*. at 31 (Table 15); *Id*. (Table 16); *Id*. (Table 17); *Id*. (Table 18); *Id*. at

36 (Table 19); *Id*. at 38 (Table 20); *Id*. (Table 21); *Id*. at 40 (Table 22); *Id*. (Table 23).

251. Dr. Duchin also compared the compactness scores of each of the individual districts in the district clusters she examined as part of her *Gingles* 1 analysis and determined that each of the clusters were as compact or comparable, and that each of the districts in those clusters were as compact or comparable. Duchin Rep. at 25- 40 (Tables 11-23).

252. Dr. Morgan testified that Dr. Duchin's illustrative plans were as compact or comparable. *See* Morgan Dep. 79:13-82:18.

253. Dr. Duchin also opined that her alternative plans respect the integrity of political subdivisions such as counties, cities, and voting precincts. Duchin Rep. 5, 22.

254. The chart below compares the number of political subdivisions splits in the enacted plans with Dr. Duchin's illustrative plans:

| | County Splits (out of 159) | County Pieces | Muni Splits (out of 538) | Muni Pieces | Precinct Splits (out of 2685) | Precinct Pieces |
|---|---|---|---|---|---|---|
| **BenchmarkCD** | 16 | 38 | 67 | 141 | 67 | 134 |
| **EnactedCD** | 15 | 36 | 64 | 136 | 86 | 172 |
| **DuncanKennedy** | 15 | 36 | 53 | 114 | 66 | 132 |
| **CD Alt** | 13 | 30 | 58 | 127 | 47 | 95 |
| **BenchmarkSD** | 37 | 100 | 114 | 269 | 154 | 309 |
| **EnactedSD** | 29 | 89 | 109 | 266 | 144 | 289 |
| **SD Alt Eff 1** | 33 | 95 | 112 | 275 | 110 | 221 |
| **SD Alt Eff 2** | 26 | 78 | 108 | 264 | 97 | 196 |
| **SD Alt Eff 3** | 29 | 84 | 108 | 264 | 106 | 213 |
| **BenchmarkHD** | 72 | 284 | 169 | 506 | 303 | 630 |
| **EnactedHD** | 69 | 278 | 166 | 494 | 352 | 724 |
| **HD Alt Eff 1** | 73 | 276 | 164 | 492 | 279 | 570 |
| **HD Alt Eff 2** | 69 | 266 | 168 | 494 | 276 | 567 |
| **HD Alt Eff 3** | 69 | 265 | 165 | 478 | 277 | 567 |

*Id*. at 22 (Table 9). *See also* Duchin Errata at 3.

255. Although Dr. Duchin did not have access to incumbent addresses, she did examine incumbency through analyzing core retention. *Id*. at 24.

256. Defendants' mapping expert explained that "protecting incumbents, including preserving cores of districts, is a traditional redistricting principle. Continuity of district representation is a traditional districting factor. Voters and residents establish relationships with their elected representatives." Morgan Rep. at 8-9.

257. Dr. Duchin determined that the legislature "placed a low priority on core retention, i.e., on maintaining voters in the same districts as they belonged to in the benchmark "congressional, senate, and house plans. Duchin Rep. at 24; Duchin

Dep. 115:06-119:10. Dr. Duchin determined that core retention was particularly poor in the enacted house plan. Duchin Rep. at 24.

258. Dr. Duchin reviewed a voluminous record of public testimony. Duchin Dep. 68:18-69:10. This community of interest testimony informed Dr. Duchin's hand-drawing process. *Id*. 70:08-70:71:06; 79:09-79:16; 163:15-163:25. *See also* Duchin Rep. at 79-80. *See also* Bagley Rep. at 48, 50, 52, 53.

## V. *Gingles* 2: Minority Group Political Cohesion in Georgia.

### A. Contemporary Evidence of Minority Group Cohesive Voting

259. Plaintiffs' expert Dr. Benjamin Schneer completed a racially polarized voting ("RPV") analysis. *See generally* Canter Decl. ¶ 24 (Expert Report of Benjamin Schneer ("Schneer Rep.")).

260. "To identify instances of RPV in Georgia," Dr. Schneer "examine[d] (1) whether members of a minority group of interest appear to be *cohesive* in their electoral support for a candidate of choice (Specifically, does more than half of a given minority group support the same candidate?); and, (2) whether White voters oppose this candidate (Specifically, do more than half of White voters oppose the minority candidate of choice?)." Schneer Rep. at 6.

261. Dr. Schneer's analysis relied on historical voting data in Georgia going back to 2012. *Id*. at 6-7.

#### 1. Statewide Evidence of Minority Group Cohesive Voting

262. Dr. Schneer opined that "Black and Hispanic voters' past behavior in statewide elections reveals that these groups had a clear candidate of choice in each election, with large majorities of these voters supporting the same candidate in each election and voting cohesively." *Id*. at 17; *id*. at 18 (Figure 1).

263. Defendants' expert Dr. Alford does not dispute any of these individual findings. In Dr. Alfords report he noted that Dr. Schneer "… provide[d] analysis that demonstrates that Black voters provide uniformly high levels of support for Democratic candidates and white voters provide uniformly high levels of support for Republican candidates." Canter Decl. ¶ 25 (Expert Report of John Alford ("Alford Rep.") at 4).

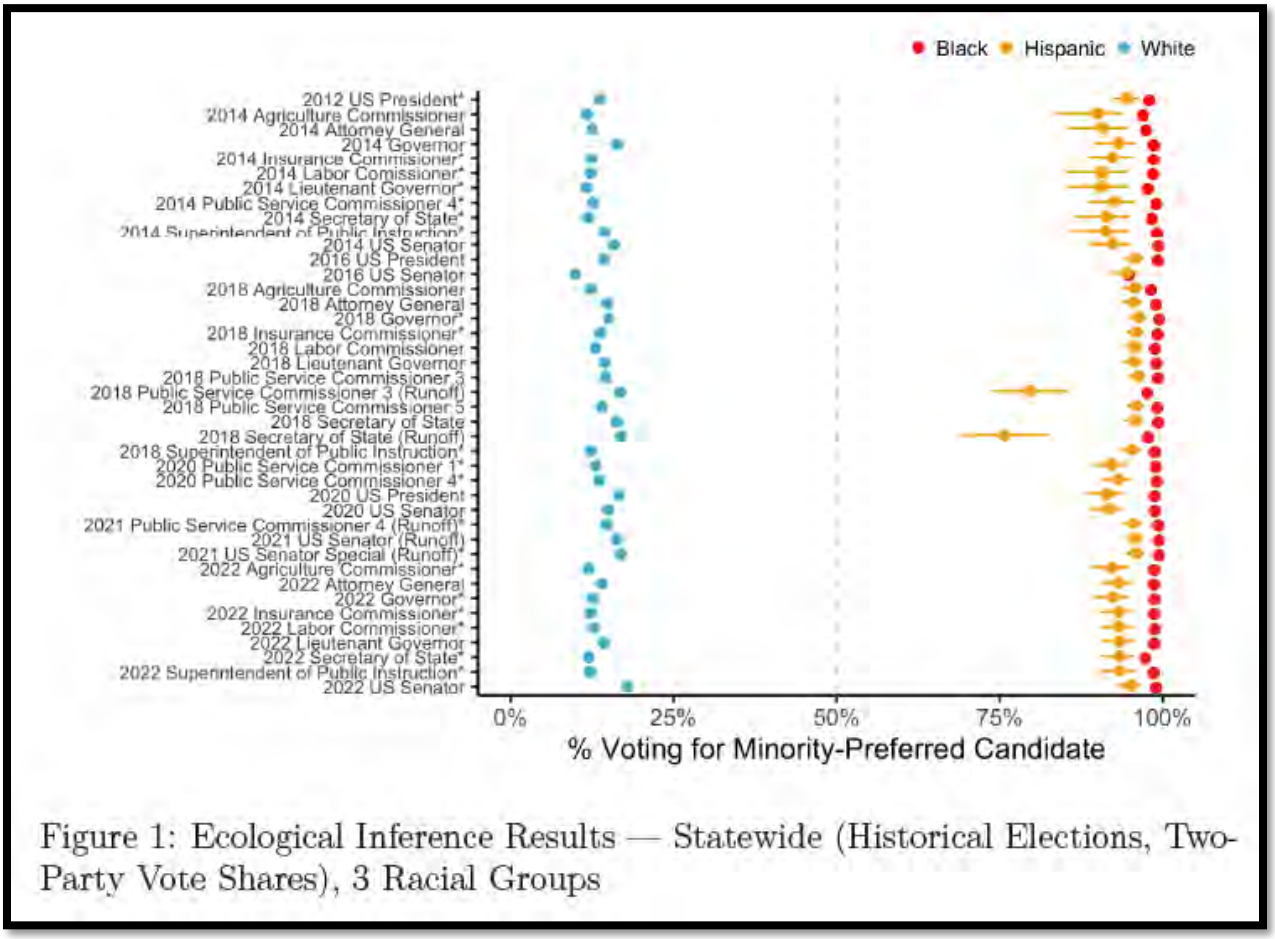



Figure 1: Ecological Inference Results — Statewide (Historical Elections, Two-Party Vote Shares), 3 Racial Groups

264. During his deposition, Dr. Alford, further testified, "I reach the same conclusion [as Dr. Schneer and Dr. Brunell] with regard to if the standard is simply that two racial groups are voting in opposite directions then it abundantly clear from everything that's in evidence in this case." See Canter Decl. ¶ 26 (Deposition of John Alford ("Alford Dep.") 126:22-127:21).

**2. Cluster-Level Evidence of Minority Group Cohesive Voting**

265. Dr. Schneer concluded that "[a]cross [SD Atlanta, SD Gwinnet, and SD East Black Belt, there is] RPV between White and Black voters. For each cluster, Black voters cohesively support a candidate of choice." ~~*Id*~~ Expert Report of Benjamin Schneer ("Schneer Rep.") at 44-45.

266. Dr. Schneer also concluded that "in the Atlanta and Gwinnett clusters, Hispanic voters cohesively support the same candidate of choice as Black voters and the lower confidence interval on the vote share estimate does not overlap with[] the 50% threshold in all elections where a minority candidate runs against a non-minority candidate." *Id*.

267. Dr. Schneer also concluded that in the East Black Belt cluster, Hispanic voters… systematically support the same candidates of choice as Black voters," although the "estimates for elections before 2016 tend to be more uncertain, with the confidence including the 50% threshold." *Id*.

268. The figure below reflects the results of Dr. Schneer's racially polarized voting analysis for each of these clusters.

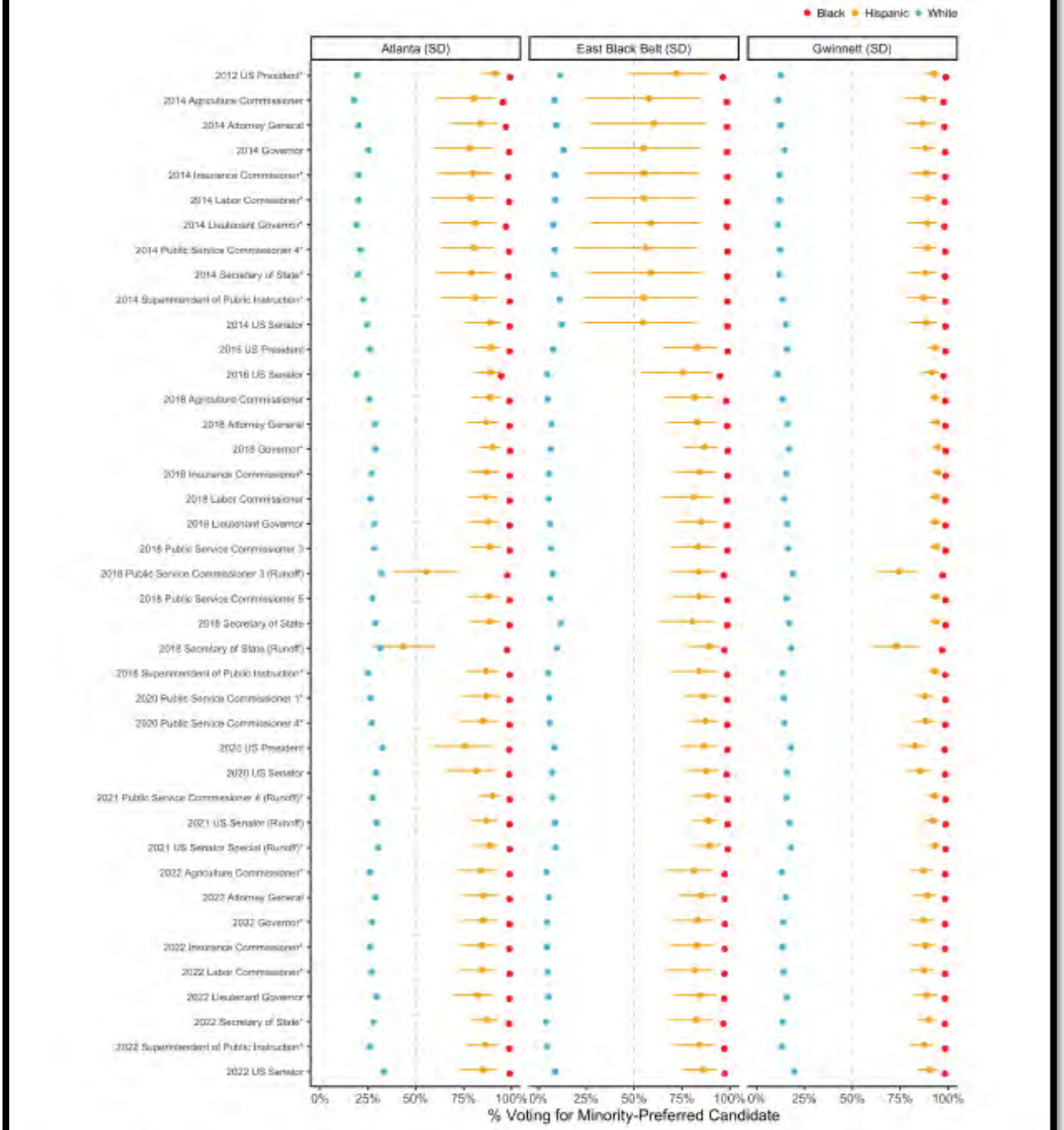



Figure 19: Ecological Inference Results — State Senate Clusters (Historical Elections, Two-Party Vote Shares)

*Id*. at 47 (Figure 19).

269. Dr. Schneer concluded that there is "evidence of RPV between White and Black voters across all state House clusters I examine[d]. Black voters cohesively support a candidate of choice[.]" *Id.* at 45-46.

270. Dr. Schneer also concluded that "Hispanic voters join black voters in supporting the same candidate of choice in each [house district] cluster." *Id*.

271. The figure below reflects the results of Dr. Schneer's racially polarized voting analysis for HD Atlanta, HD Southwest, HD East Black Belt, and HD Southeast. *Id*. at 48 (Figure 20).

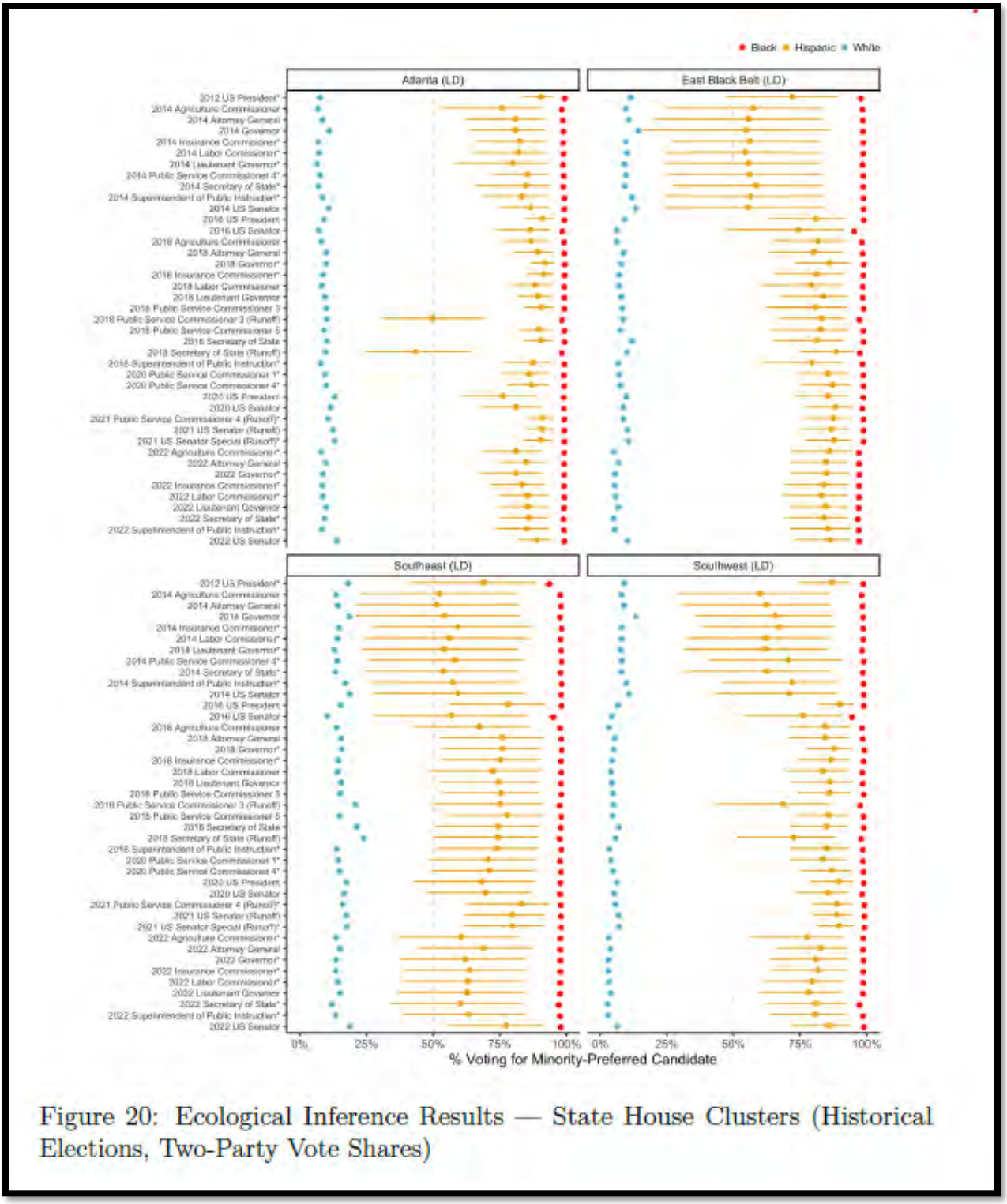



Figure 20: Ecological Inference Results — State House Clusters (Historical Elections, Two-Party Vote Shares)

*Id*. at 48 (Figure 20)

### 3. Congressional District-Level Evidence of Minority Group Cohesive Voting

272. Dr. Schneer concluded that there is "RPV between Black voters on the one hand and White voters on the other hand when pooling across all [of the districts in the Enacted Congressional Map] (e.g., statewide) as well as specifically for all [districts in the Enacted Congressional Map] other than CD 5." *Id*. at 21.

273. Dr. Schneer stated that "[i]n [enacted Congressional districts] 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13 and 14, Black voters supported, by an overwhelming margin, the minority candidate in all historical elections in which they ran." *Id*. at 19-20.

274. Dr. Schneer stated that "CD 3 demonstrates clear evidence of RPV between White and Black voters for all elections that I examine[d]. For Black voters, I never estimate[d] a minority-preferred candidate vote share below 92.8%." *Id*. at 20.

275. Dr. Schneer stated that "CD 7 presents [a] strong example among the congressional districts of RPV, with Black voters cohering around minority candidates (and other minority-preferred candidates) . . . In every election with a minority candidate running against a non-minority candidate, minority voters supported the minority candidate, often overwhelmingly." *Id*.

276. Dr. Schneer also produced five figures that reflect the results of his racially polarized voting analysis for all of the districts in the Enacted Congressional Map. *Id*. at 24 (Figure 3); 25 (Figure 4); 26 (Figure 5); 27 (Figure 6); 28 (Figure 7).

277. The figures reflect that Black voters in each district in the Enacted Congressional Map vote cohesively for the same candidate of choice. *Id*. at 24 (Figure 3); 25 (Figure 4); 26 (Figure 5); 27 (Figure 6); 28 (Figure 7).

278. The five figures from Dr. Schneer's report reflecting this information are presented on the following five pages.

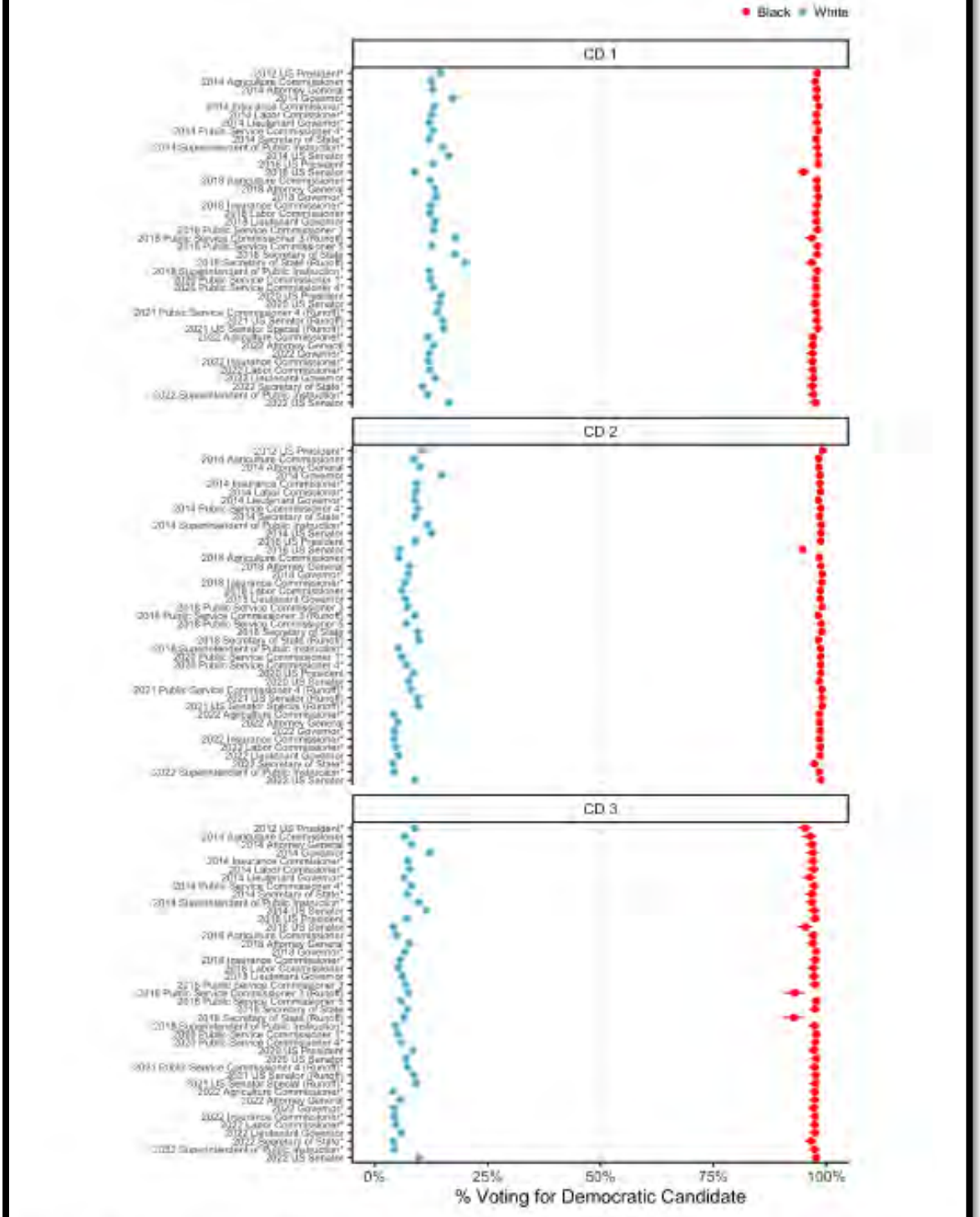



Figure 3: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

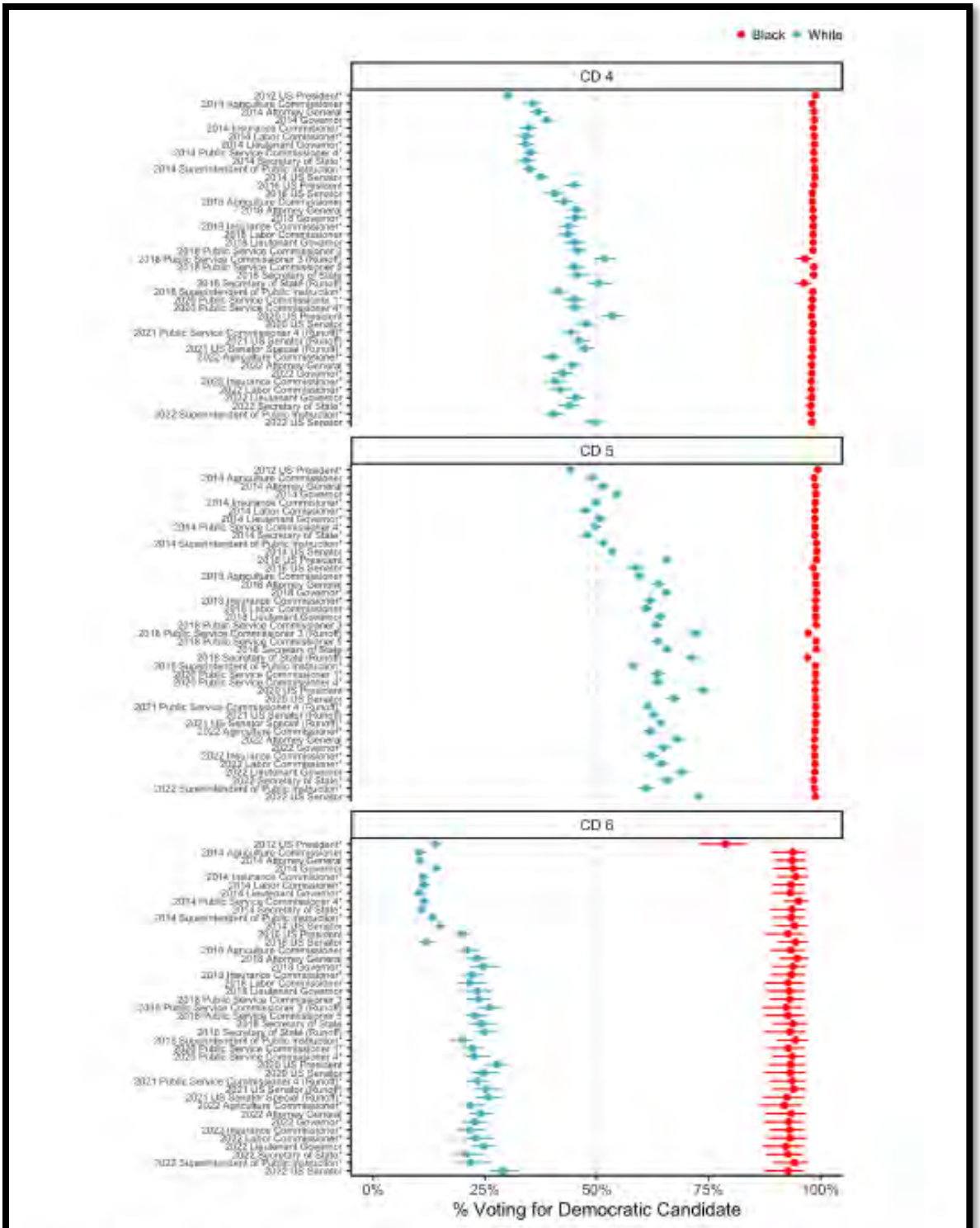



Figure 4: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

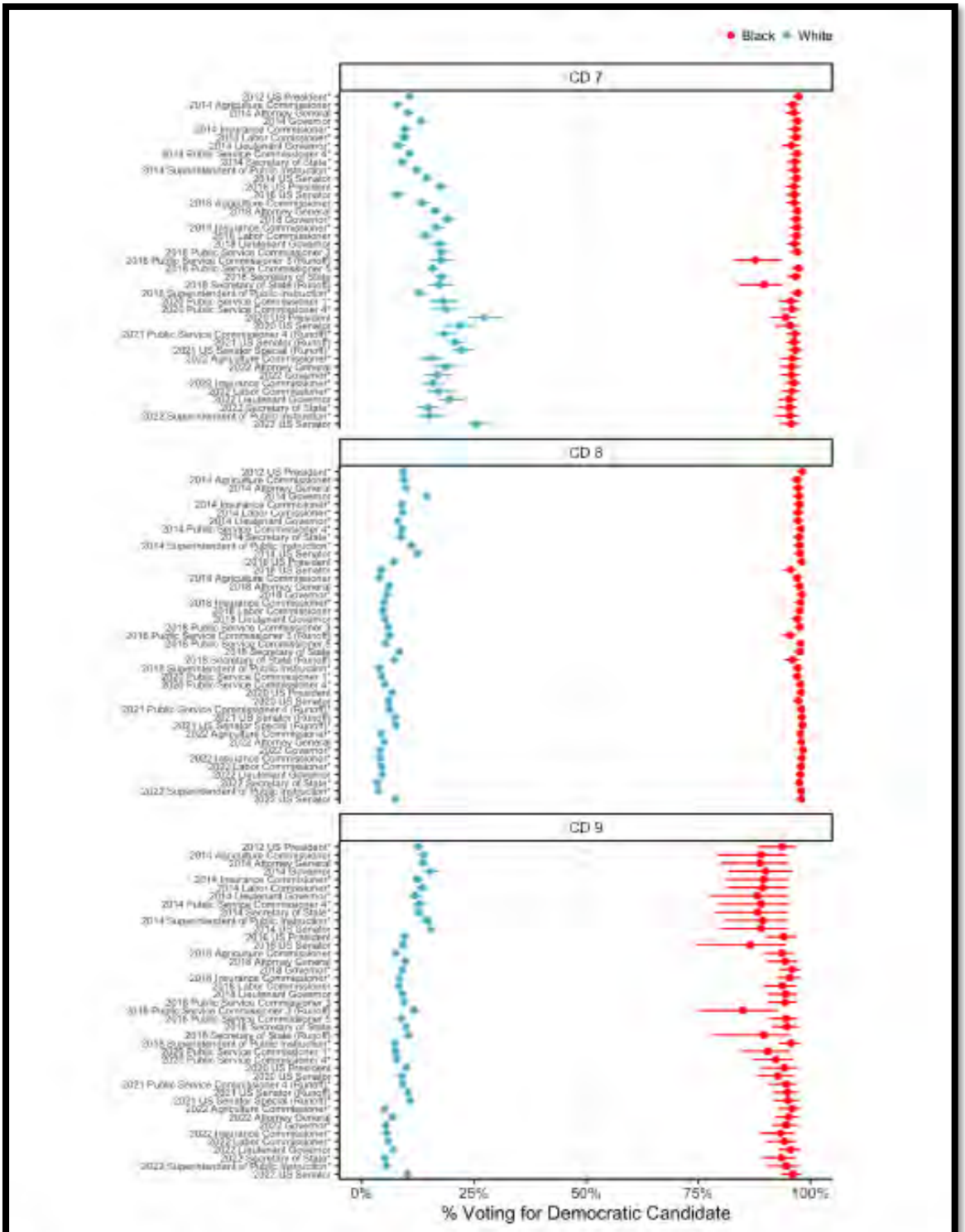



Figure 5: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

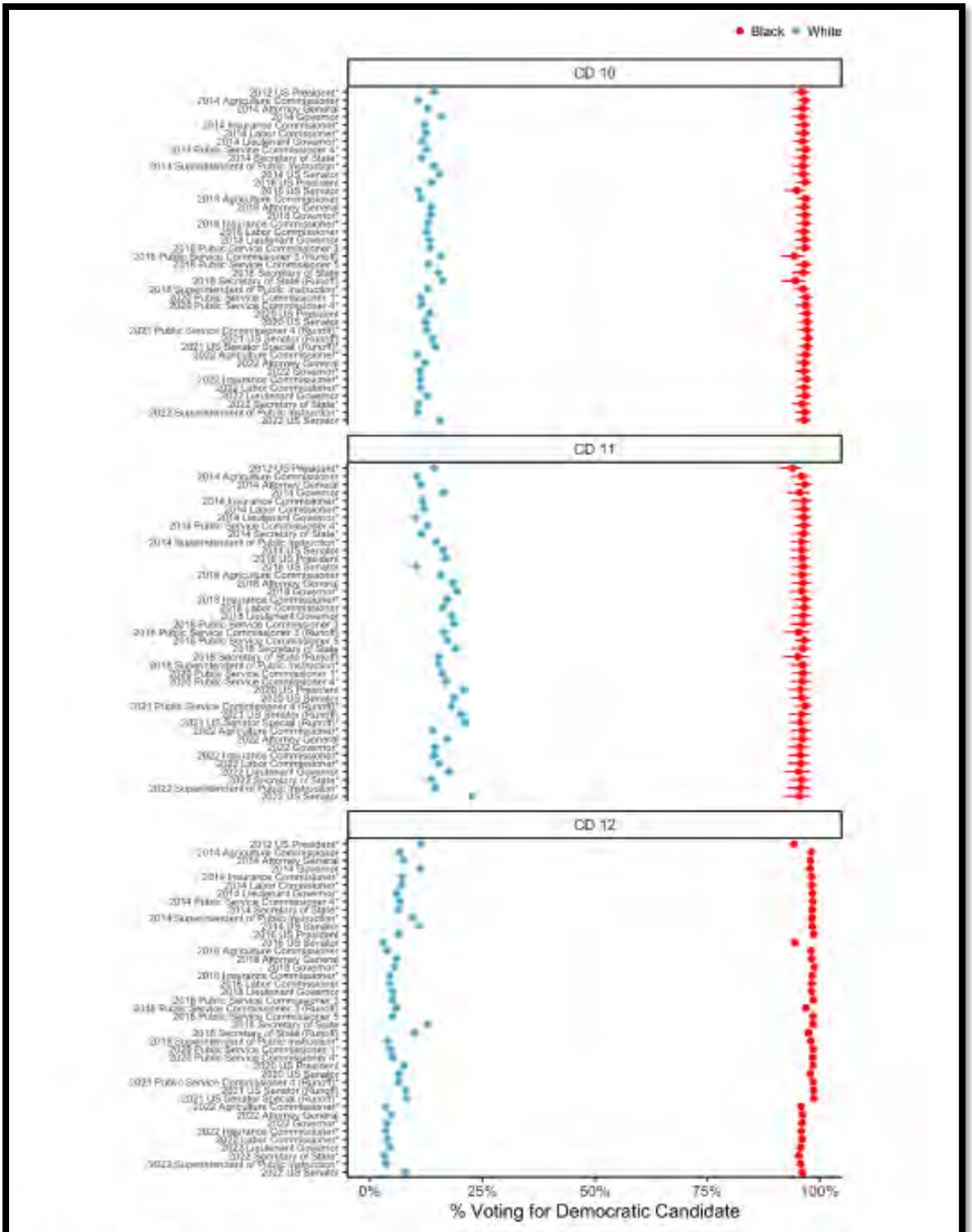



Figure 6: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

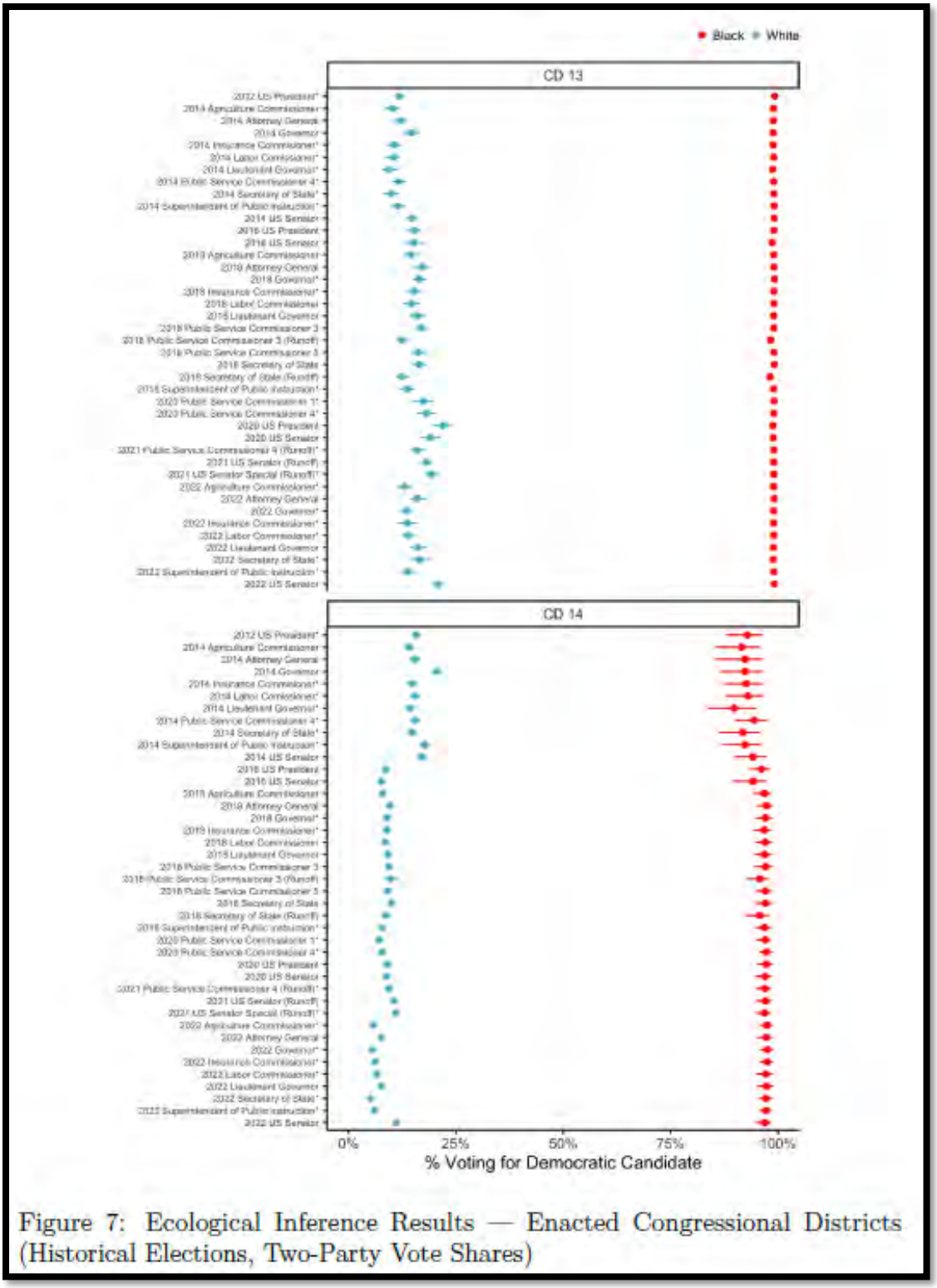
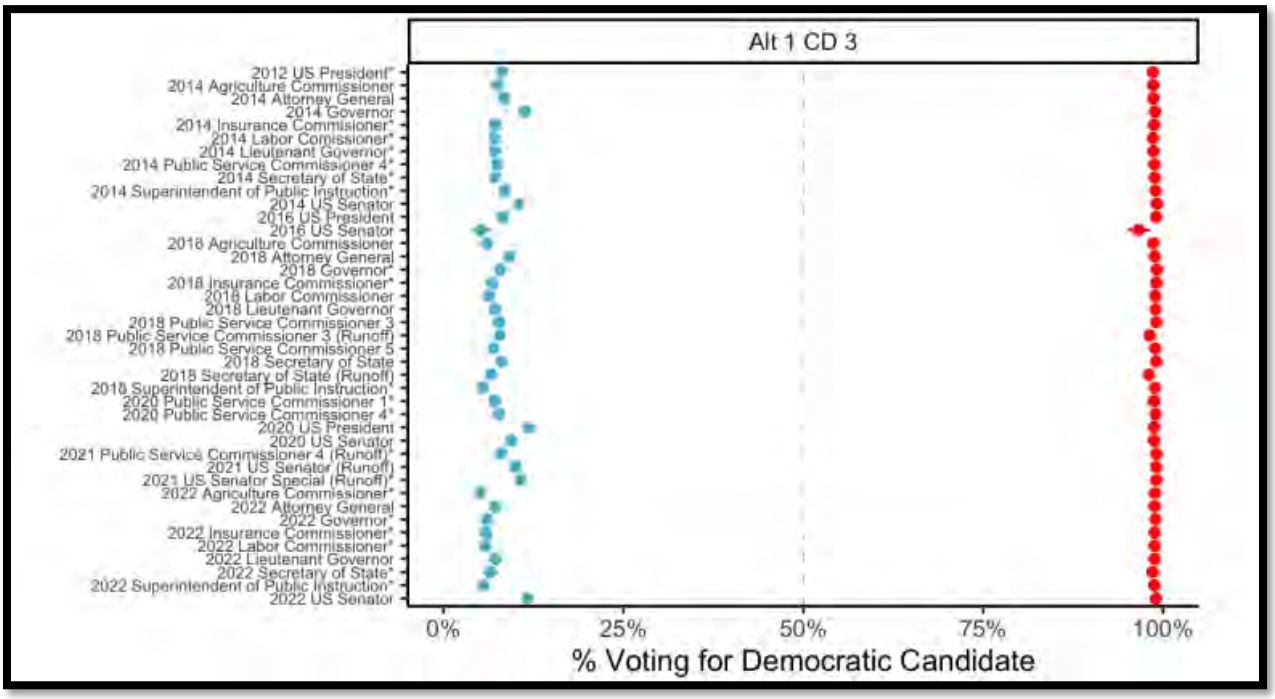


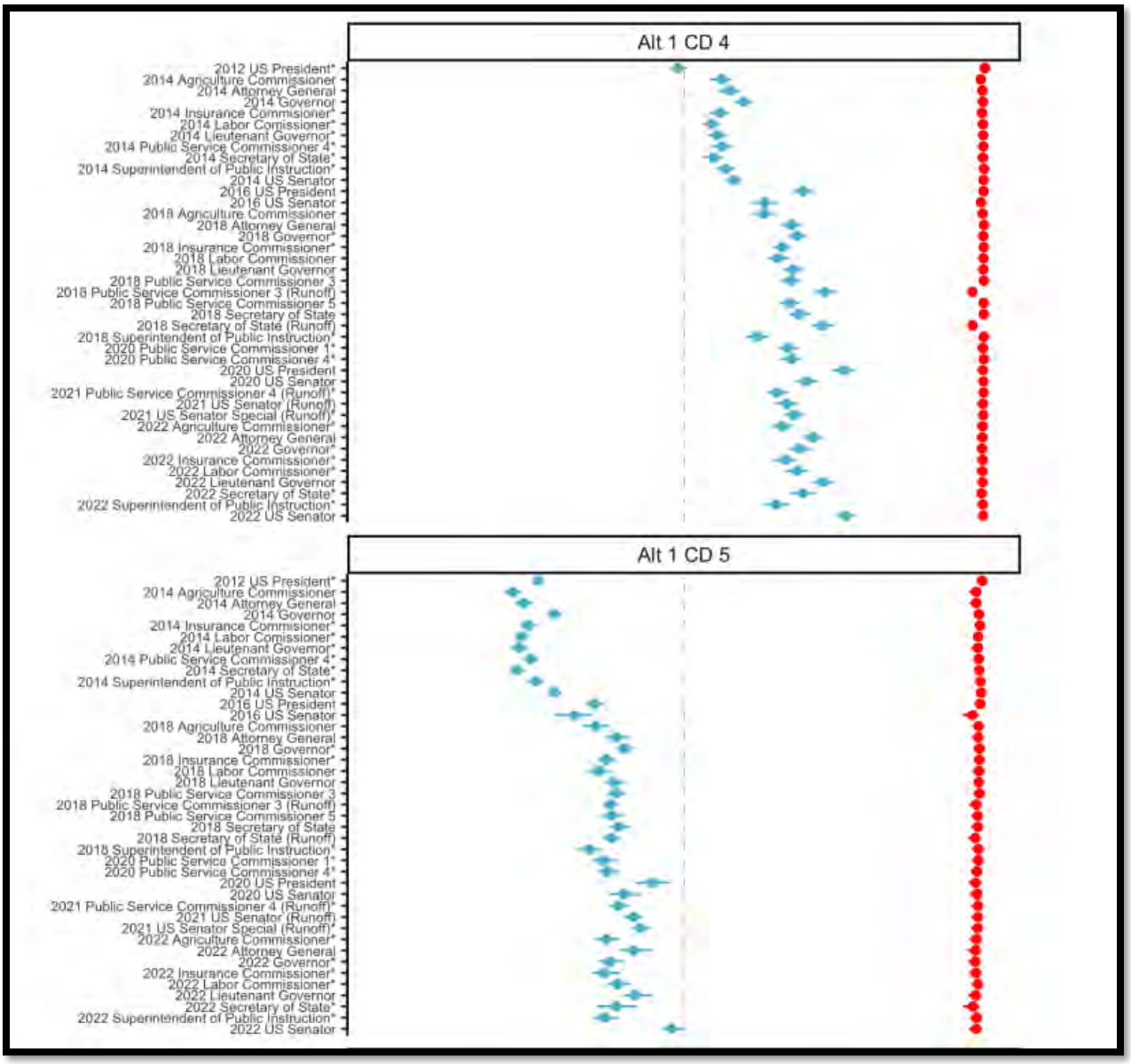

Figure 7: Ecological Inference Results — Enacted Congressional Districts (Historical Elections, Two-Party Vote Shares)

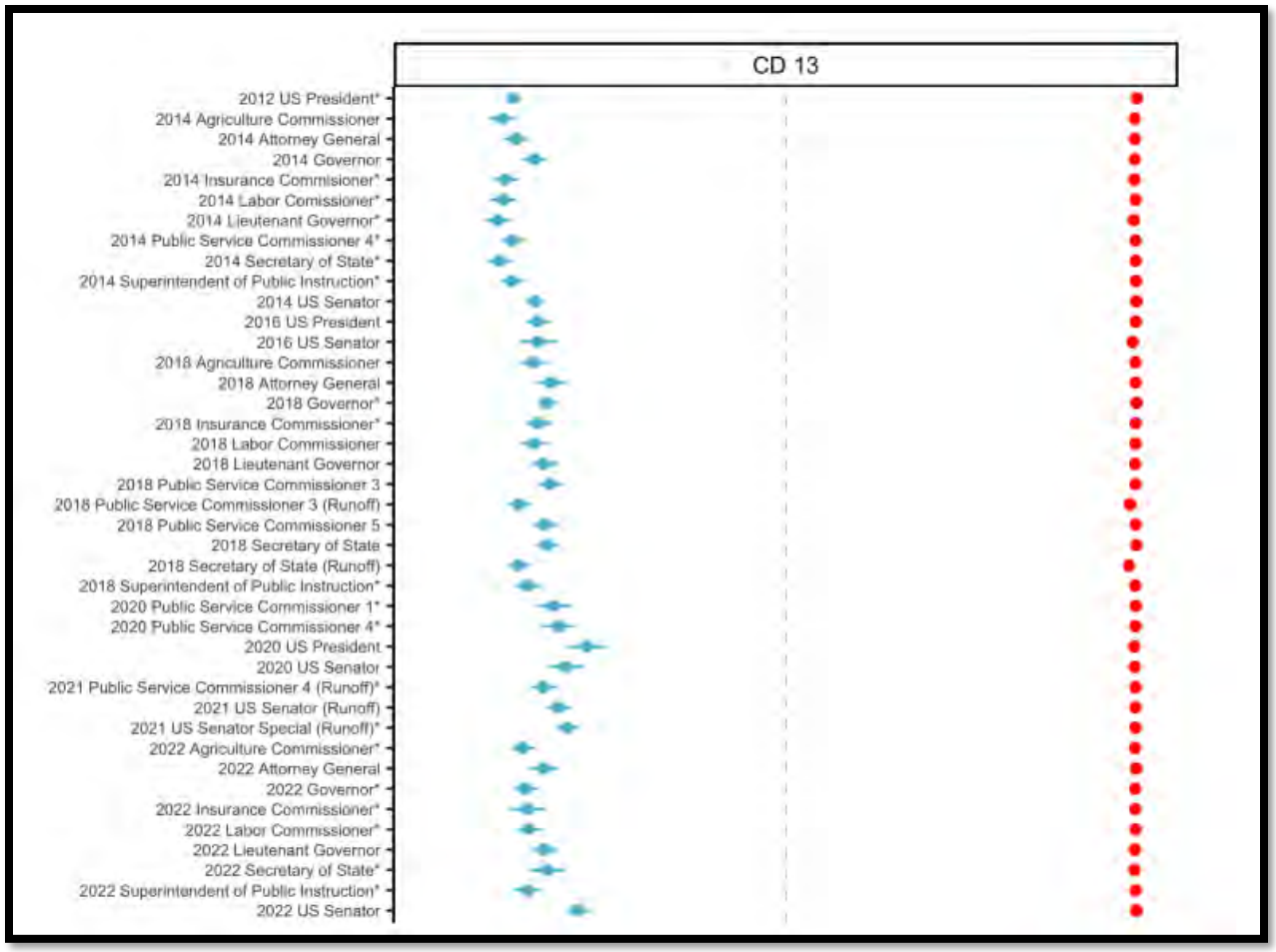
*Id*. at 24 (Figure 3); 25 (Figure 4); 26 (Figure 5); 27 (Figure 6); 28 (Figure 7).

279. Dr. Schneer analyzed whether there is Black cohesive voting in each district that Dr. Duchin drew in her Congressional Alt 1 Map. *Id*. at 57.

280. Dr. Schneer's analysis demonstrates extremely strong cohesion—over 75%—among Black voters for every majority-Black district in the Demonstrative Congressional Map (Demonstrative CDs 3, 5, and 13), as reflected in the table below: *Id.* at 58 (Figure 21); 59 (Figure 22); 62 (Figure 25).




Alt 1 CD 4
2012 US President*
2014 Agriculture Commissioner
2014 Attorney General
2014 Governor
2014 Insurance Commissioner*
2014 Labor Comissioner*
2014 Lieutenant Governor*
2014 Public Service Commissioner 4*
2014 Secretary of State*
2014 Superintendent of Public Instruction*
2014 US Senator
2016 US President
2016 US Senator
2018 Agriculture Commissioner
2018 Attorney General
2018 Governor*
2018 Insurance Commissioner*
2018 Labor Commissioner
2018 Lieutenant Governor
2018 Public Service Commissioner 3
2018 Public Service Commissioner 3 (Runoff)
2018 Public Service Commissioner 5
2018 Secretary of State
2018 Secretary of State (Runoff)
2018 Superintendent of Public Instruction*
2020 Public Service Commissioner 1*
2020 Public Service Commissioner 4*
2020 US President
2020 US Senator
2021 Public Service Commissioner 4 (Runoff)*
2021 US Senator (Runoff)
2021 US Senator Special (Runoff)*
2022 Agriculture Commissioner*
2022 Attorney General
2022 Governor*
2022 Insurance Commissioner*
2022 Labor Commissioner*
2022 Lieutenant Governor
2022 Secretary of State*
2022 Superintendent of Public Instruction*
2022 US Senator
Alt 1 CD 5
2012 US President*
2014 Agriculture Commissioner
2014 Attorney General
2014 Governor
2014 Insurance Commissioner*
2014 Labor Comissioner*
2014 Lieutenant Governor*
2014 Public Service Commissioner 4*
2014 Secretary of State*
2014 Superintendent of Public Instruction*
2014 US Senator
2016 US President
2016 US Senator
2018 Agriculture Commissioner
2018 Attorney General
2018 Governor*
2018 Insurance Commissioner*
2018 Labor Commissioner
2018 Lieutenant Governor
2018 Public Service Commissioner 3
2018 Public Service Commissioner 3 (Runoff)
2018 Public Service Commissioner 5
2018 Secretary of State
2018 Secretary of State (Runoff)
2018 Superintendent of Public Instruction*
2020 Public Service Commissioner 1*
2020 Public Service Commissioner 4*
2020 US President
2020 US Senator
2021 Public Service Commissioner 4 (Runoff)*
2021 US Senator (Runoff)
2021 US Senator Special (Runoff)*
2022 Agriculture Commissioner*
2022 Attorney General
2022 Governor*
2022 Insurance Commissioner*
2022 Labor Commissioner*
2022 Lieutenant Governor
2022 Secretary of State*
2022 Superintendent of Public Instruction*
2022 US Senator




*Id*. at 58 (Figure 21); 59 (Figure 22); 62 (Figure 25).

#### 4. State Senate District-Level Evidence of Minority Group Cohesive Voting

281. Dr. Schneer analyzed whether this is Black cohesive voting in the following districts in the Enacted State Senate Map: SD 9, SD 16, SD 17, SD 22, SD 23, SD 25, SD 26, SD 28, SD 34, SD 35, SD 40, SD 41, SD 43, SD 44, and SD 55. *Id*. 29-30.

282. Dr. Schneer concluded that apart from SD 41 and potentially also from SD 40, "there is evidence of racially polarized voting behavior between Black and White voters in every other State Senate district I analyzed. Black voters clearly supported the minority-preferred candidate in every election under study, including those elections with a minority candidate running." *Id*. at 30.

283. Dr. Schneer also concluded that [Enacted State Senate Map districts] 16, 22, 23, 25, 26, and 44 exhibit clear evidence of RPV with Black and Hispanic voters cohering around minority candidates[.]" *Id*. at 29-30.

284. Dr. Schneer produced four figures that reflect the results of his racially polarized voting analysis for all of the Enacted State Senate Map districts which he analyzed (i.e., SD 9, SD 16, SD 17, SD 22, SD 23, SD 25, SD 26, SD 28, SD 34, SD 35, SD 40, SD 41, SD 43, SD 44, and SD 55). *Id*. at 32 (Figure 9); 33 (Figure 10); 34 (Figure 11); 35 (Figure 12).

285. The four figures from Dr. Schneer's report reflecting this information are presented on the following four pages.

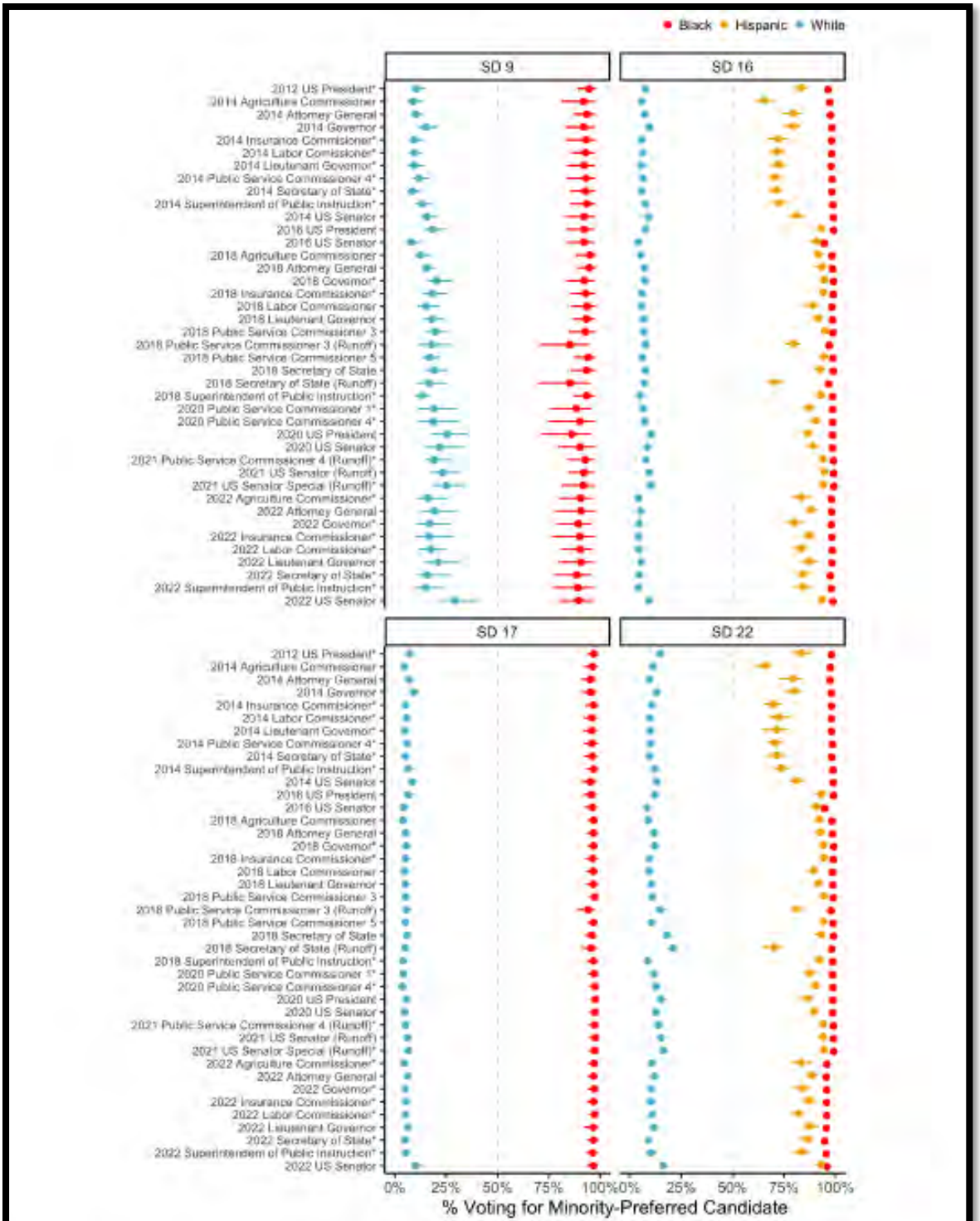



Figure 9: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

Figure 10: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

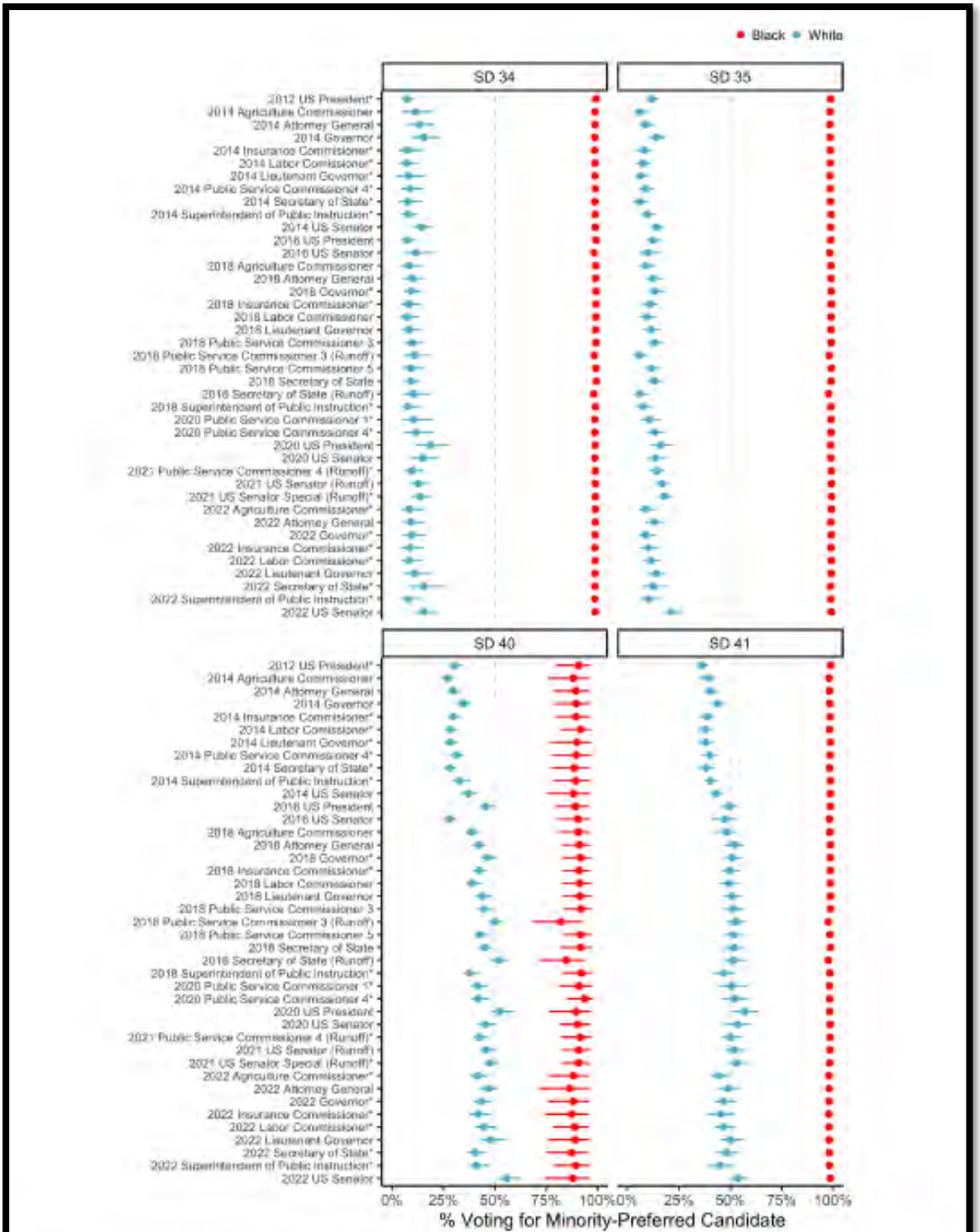



Figure 11: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

Figure 12: Ecological Inference Results — State Senate Districts (Historical Elections, Two-Party Vote Shares)

*Id*. at 32 (Figure 9); 33 (Figure 10); 34 (Figure 11); 35 (Figure 12).

286. Dr. Schneer also analyzed whether there is Black cohesive voting in certain illustrative districts: SDs Alt 1 16, 17, 25, 28, and 40, and whether there was Black and Hispanic cohesive voting in SDs Alt 2, 16, and 23. *Id*. at 63.

287. Dr. Schneer concluded that there is "evidence of RPV between Black and White voters across all past statewide elections with a minority candidate running for" SDs Alt 1 16, 17, 25, and 28." *Id*.

288. Dr. Schneer concluded that he "observe[s] evidence of RPV with Black and Hispanic voters supporting minority-[preferred] candidates" in SDs Alt 2 16 and 23. *Id*.

289. Dr. Schneer analyzed the results of his racially polarized voting analysis for SDs Alt 1 16, 17, 25, and 28 and for SDs Alt 2 16 and 23 in the figures below.

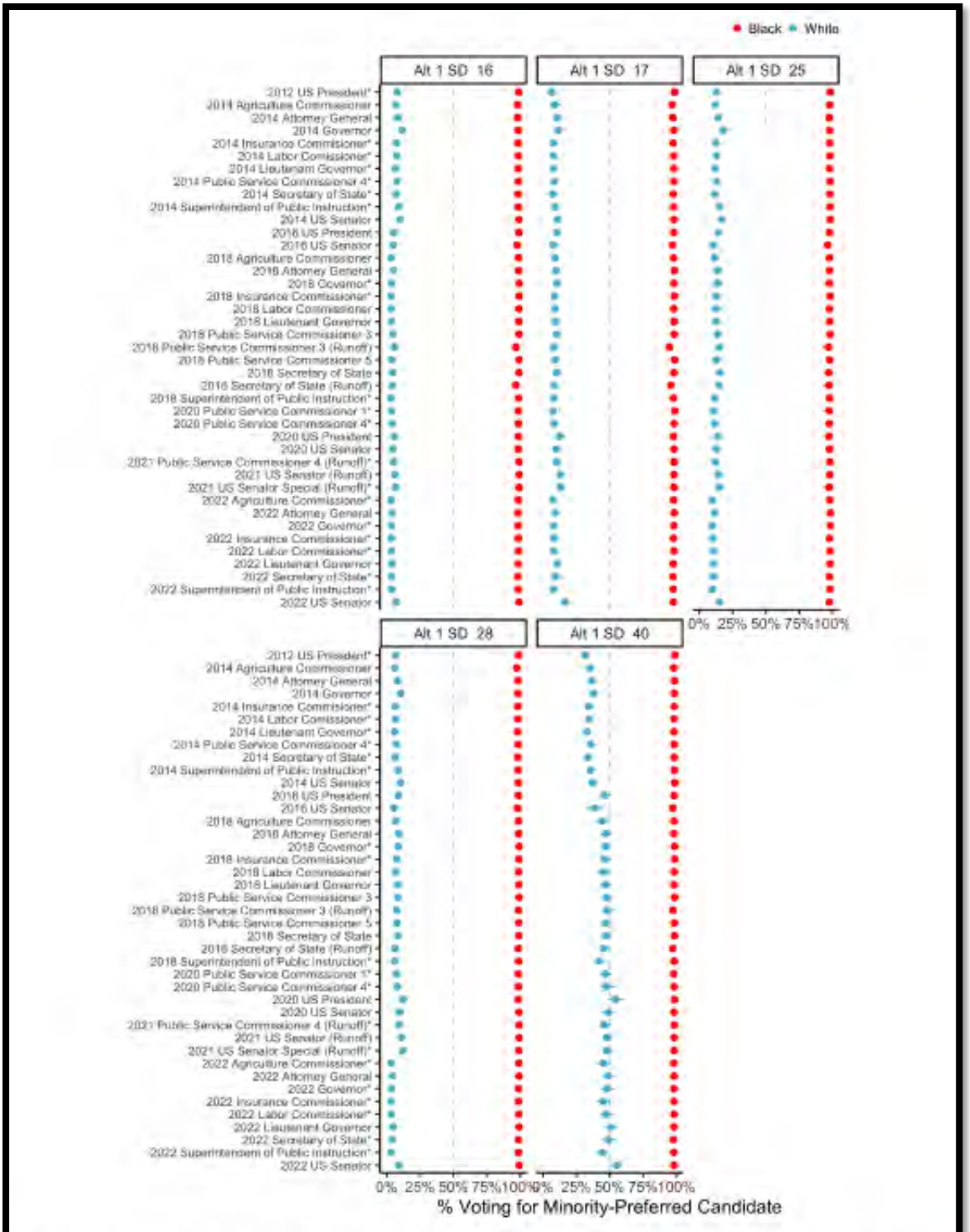



Figure 26: Ecological Inference Results — Illustrative Map 1 State Senate Districts (Historical Elections, Two-Party Vote Shares)

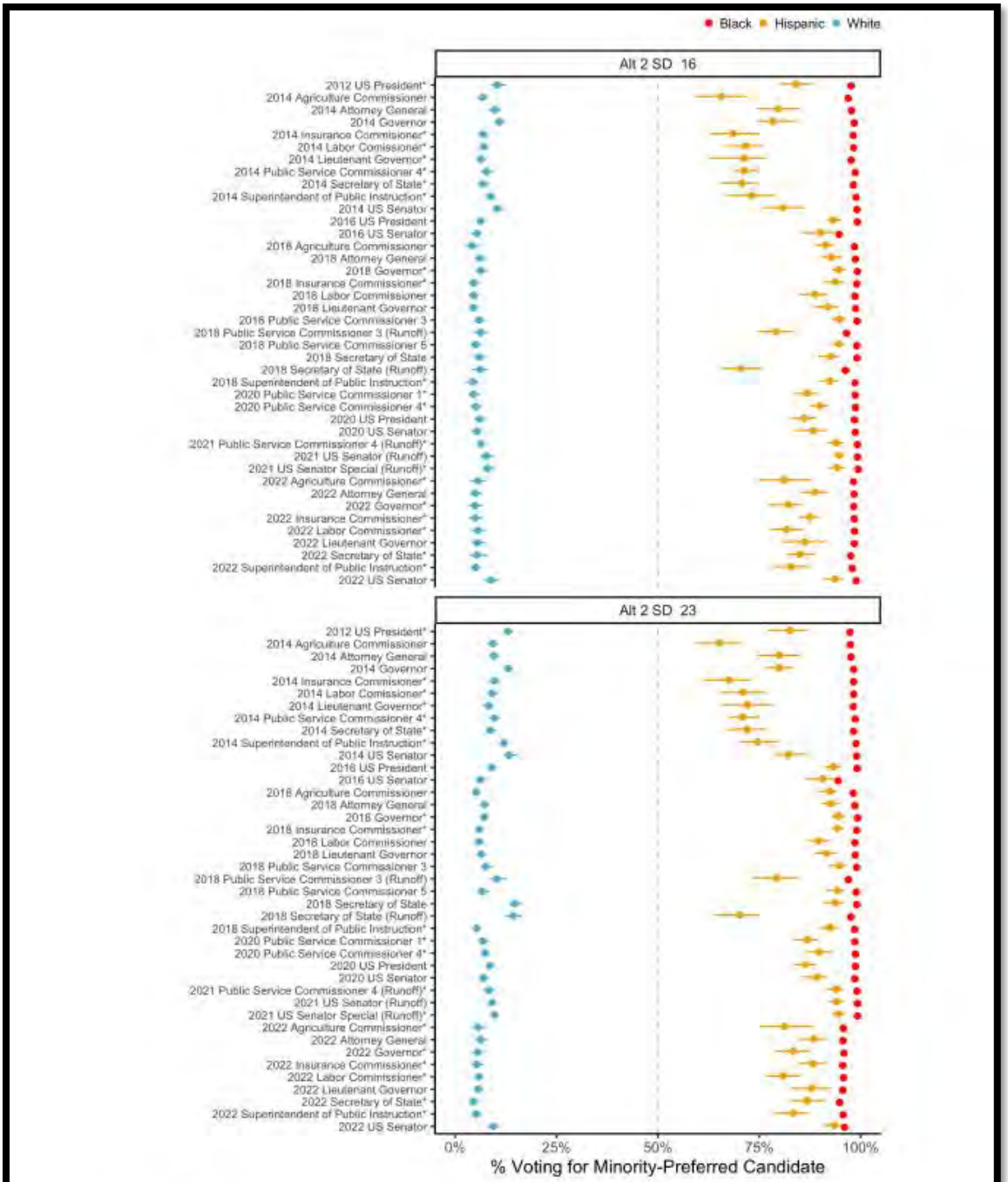



Figure 27: Ecological Inference Results — Illustrative Map 2 State Senate Districts (Historical Elections, Two-Party Vote Shares)

65

*Id*. at 64-65 (Figures 26-27).

### 5. State House District-Level Evidence of Black And Hispanic Cohesive Voting

290. Dr. Schneer analyzed whether there is Black cohesive voting in the following districts in the Enacted State House Map: HD 61, HD 64, HD 65, HD 66, HD 74, HD 78, HD 115, HD 116, HD 117, HD 140, HD 142, HD 143, HD 151, HD 154, HD 161, HD 163, HD 165, and HD 171. *Id*. at 36-37.

291. Dr, Schneer concluded that there is "RPV between Black and White voters in [Enacted State House Map districts] 61, 65, 74, 78, 115, 116, 117, 142, 143, 151, 154 and 171[.]" *Id*. at 37.

292. Dr. Schneer stated that "[Enacted State House Map districts] 61, 65, 74, 115, 142, 143, 151, 154 and 171 present clear evidence of RPV with Black voters selecting the minority candidates as their candidate of choice[.]" *Id*. at 36-37.

293. Dr. Schneer stated that "on balance the estimates show that Black voters supported minority candidates" in HD 78 and HD 117. *Id*. at 37.

294. Dr. Schneer also examined whether there was cohesion between Black and Hispanic voters in enacted HDs 161, 163, and 165. *Id*. at 36.

295. Dr. Schneer determined that HDs 161, 163, and 165 present "clear of evidence of RPV with Black and Hispanic voters cohering to select the minority candidates as their candidate of choice." *Id.* at 36-37.

296. Dr. Schneer produced five figures that reflects the results of his racially polarized voting analysis for all of the Enacted State House Map districts which he analyzed (i.e., HD 61, HD 64, HD 65, HD 66, HD 74, HD 78, HD 115, HD 116, HD 117, HD 140, HD 142, HD 143, HD 151, HD 154, HD 161, HD 163, HD 165, and HD 171). *Id*. at 39 (Figure 14); 40 (Figure 15); 41 (Figure 16); 42 (Figure 17); 43 (Figure 18).

297. The five figures from Dr. Schneer's report reflecting this information are presented on the following five pages.

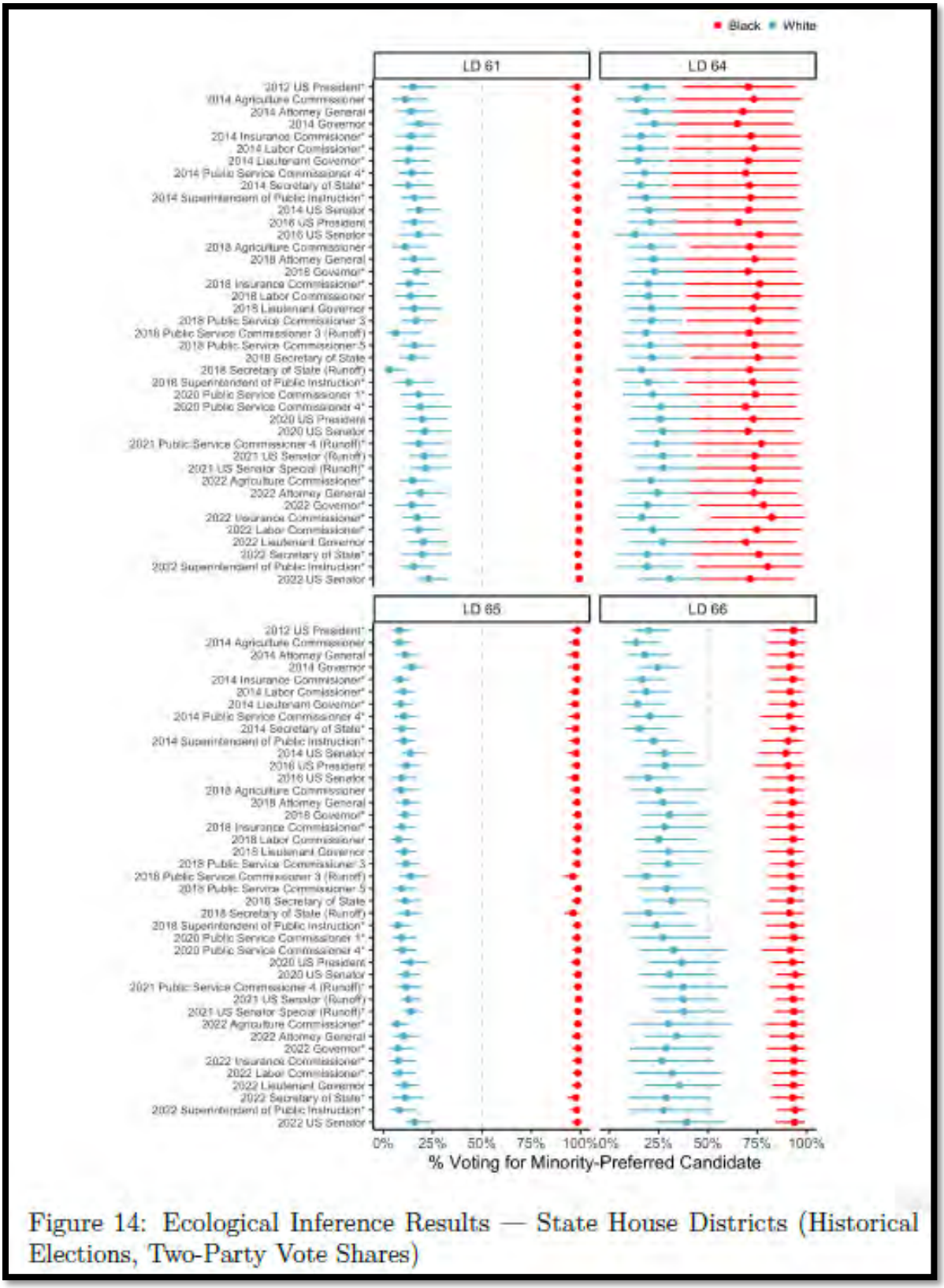



Figure 14: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

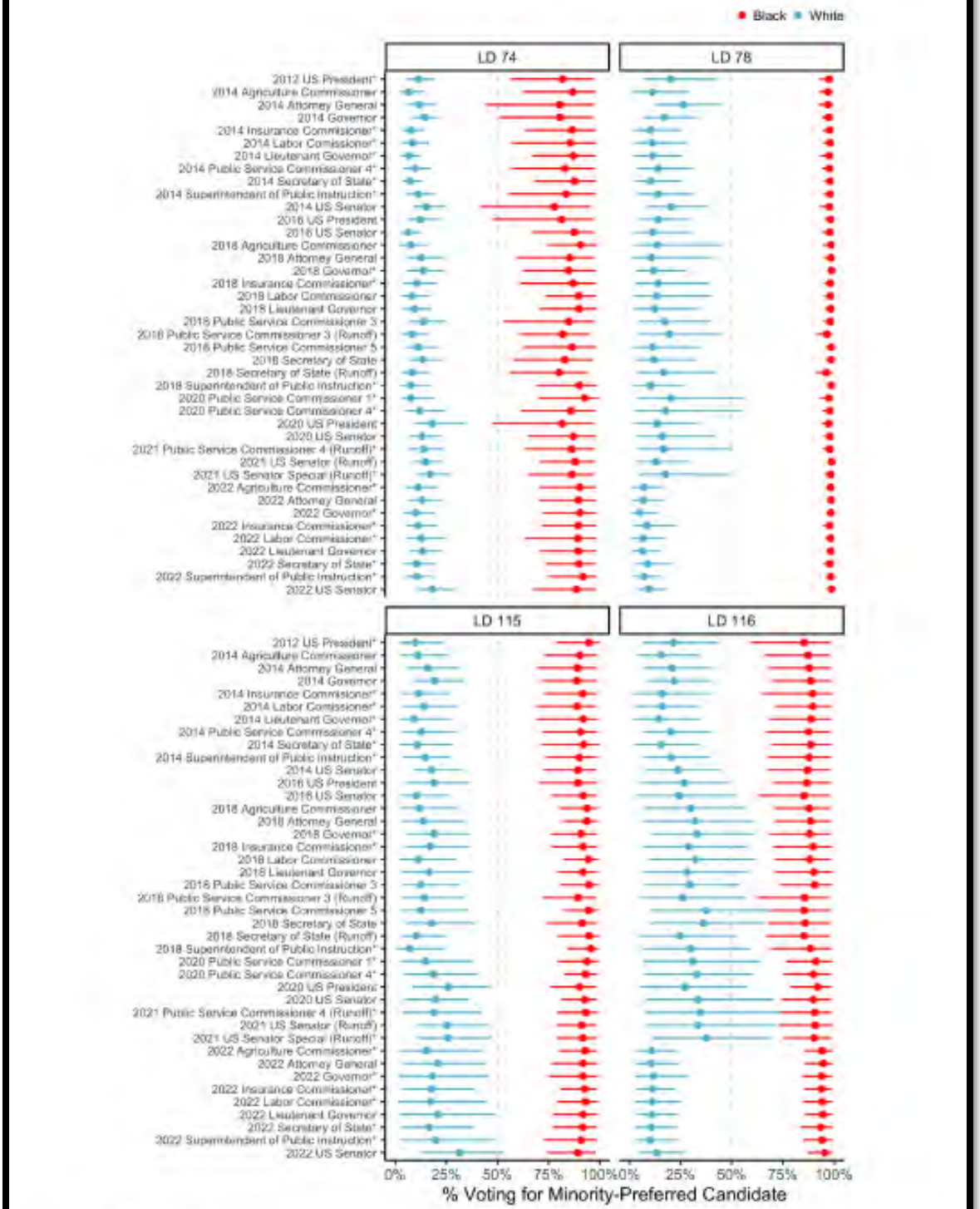



Figure 15: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

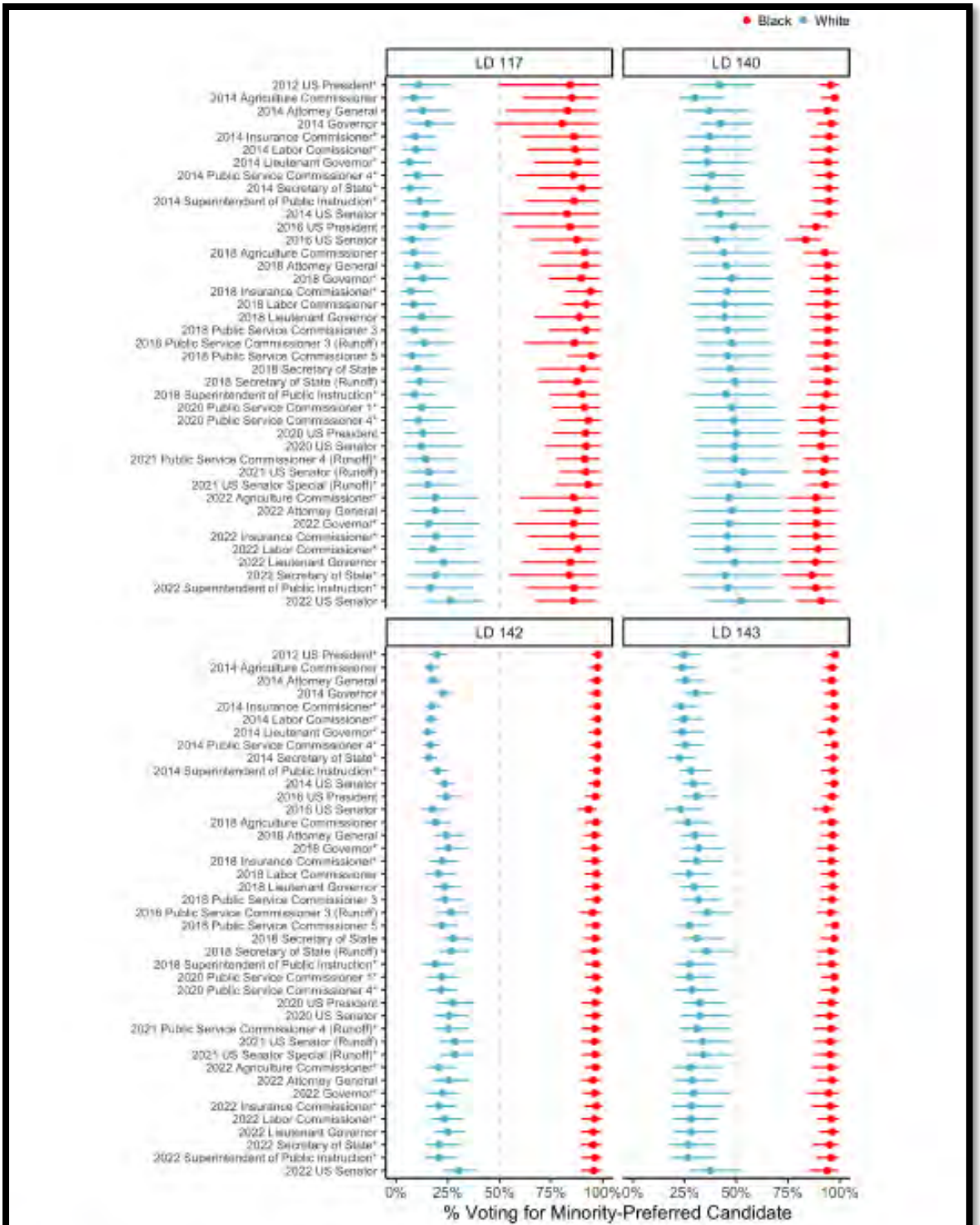



Figure 16: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

Figure 17: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

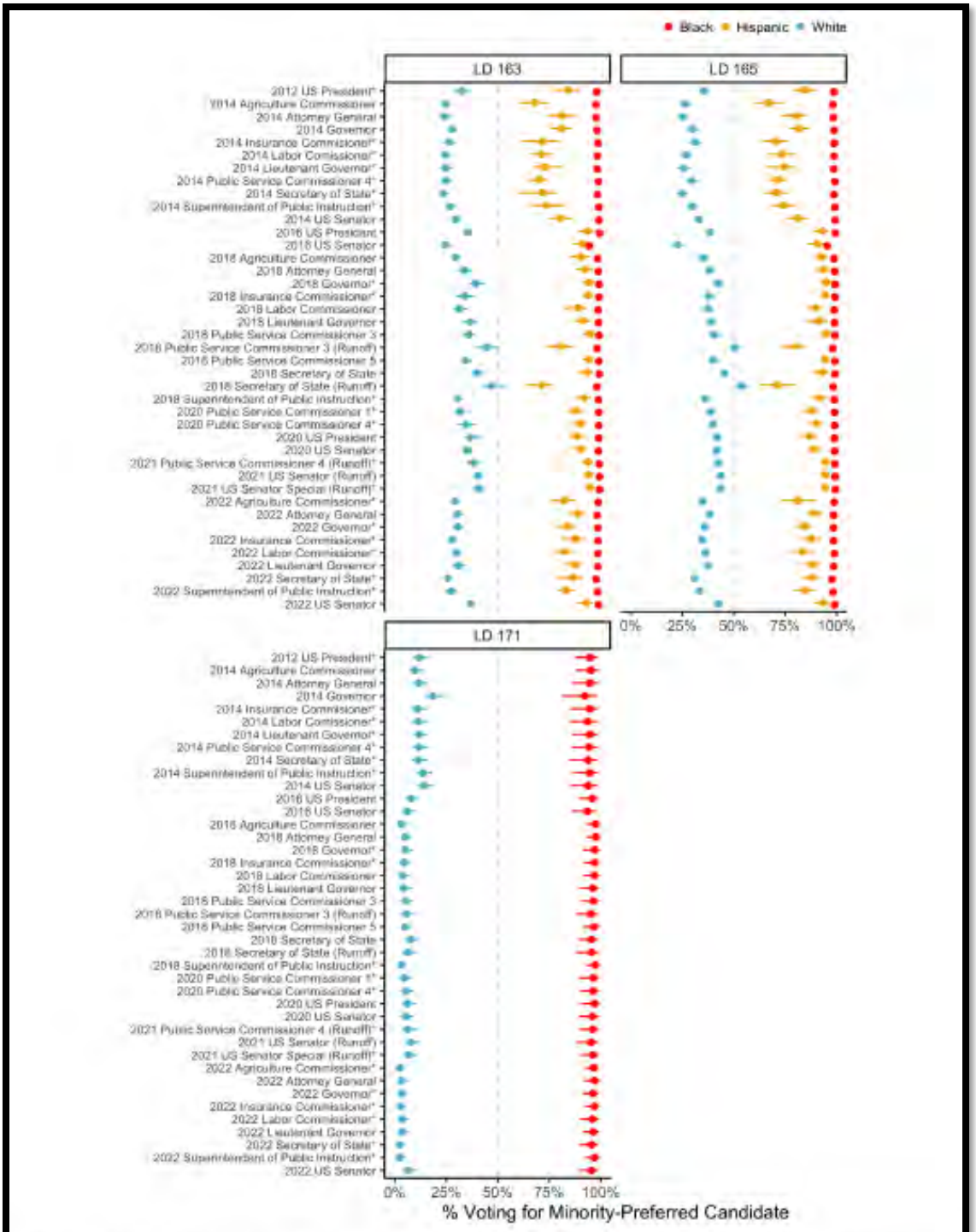



Figure 18: Ecological Inference Results — State House Districts (Historical Elections, Two-Party Vote Shares)

*Id*. at 39 (Figure 14); 40 (Figure 15); 41 (Figure 16); 42 (Figure 17); 43 (Figure 18).

298. Dr. Schneer also analyzed whether there is Black cohesive voting in HDs Alt 1 64, 74, 117, 144, 151, and 171. *Id*. at 66-67.

299. Dr. Schneer stated that there is "evidence of RPV between Black and White voters in all districts I examine[d]." *Id*. ~~at 66~~.

300. Dr. Schneer also analyzed whether there is Black and Hispanic cohesive voting in HD Alt 1 161. *Id*. ~~at 66-67~~.

301. Dr. Schneer stated that in HD Alt 1 161, there is "RPV with Black and Hispanic voters supporting minority candidates[.]" *Id*. at 66.

302. Dr. Schneer produced a figure that reflects the results of his RPV analysis.

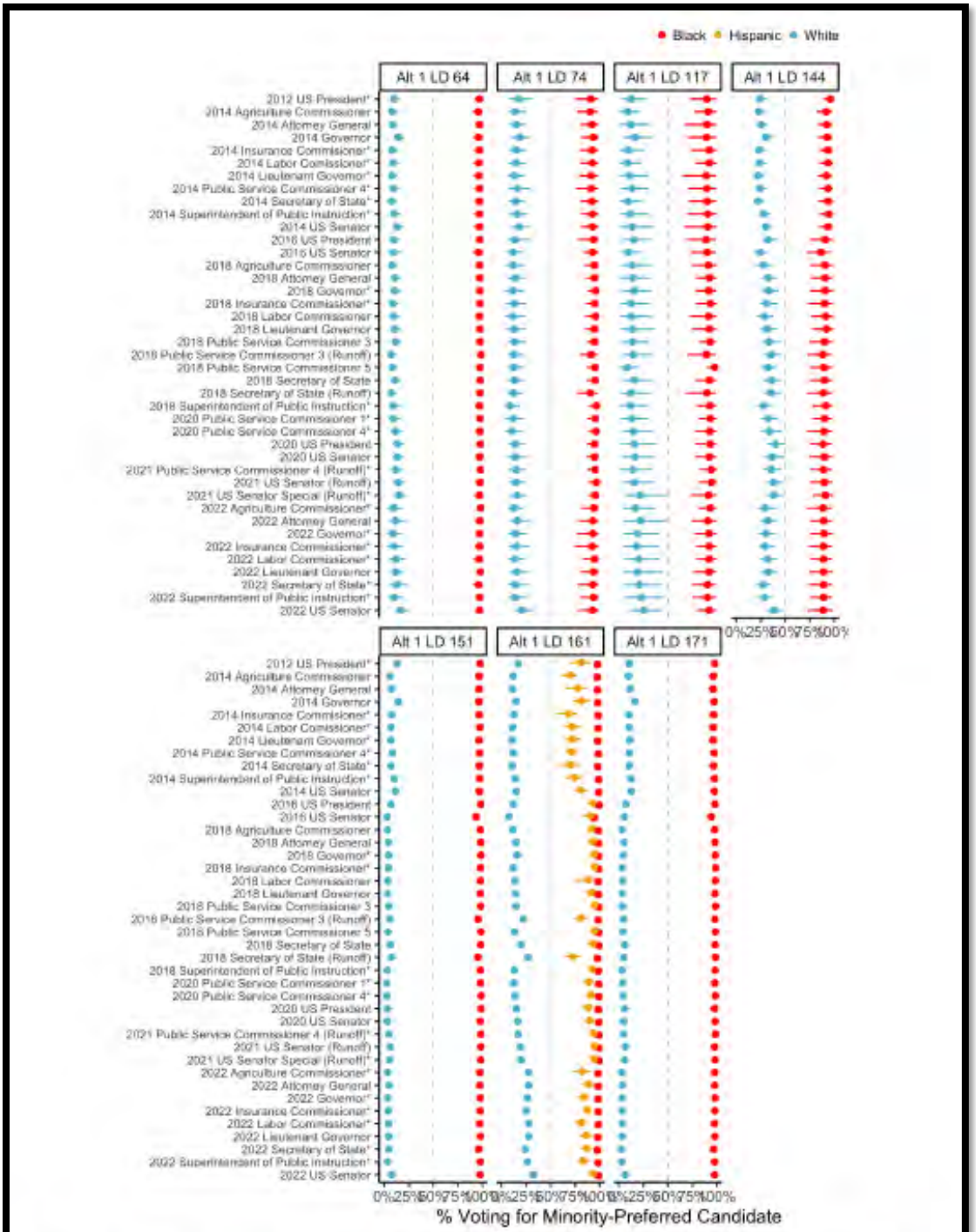



Figure 28: Ecological Inference Results — Illustrative Map 1 State House Districts (Historical Elections, Two-Party Vote Shares)

*Id*. at 68 (Figure 28).

### B. *Gingles* 3: Majority White Voters Vote as a Bloc so as to Usually Defeat the Candidates of Choice of the Minority Group or Groups.

#### 1. Statewide Evidence of White Cohesive Voting & that the White Voting Bloc Opposes the Minority Group-Preferred Candidate.

303. Dr. Schneer concluded that there is "clear evidence of racially polarized voting at the statewide level" and that "Hispanic and Black voters cohere around the same candidates of choice, and White voters oppose them, consistent with RPV." *Id*. at 17.

304. Dr. Schneer opined that "primary elections can be of use in an RPV analysis, but in my view studying them is not necessary or sufficient for drawing conclusions about racially polarized voting in Georgia general elections." *Id*. at 12-13.

305. Dr. Schneer opined that "if racially polarized voting occurs in a Georgia primary election it does not necessarily imply that racially polarized voting will occur in the general election, and vice versa." *Id.*

306. Dr. Schneer opined that "it is sufficient in this case to examine behavior in general elections in order to determine the extent of racially polarized voting in Georgia general elections." *Id.* ~~at 12–13.~~

307. Dr. Schneer also produced a figure which reflects the results of his racially polarized analysis across statewide elections. *Id*. at 18 (Figure 1).

308. The figure reflects that White voters across all of the statewide elections vote cohesively for the same candidate of choice in opposition to the preferred candidate of choice for both Black and/or Black and Hispanic voters. *Id*.

309. The figure from Dr. Schneer's report reflecting this information is presented at paragraph 263 of this Statement of Facts. *See id.*

**2. Cluster-Level Evidence of White Cohesive Voting and that the White Voting Bloc Opposes the Black and the Hispanic Voting Bloc**

310. Dr. Schneer analyzed whether there is White cohesive voting in SD Atlanta, SD Gwinnett, and SD East Black Belt in opposition to Black and/or Black and Hispanic voters' preferred candidates of choice in these clusters. *Id*. at 44-45.

311. Dr. Schneer concluded that "[a]cross [SD Atlanta, SD Gwinnet, and SD East Black Belt, there is] RPV between White and Black voters. For each cluster, Black voters cohesively support a candidate of choice and White voters oppose these candidates systematically. Furthermore, Hispanic voters tend to support the same candidates of choice as Black voters." *Id*.

312. Dr. Schneer also produced a figure that reflects the results of his racially polarized voting analysis for SD Atlanta, SD Gwinnet, and SD East Black Belt. *Id*. at 47 (Figure 19).

313. The figure reflects that White voters in SD Atlanta, SD Gwinnett, and SD East Black Belt vote cohesively for the same candidate of choice in opposition to the preferred candidate of choice for Black voters, and for both Black and Hispanic voters in SD Gwinnet. *Id*.

314. The figure from Dr. Schneer's report reflecting this information is presented at paragraph 268 of this Statement of Facts. *See id.*

315. Dr. Schneer also analyzed whether there is White cohesive voting in HD Atlanta, HD Southwest, HD East Black Belt, and HD Southeast in opposition to the Black and Hispanic voters' preferred candidates of choice in these clusters. *Id*. at 45.

316. Dr. Schneer concluded that there is "evidence of RPV between White and Black voters across all state House clusters I examine[d]. Black voters cohesively support a candidate of choice and White voters oppose this candidate. Based on my estimates, this is true in every cluster and for every statewide election that I examine." *Id*.

317. Dr. Schneer also produced a figure that reflects the results of his racially polarized voting analysis for HD Atlanta, HD Southwest, HD East Black Belt, and HD Southeast. *Id*. at 48 (Figure 20).

318. The figure reflects that White voters in HD Atlanta, HD Southwest, HD East Black Belt, and HD Southeast vote cohesively for the same candidate of choice in opposition to the preferred candidate for Black voters. *Id*.

319. The figure from Dr. Schneer's report reflecting this information is presented at paragraph 271 of this Statement of Facts. *See id.*

### 3. Congressional District-Level Evidence of White Cohesive Voting, that the White Voting Bloc Opposes the Black Voting Bloc, & that the White Voting Bloc Usually Defeats the Black Voting Bloc

320. Dr. Schneer concluded that there is "RPV between Black voters on the one hand and White voters on the other hand when pooling across all [of the districts in the Enacted Congressional Map] (e.g., statewide) as well as specifically for all [districts in the Enacted Congressional Map] other than CD 5." *Id*. at 21.

321. Dr. Schneer stated that in all of the districts in the Enacted Congressional Map except for CD 5 "White voters opposed the candidate of choice of Black voters in every historical election" and "the confidence intervals on the estimates for White voters never overlap[ped] with the threshold for majority support." *Id*. at 19-~~20~~21.

322. Dr. Schneer stated that in CD 3 "[f]or Black voters, I never estimate[d] a minority-preferred candidate vote share below 92.8%" and "[f]or White voters, I never estimate[d] a minority-preferred candidate vote share above 12.2%." *Id*. at 20.

323. Dr. Schneer stated that in CD 7 "Black voters coher[ed] around minority candidates (and other minority-preferred candidates) and . . . White voters oppos[ed] these candidates of choice." *Id*.

324. Dr. Schneer stated that "[o]verall, CD 4 suggests to me cohesive behavior across Black voters in support of minority candidates (and other minority-preferred candidates) [while] White voters have reliably opposed the minority candidates of choice." *Id*. at 20-21.

325. Dr. Schneer also produced five figures that reflect the results of his racially polarized voting analysis for all of the districts in the Enacted Congressional Map. *Id*. at 24 (Figure 3); 25 (Figure 4); 26 (Figure 5); 27 (Figure 6); 28 (Figure 7).

326. The figures reflect that White voters in each district in the Enacted Congressional Map except for CD 5 vote cohesively for the same candidate of choice in opposition to the preferred candidate of choice for Black voters. *Id*.

327. The five figures from Dr. Schneer's report reflecting this information are presented at paragraph 278 of this Statement of Facts. *See id.*

328. Dr. Schneer also "examine[d] the electoral performance of the enacted congressional districts." *Id*. at 49-51; at 52 (Table 2).

329. Dr. Schneer "use[d] historical election data" to complete this analysis. *Id*. at 49.

330. Dr. Schneer concluded that "based on historical elections, minority voters have close to no chance of electing preferred candidates in [ ] nine congressional districts." *Id*. at 51.

331. Dr. Schneer stated that in Enacted Congressional Districts "1, 3, 6, 8, 9, 10, 11, 12 and 14, White voters comprise a strong majority of the electorate. If conditions remain similar to historical elections, minority voters who preferred a minority candidate would not be able to elect that candidate" because "the minority-preferred candidate did not win in any of the historical elections I examine for these districts." *Id*. at 50.

332. Dr. Schneer also prepared a table reflecting the result that in nine districts in the Enacted Congressional Map, historical evidence indicates that the Black preferred candidate would not receive at least 55% of the vote share, which Dr. Schneer opined is "a conventional cutoff used in voting rights litigation to indicate a safer district." *Id*. at 52 (Table 2); *id*. at 49-50.

333. Dr. Duchin also completed a performance analysis of each of the districts in the Enacted Congressional Map. Duchin Rep. at 18 (Table 4).

334. To perform her performance analysis, Dr. Duchin analyzed historical primary and general election results and determined that a district is performing if

the relevant population's preferred candidate of choice wins at least three out of four primary elections and at least five out of eight general elections Duchin Rep. at 17.

335. Dr. Duchin, consistent with Dr. Schneer, determined that in nine of the districts in the Enacted Congressional Map—CD 1, CD 3, CD 6, CD 8, CD 9, CD 10, CD 11, CD 12, and CD 14—the Black VAP does not have an opportunity to defeat the White VAP. *Id*. at 18 (Table 4).

336. Dr. Schneer analyzed whether there is White cohesive voting in each district that Dr. Duchin drew in the Demonstrative Congressional Map in opposition to the preferred candidate of choice for Black voters. Schneer Rep. at 57.

337. Dr. Schneer concluded that except for Demonstrative CD 4 "there is essentially universal evidence of RPV between Black and White voters. In these districts, when a minority candidate runs Black voters support them and White voters oppose this candidate. In elections between no minority candidates or two minority candidates, Black voters support the minority-preferred candidate and White voters oppose them." *Id*.

338. Dr. Schneer also produced a figure that reflects the results of his racially polarized voting analysis for Demonstrative CD 3. *Id*. at 58 (Figure 21).

339. The figure reflects that White voters in Demonstrative CD 3 vote cohesively for the same candidate of choice in opposition to the preferred candidate of choice for Black voters. *Id*.

340. The figure from Dr. Schneer's report reflecting this information is presented at paragraph 280 of this Statement of Facts.

#### 4. State Senate District-Level Evidence of White Cohesive Voting, that the White Voting Bloc Opposes the Black Voting Bloc, & that the White Voting Bloc Usually Defeats the Black Voting Bloc

341. Dr. Schneer analyzed whether this is White cohesive voting in opposition to the preferred candidate of choice for Black voters in the following districts in the Enacted State Senate Map: SD 9, SD 16, SD 17, SD 22, SD 23, SD 25, SD 26, SD 28, SD 34, SD 35, SD 40, SD 41, SD 43, SD 44, and SD 55. *Id*. at 29-30.

342. Dr. Schneer concluded that apart from SD 41 and potentially also from SD 40, "there is evidence of racially polarized voting behavior between Black and White voters in every other State Senate district I analyzed. Black voters clearly supported the minority-preferred candidate in every election under study, including those elections with a minority candidate running. White voters opposed their candidate of choice." *Id*. at 30.

343. Dr. Schneer stated that "[Enacted State Senate Map districts] 16, 22, 23, 25, 26, and 44 exhibit clear evidence of RPV with Black and Hispanic voters cohering around minority candidates and White voters opposing them in ever historical election with a minority candidate that I examine[d]." *Id*. at 29-30.

344. Dr. Schneer stated that "[Enacted State Senate Map districts] 9, 17, 28, 34, 43 and 55 exhibit evidence of RPV between Black and White voters, again with Black voters cohering around the minority candidate and White voters opposing this candidate." *Id*. at 30.

345. Dr. Schneer also produced four figures that reflect the results of his racially polarized voting analysis for all of the Enacted State Senate Map districts which he analyzed (i.e., SD 9, SD 16, SD 17, SD 22, SD 23, SD 25, SD 26, SD 28, SD 34, SD 35, SD 40, SD 41, SD 43, SD 44, and SD 55). *Id*. at 32 (Figure 9); 33 (Figure 10); 34 (Figure 11); 35 (Figure 12).

346. The figures reflect that White voters in each district analyzed except for SD 41 and potentially also SD 40 vote cohesively for the same candidate of choice and in opposition to the preferred candidate of choice for Black voters. *Id*. at 32 (Figure 9); 33 (Figure 10); 34 (Figure 11); 35 (Figure 12).

347. The four figures from Dr. Schneer's report reflecting this information are presented at paragraph 285 of this Statement of Facts.

348. Dr. Schneer also examined the electoral performance of the focus enacted state Senate districts. *Id*. at 49.

349. Dr. Schneer "use[d] historical election data" to complete this analysis. *Id*.

350. Dr. Schneer concluded that "[b]ased on historical elections, the candidate preferred by minority voters would not have won in any election I examine between 2012 and 2022 in SDs 16, 17, 23, 25 and 28." *Id*. at 53.

351. Dr. Schneer also prepared a table reflecting the result that in SD 16, SD 17, SD 23, SD 25, and SD 28, which shows that in each of these districts historical evidence indicates that the Black preferred candidate would not receive at least 55% of the vote share, which is a conventional cutoff used in voting rights litigation to indicate a safer district. *Id*. at 56; (Table 3).

352. Dr. Duchin also completed a performance analysis of SD 16, SD 17, SD 23, SD 25, and SD 28. Duchin Rep. at 48-49, 51.

353. Dr. Duchin, consistent with Dr. Schneer, determined that SD 16, SD 17, SD 23, SD 25, and SD 28 do not provide the Black-preferred candidate an opportunity to defeat the White majority bloc-preferred candidate. *Id*.

### 5. State House District-Level Evidence of White Cohesive Voting and that the White Voters Vote as a Bloc So as to Usually Defeat Voting Bloc Opposes the Black Voting Bloc

354. Dr. Schneer analyzed whether this is White cohesive voting in opposition to the preferred candidate of choice for Black voters in the following districts in the Enacted State House Map: HD 61, HD 64, HD 65, HD 66, HD 74, HD 78, HD 115, HD 116, HD 117, HD 140, HD 142, HD 143, HD 144, HD 151, HD 154, HD 161, HD 163, HD 165, and HD 171. Schneer Rep. at 36-37; Canter Decl. ¶ 27 (Deposition of Benjamin Schneer ("Schneer Dep.") 91:01-91:22 (HD 144)).

355. Dr, Schneer concluded that there is "RPV between Black and White voters in [Enacted State House Map districts] 61, 65, 74, 78, 115, 116, 117, 142, 143, 151, 154 and 171[.]" *Id*. at 37.

356. Dr. Schneer stated that "[Enacted State House Map districts] 61, 65, 74, 115, 142, 143, 151, 154 and 171 present clear evidence of RPV with Black voters selecting the minority candidates as their candidate of choice, and White voters opposing these candidates in every historical election" *Id*. at 36-37.

357. Dr. Schneer stated that "on balance the estimates show that Black voters supported minority candidates" in HD 78 and HD 117 and these same minority

candidates "were opposed by White voters in a vast majority of historical elections." *Id*. at 37.

358. Dr. Schneer also produced five figures that reflect the results of his racially polarized voting analysis for all of the Enacted State House Map districts which he analyzed (i.e., HD 61, HD 64, HD 65, HD 66, HD 74, HD 78, HD 115, HD 116, HD 117, HD 140, HD 142, HD 143, HD 151, HD 154, HD 161, HD 163, HD 165, and HD 171). *Id*. at 39 (Figure 14); 40 (Figure 15); 41 (Figure 16); 42 (Figure 17); 43 (Figure 18).

359. The figures reflect that White voters in HD 61, HD 65, HD 74, HD 78, HD 115, HD 116, HD 117, HD 142, HD 143, HD 151, HD 154, and HD 171 vote cohesively for the same candidate of choice in opposition to the preferred candidate of choice for Black voters. *Id*. at 39 (Figure 14); 40 (Figure 15); 41 (Figure 16); 42 (Figure 17); 43 (Figure 18).

360. The five figures from Dr. Schneer's report reflecting this information are presented at paragraph 297 of this Statement of Facts

361. Dr. Schneer also examined the electoral performance of the focus enacted state House districts. *Id*. at 49.

362. Dr. Schneer "use[d] historical election data" to complete this analysis. *Id*.

363. Dr. Schneer concluded that "[b]ased on historical elections, the candidate preferred by minority voters would not have won in any election I examine between 2012 and 2022 in [Enacted State House Map districts] 64, 74, 161 and 171." *See* Canter Decl. ¶ 29 (Benjamin Schneer Notice of Errata at 1-2 (March 31, 2023)).

364. Dr. Schneer also "looked at. . . the performance of Legislative District 144," and determined that by "essentially running the exact same type of performance analysis that I did for all other districts, this was a district where in no past elections that I examined were minority voters able to elect their candidates of choice." Schneer Dep. 91:11-91:18.

365. Dr. Schneer prepared a table reflecting the result that in HD 64, HD 74, HD 117, HD 161, and HD 171, which shows that in each of these districts historical evidence indicates that the Black preferred candidate would not receive at least 55% of the vote share, which is a conventional cutoff used in voting rights litigation to indicate a safer district. Schneer Rep. at 56 (Table 4).

366. Dr. Duchin also completed a performance analysis of HD 64, HD 74, HD 117, HD 161, and HD 171. Duchin Rep. at 55, 63, 66.

367. Dr. Duchin, consistent with Dr. Schneer, determined that SD 16, SD 17, SD 23, SD 25, and SD 28 do not provide the Black-preferred candidate with an opportunity to defeat the White majority-bloc preferred candidate. *Id.*

### C. The RPV Expert Retained By Defendants Does Not Dispute That Black—and Sometimes Black and Hispanic—Voters Support the Same Candidates of Choice With Extremely High Levels of Cohesion.

368. Defendants' RPV expert in this case, Dr. John Alford, testified that Dr. Scheer's "evidentiary basis" and "empirical analysis" with regards to his racially polarized voting report is "perfectly adequate." Alford Dep. at 74:15-74:17.

369. He stated that he is "fine with reaching conclusions" based on Dr. Schneer's analysis. *Id.* at 74:17-74:18.

370. Dr. Alford does not dispute any of Dr. Schneer's findings about the levels of voting cohesion that Black voters demonstrate in Georgia: His only opinion in this case is Dr. Schneer did not rule out that partisanship, not race, is the cause of that cohesion. *Id.* at 68:15-68:24.

371. Dr. Alford testified that in Georgia "black voters vote [in a] highly cohesion fashion for democratic candidates . . . ." *Id.* at 110:18-111:08.

### D. The Legislature Recognized the Existence of RPV in Georgia During the Redistricting Process.

372. Chair Kennedy recognized that that "process" the Senate Redistricting Committee undertook "recognized" the "principle" of RPV in Georgia. Kennedy Dep. 126:22-127:21.