# At-Large Elections and Minority Representation in Local Government Online Appendix 

November 18, 2019

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## A Additional Information about the CVRA

A. 1 Threat letter to the city of Garden Grove, CA from the Mexican-American Legal Defense Fund (MALDEF)

June 3, 2015

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Mayor Pro-Tem Steve Jones
Councilmember Kris Beard
Councilmember Phat Bui
Councilmember Christopher Phan
11222 Acacia Parkway
Garden Grove, California 92840

## Re: Garden Grove - District Elections

Dear City Officials,
We have received complaints from Latino citizens and voters in Garden Grove that the use of an at-large city council election system results in Latino vote dilution and prevents Latino voters from electing candidates of their choice. MALDEF has investigated Garden Grove demographic and electoral information with particular attention to the prohibitions of the California Voting Rights Act ("CVRA") of 2001. Based on that investigation, we believe that Garden Grove's at-large election system violates the CVRA and must be changed to a district election system.

The CVRA, which is a part of the California Elections Code, states in relevant part:
§ 14027. [A]n at-large method of election may not be imposed or applied in a manner that impairs the ability of a protected class to elect candidates of its choice or its ability to influence the outcome of an election, as a result of the dilution or abridgement of the rights and the privileges of members of a protected class.

According to U.S. Census population data, $37 \%$ of the population of Garden Grove is Latino. However, none of the five current members of the Garden Grove City Council is Latino, and no Latino candidates have been elected to city council in the last six decades, perhaps longer. Based on our review of election returns, demographic information, and Spanish-surname analysis of votes cast by precinct, we believe that the lack of success of Latino candidates results from persistent racially polarized voting by the Garden Grove electorate. Our methodology for

Re: Garden Grove - District Elections
June 3, 2015
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estimating the extent of racially polarized voting in Garden Grove is consistent with that universally accepted by federal courts, as $\S 14026(\mathrm{e})$ of the CVRA requires.

The inability of Latino voters to select candidates of their choice is due to racially polarized voting in at-large elections that violate the California Voting Rights Act. We demand that Garden Grove change its at-large system to a district-based system that affords Latino voters an equal opportunity to elect candidates of choice to the Garden Grove City Council.

We request your response by July 3, 2015. In the absence of a satisfactory response, MALDEF and our clients will be forced to seek judicial relief in the form of an action to obtain an order changing the election system from at-large to by-district, together with other relief provided for in the CVRA, including awards of litigation and expert witness costs, and attorneys' fees.

Please contact me with any questions you may have. We would be pleased to discuss the subject of this letter with you.

cc: Zeke Hernandez
David Rodriguez
Art Montez

DH:jaa
A. 2 Resolution from the Lodi Board of Education requesting to bypass districtwide vote to change to by-trustee area elections

# BOARD OF EDUCATION <br> of the LODI UNIFIED SCHOOL DISTRICT 

## RESOLUTION NO. 2013-18

## RESOLUTION REQUESTING THAT COUNTY COMMITTEE ON SCHOOL DISTRICT REORGANIZATON APPROVE CHANGE TO BY-TRUSTEE AREA ELECTIONS

WHEREAS, the Lodi Unified School District ("District") currently uses the Education Code section 5030(c) election process to elect its governing board members; and

WHEREAS, Section 5030(c) provides that "each governing board member be elected by the registered voters of the entire school district ..., but reside in the trustee area which he or she represents." (See also California Elections Code, section 14026(a)(1)); and

WHEREAS, Board of Education ("Board") Bylaw 9110 currently provides that the District's seven member Board is elected by the qualified voters of the total District; and

WHEREAS, California Education Code sections 5019(a) and 5030 authorize the San Joaquin County Committee on School District Reorganization ("County Committee"), upon application of a school district's governing board, to change the method of election in a school district under its jurisdiction; and

WHEREAS, it is the considered view of the members of the Board that starting with the 2014 Board elections, incorporating the results of the 2010 decennial census data, the public interest will be well-served by election of District Board members in "by-trustee area" elections, i.e., elections in which "one or more members residing in each trustee area [is] elected by the registered voters in that particular trustee area" (California Education Code, section 5030(b)); and

WHEREAS, several school districts in California have been sued or threatened with lawsuit for alleged violations of the California Voting Rights Act (CVRA) by a group that has filed several such lawsuits over the past few years as a result of such Districts' at-large election systems; and

WHEREAS, in an effort to avoid the potential cost, expense and uncertainty inherent in such litigation, the District desires to proceed expeditiously to change its current at-large election system; and

WHEREAS, although Election Code section 5020 requires that a County Committee's resolution approving a change in the method of electing board members must normally be submitted to the electorate for its approval at the District's next regular election, the Board intends to seek a waiver of the voter approval requirement as permitted by law; and

WHEREAS, trustee area boundary adjustments are necessary to ensure that the population of each trustee area is proportional based on federal 2010 census data; and

WHEREAS, the County Superintendent has commissioned and provided to the Board a draft adjusted trustee area boundary plan for the District's consideration (the "Plan") that the Board has considered; and

WHEREAS, the Board has invited and received public input and comment on the Plan in open session on April 2, 2013; and

WHEREAS, the Board desires to adopt the Plan, a copy of which is attached to this Resolution as Exhibit A.

NOW THEREFORE, be it resolved by the Governing Board of Education of the Lodi Unified School District as follows:

1. That the above recitals are true and correct; and
2. The Board hereby proposes the adoption of revised trustee area boundaries based on 2010 census data and adopts the Plan for such purpose; and
3. The Board recommends the Plan to the San Joaquin County Committee on School District Organization for its consideration and approval; and
4. The Board requests that the revised trustee areas be implemented for the 2014 election.

BE IT FURTHER RESOLVED that the Superintendent or her designee are authorized and directed to forward this Resolution to the County Committee and to take all additional steps to facilitate all legally required approvals of the revised trustee areas.

THIS RESOLUTION was passed and adopted by the Board at a regular meeting held on the 16th day of April, 2013, by the following roll call vote:

AYES:

NOES:
ABSENT:

ABSTAIN:
Signed and approved by me after its passage.

> Ralph Womack, Board President

## ATTEST:

George Neely, Clerk of the Board
A. 3 Waiver request to bypass districtwide vote to establish ward elections, approved by the State Board of Education

## CALIFORNIA STATE BOARD OF EDUCATION

## JANUARY 2015 AGENDA

## Q General Waiver

## SUBJECT

Request by three school districts to waive California Education Code Section 5020, and portions of sections 5019, 5021, and 5030, that require a districtwide election to establish a by-trustee-area method of election.

Action

Consent

Waiver Numbers:
Lancaster Elementary School District 21-10-2014
Sulphur Springs Union Elementary School District 20-10-2014
Tulelake Basin Joint Unified School District 9-9-2014

## SUMMARY OF THE ISSUES

School districts that elect governing board members at-large are facing existing or potential litigation under the California Voting Rights Act of 2001 (CVRA). Pursuant to the California Education Code (EC), a district can change from at-large elections to by-trustee-area elections only if the change is approved by both the County Committee on School District Organization (County Committee) and voters at a districtwide election.

To reduce the potential for litigation and to establish by-trustee-area elections as expeditiously as possible, the Lancaster Elementary School District (ESD), the Sulphur Springs Union Elementary School District (UESD), and the Tulelake Basin Joint Unified School District (JUSD) request the California State Board of Education (SBE) to waive the requirement that a by-trustee-area election method be approved at districtwide elections-allowing by-trustee-area elections to be adopted upon review and approval of the respective County Committees.

Authority for Waiver: EC Section 33050

## RECOMMENDATION

## Approval Approval with conditions Denial

The California Department of Education (CDE) recommends the SBE approve the requests by the Lancaster ESD, the Sulphur Springs UESD, and the Tulelake Basin JUSD to waive EC Section 5020, and portions of sections 5019 , 5021 , and 5030 , which require a districtwide election to approve by-trustee-area elections.

## A. 4 Districts forced to convert from at-large to ward elections

| District | Means of Conversion | Year |
| :--- | :---: | :---: |
| Madera Unified | Court ruling | 2008 |
| Hanford Joint Union High | Settlement | 2005 |
| Ceres Unified | Settlement | 2009 |
| ABC Unified | Settlement | 2013 |
| Merced City Elementary | Threat | 2009 |
| Merced Union High | Threat | 2009 |
| Central Unified | Threat | 2010 |
| Oak Grove Elementary | Threat | 2010 |
| Los Banos Unified | Threat | 2011 |
| Perris Union High | Threat | 2011 |
| Visalia Unified | Threat | 2011 |
| Vista Unified | Threat | 2012 |
| Newport-Mesa Unified | Threat | 2013 |
| Lodi Unified | Threat | 2013 |
| Riverbank Unified | Threat | 2013 |
| Anaheim Union High | Threat | 2014 |
| Garden Grove Unified | Threat | 2014 |
| Val Verde Unified | Threat | 2014 |
| Glendale Unified | Threat | 2015 |
| Perris Elementary | Threat | 2015 |
| Lawndale Elementary | Threat | 2016 |
| Fullerton Elementary | Threat | 2016 |
| Fullerton Joint Union High | Threat | 2016 |
| Sequoia Union High | Threat | 2016 |

## B Additional Tables and Figures

Table B.1: Effect of Ward Elections on Proportion of Elected Board Members that Were Latino

|  | Dependent variable: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Segregation |  | District Size |  |
|  | All <br> (1) | Low <br> (2) | High <br> (3) | Low <br> (4) | High <br> (5) |
| Ward elections (switch by legal threat) | $\begin{aligned} & -0.301 \\ & (0.276) \end{aligned}$ | $\begin{aligned} & 1.119^{*} \\ & (0.554) \end{aligned}$ | $\begin{gathered} -0.708^{* *} \\ (0.223) \end{gathered}$ | $\begin{gathered} 0.559 \\ (0.366) \end{gathered}$ | $\begin{gathered} -0.873^{* * *} \\ (0.205) \end{gathered}$ |
| Proportion Latino (voting eligible) | $\begin{aligned} & -0.203 \\ & (0.211) \end{aligned}$ | $\begin{aligned} & -0.159 \\ & (0.227) \end{aligned}$ | $\begin{aligned} & -0.528 \\ & (0.630) \end{aligned}$ | $\begin{aligned} & -0.183 \\ & (0.220) \end{aligned}$ | $\begin{gathered} 0.880 \\ (0.758) \end{gathered}$ |
| Ward * proportion Latino | $\begin{gathered} 1.050 \\ (0.986) \end{gathered}$ | $\begin{aligned} & -2.753 \\ & (1.415) \end{aligned}$ | $\begin{aligned} & 2.538^{* *} \\ & (0.829) \end{aligned}$ | $\begin{aligned} & -1.464 \\ & (1.009) \end{aligned}$ | $\begin{gathered} 3.351^{* * *} \\ (0.596) \end{gathered}$ |
| Dissimilarity index | $\begin{gathered} 0.011 \\ (0.137) \end{gathered}$ | $\begin{aligned} & -0.074 \\ & (0.182) \end{aligned}$ | $\begin{gathered} 0.122 \\ (0.252) \end{gathered}$ | $\begin{gathered} 0.001 \\ (0.146) \end{gathered}$ | $\begin{aligned} & -0.142 \\ & (0.530) \end{aligned}$ |
| Logged enrollment | $\begin{aligned} & -0.063 \\ & (0.067) \end{aligned}$ | $\begin{aligned} & -0.081 \\ & (0.073) \end{aligned}$ | $\begin{gathered} 0.159 \\ (0.191) \end{gathered}$ | $\begin{aligned} & -0.057 \\ & (0.071) \end{aligned}$ | $\begin{aligned} & -0.229 \\ & (0.217) \end{aligned}$ |
| Property taxes collected/ enrollee | $\begin{aligned} & -0.008 \\ & (0.005) \end{aligned}$ | $\begin{aligned} & -0.007 \\ & (0.007) \end{aligned}$ | $\begin{aligned} & -0.009 \\ & (0.007) \end{aligned}$ | $\begin{aligned} & -0.008 \\ & (0.005) \end{aligned}$ | $\begin{gathered} 0.007 \\ (0.018) \end{gathered}$ |
| Total current spending on instruction/enrollee | $\begin{gathered} 0.003 \\ (0.017) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.020) \end{gathered}$ | $\begin{gathered} 0.012 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.003 \\ (0.018) \end{gathered}$ | $\begin{gathered} 0.072 \\ (0.062) \end{gathered}$ |
| Total revenue/enrollee | $\begin{aligned} & -0.002 \\ & (0.005) \end{aligned}$ | $\begin{aligned} & -0.001 \\ & (0.006) \end{aligned}$ | $\begin{aligned} & -0.007 \\ & (0.010) \end{aligned}$ | $\begin{aligned} & -0.0004 \\ & (0.005) \end{aligned}$ | $\begin{gathered} 0.001 \\ (0.016) \end{gathered}$ |
| Total expenditure/enrollee | $\begin{aligned} & -0.001 \\ & (0.005) \end{aligned}$ | $\begin{aligned} & -0.004 \\ & (0.006) \end{aligned}$ | $\begin{gathered} 0.016 \\ (0.014) \end{gathered}$ | $\begin{aligned} & -0.002 \\ & (0.005) \end{aligned}$ | $\begin{gathered} 0.003 \\ (0.016) \end{gathered}$ |
| Median household income | $\begin{aligned} & 0.0004 \\ & (0.001) \end{aligned}$ | $\begin{gathered} 0.001 \\ (0.001) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.003) \end{aligned}$ | $\begin{gathered} 0.002 \\ (0.001) \end{gathered}$ | $\begin{aligned} & -0.005 \\ & (0.003) \end{aligned}$ |
| Median household income among Latinos | $\begin{aligned} & -0.001 \\ & (0.001) \end{aligned}$ | $\begin{aligned} & -0.001 \\ & (0.001) \end{aligned}$ | $\begin{aligned} & -0.001 \\ & (0.002) \end{aligned}$ | $\begin{aligned} & -0.002 \\ & (0.001) \end{aligned}$ | $\begin{gathered} -0.0002 \\ (0.003) \end{gathered}$ |
| Proportion of students receiving free lunch | $\begin{gathered} 0.013 \\ (0.051) \end{gathered}$ | $\begin{gathered} 0.009 \\ (0.063) \end{gathered}$ | $\begin{gathered} 0.062 \\ (0.093) \end{gathered}$ | $\begin{aligned} & -0.014 \\ & (0.059) \end{aligned}$ | $\begin{gathered} 0.089 \\ (0.122) \end{gathered}$ |
| Proportion of students receiving English language services | $\begin{aligned} & -0.116 \\ & (0.173) \\ & \hline \end{aligned}$ | $\begin{aligned} & -0.096 \\ & (0.200) \\ & \hline \end{aligned}$ | $\begin{aligned} & -0.025 \\ & (0.336) \\ & \hline \end{aligned}$ | $\begin{aligned} & -0.186 \\ & (0.189) \\ & \hline \end{aligned}$ | $\begin{gathered} 0.661 \\ (0.395) \\ \hline \end{gathered}$ |
| Year FE | Yes | Yes | Yes | Yes | Yes |
| District FE | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes |
| Observations | 1,477 | 1,117 | 360 | 1,158 | 319 |
| $\mathrm{R}^{2}$ | 0.620 | 0.643 | 0.587 | 0.649 | 0.607 |

Notes: ${ }^{*} \mathrm{p}<0.05 ;{ }^{* *} \mathrm{p}<0.01 ;{ }^{* * *} \mathrm{p}<0.001$. Property taxes, current spending, revenue, expenditure, and median income variables are in thousands of dollars.

Table B. 1 (cont): Effect of Ward Elections on Proportion of Elected Board Members that Were Latino

|  | Dependent variable: |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Segregation |  |  |  |  | District Size |
|  | All | Low | High | Low | High |  |  |
|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ |  |  |
| Proportion of students who are | -0.152 | -0.651 | 0.445 | 0.052 | 0.717 |  |  |
| Black | $(0.556)$ | $(0.642)$ | $(1.326)$ | $(0.584)$ | $(1.098)$ |  |  |
| Proportion of students who are | -0.029 | 0.010 | 0.126 | -0.100 | $1.157^{*}$ |  |  |
| white | $(0.157)$ | $(0.192)$ | $(0.242)$ | $(0.169)$ | $(0.506)$ |  |  |
| Proportion of students who are | -0.715 | -0.350 | -1.505 | -0.618 | 0.397 |  |  |
| Asian | $(0.403)$ | $(0.435)$ | $(0.882)$ | $(0.503)$ | $(1.005)$ |  |  |
| Proportion of students below 100\% | 0.074 | 0.139 | -0.404 | 0.149 | 0.181 |  |  |
| of the poverty line | $(0.264)$ | $(0.297)$ | $(0.639)$ | $(0.272)$ | $(0.989)$ |  |  |
| Proportion of students between 100\% | 0.306 | 0.224 | 0.595 | 0.286 | -0.771 |  |  |
| and 149\% of the poverty line | $(0.474)$ | $(0.521)$ | $(0.795)$ | $(0.496)$ | $(1.629)$ |  |  |
| Proportion of Latino students whose | -0.217 | -0.222 | -0.225 | -0.156 | -0.467 |  |  |
| parents have less than high school | $(0.143)$ | $(0.169)$ | $(0.351)$ | $(0.160)$ | $(0.413)$ |  |  |
| Proportion of Latino students whose | -0.261 | -0.270 | -0.145 | -0.157 | -0.577 |  |  |
| parents have high school degree | $(0.170)$ | $(0.200)$ | $(0.431)$ | $(0.186)$ | $(0.455)$ |  |  |
| Proportion of Latino students whose | -0.124 | -0.078 | -0.293 | -0.060 | -0.658 |  |  |
| parents have some college | $(0.165)$ | $(0.182)$ | $(0.452)$ | $(0.173)$ | $(0.616)$ |  |  |
| Unemployment rate among Latinos | -0.083 | -0.095 | -0.130 | -0.118 | 0.146 |  |  |
| Proportion of Latinos who speak English | $(0.177)$ | $(0.189)$ | $(0.614)$ | $(0.185)$ | $(0.755)$ |  |  |
| well | 0.062 | 0.041 | 0.135 | 0.065 | -0.065 |  |  |
| Size of school board | $(0.132)$ | $(0.159)$ | $(0.285)$ | $(0.151)$ | $(0.325)$ |  |  |
|  | 0.048 | 0.075 | -0.277 | 0.037 | -0.108 |  |  |
| Year FE | $(0.091)$ | $(0.099)$ | $(0.201)$ | $(0.099)$ | $(0.130)$ |  |  |
| District FE | Yes | Yes | Yes | Yes | Yes |  |  |
| Controls | Yes | Yes | Yes | Yes | Yes |  |  |
| Observations | Yes | Yes | Yes | Yes | Yes |  |  |
| R | 1,477 | 1,117 | 360 | 1,158 | 319 |  |  |
| Notes: *p<0.05; **p<0.01; ${ }^{* * * * p<0.001 . ~}$ | 0.620 | 0.643 | 0.587 | 0.649 | 0.607 |  |  |
|  |  |  |  |  |  |  |  |

Table B.2: Mean Characteristics of Districts that Saw an Increase in Latino Candidacy After Conversion, vs. Districts that Did Not

|  | Increase | No increase | p-value |
| :---: | :---: | :---: | :---: |
| Dissimilarity index | 0.31 | 0.31 | 0.72 |
| Enrollment | 20,045 | 15,051 | 0.00 |
| Property taxes collected/enrollee | 1,654 | 2,440 | 0.01 |
| Total current spending on instruction/ enrollee | 4,748 | 4,942 | 0.07 |
| Total revenue/enrollee | 9,233 | 9,521 | 0.20 |
| Total expenditure/enrollee | 9,352 | 9,648 | 0.23 |
| Median income in district | 59,282 | 60,825 | 0.55 |
| Median income among Latinos in district | 50,416 | 49,855 | 0.77 |
| Proportion of students receiving free lunch | 0.67 | 0.79 | 0.00 |
| Proportion of students receiving English language services | 0.22 | 0.30 | 0.00 |
| Proportion of students who are Black | 0.08 | 0.08 | 0.16 |
| Proportion of students who are white | 0.31 | 0.27 | 0.13 |
| Proportion of students who are Asian | 0.15 | 0.13 | 0.11 |
| Proportion of students below $100 \%$ of the poverty line | 0.15 | 0.18 | 0.01 |
| Proportion of students between $100 \%$ and $149 \%$ of the poverty line | 0.12 | 0.12 | 0.98 |
| Proportion of Latino students whose parents have less than high school | 0.41 | 0.43 | 0.21 |
| Proportion of Latino students whose parents have high school degree | 0.28 | 0.28 | 0.93 |
| Proportion of Latino students whose parents have some college | 0.26 | 0.24 | 0.01 |
| Unemployment rate among Latinos | 0.12 | 0.14 | 0.03 |
| Proportion of Latinos who speak English well | 0.55 | 0.54 | 0.15 |
| Size of school board | 5.99 | 6.07 | 0.63 |

Notes: ${ }^{*} \mathrm{p}<0.05 ;{ }^{* *} \mathrm{p}<0.01 ;{ }^{* * *} \mathrm{p}<0.001$. Groups are defined based on the proportion of seats up for election in a given district-year that had at least one Latino candidate on the ballot, as described in the Data and Measurement section.

Figure B.1: Marginal Effects of Conversion to Ward Elections on Availability of Latino Candidates, by Geographic Segregation


Notes: The proportion of the over-18 population of the district that is both Latino and eligible to vote (i.e., a native-born or naturalized U.S. citizen) is plotted along the x-axis, with the associated marginal effect $\left(\beta_{1}+\beta_{2} *\right.$ proportionLatino from Equation 1) on the $y$-axis. The $x$-axis ranges over the common support of the proportionLatino variable in the treatment and control groups. We show the distributions of the observed values of proportionLatino in the treated group (top) and control group (bottom). $95 \%$ confidence intervals are shown in gray.

Figure B.2: Marginal Effects of Conversion to Ward Elections on Availability of Latino Candidates, by District Size


Notes: The proportion of the over-18 population of the district that is both Latino and eligible to vote (i.e., a native-born or naturalized U.S. citizen) is plotted along the x-axis, with the associated marginal effect $\left(\beta_{1}+\beta_{2} *\right.$ proportionLatino from Equation 1) on the y-axis. The x-axis ranges over the common support of the proportionLatino variable in the treatment and control groups. We show the distributions of the observed values of proportionLatino in the treated group (top) and control group (bottom). $95 \%$ confidence intervals are shown in gray.

Figure B.3: Marginal Effects of Conversion to Ward Elections on Vote Share to Latino Candidates, by Geographic Segregation


Notes: The proportion of the over-18 population of the district that is both Latino and eligible to vote (i.e., a native-born or naturalized U.S. citizen) is plotted along the x-axis, with the associated marginal effect $\left(\beta_{1}+\beta_{2} *\right.$ proportionLatino from Equation 1) on the y-axis. The x-axis ranges over the common support of the proportionLatino variable in the treatment and control groups. We show the distributions of the observed values of proportionLatino in the treated group (top) and control group (bottom). $95 \%$ confidence intervals are shown in gray.

Figure B.4: Marginal Effects of Conversion to Ward Elections on Vote Share to Latino Candidates, by District Size


Notes: The proportion of the over-18 population of the district that is both Latino and eligible to vote (i.e., a native-born or naturalized U.S. citizen) is plotted along the x-axis, with the associated marginal effect $\left(\beta_{1}+\beta_{2} *\right.$ proportionLatino from Equation 1) on the y-axis. The x-axis ranges over the common support of the proportionLatino variable in the treatment and control groups. We show the distributions of the observed values of proportionLatino in the treated group (top) and control group (bottom). $95 \%$ confidence intervals are shown in gray.

Figure B.5: Marginal Effects of Conversion to Ward Elections on Proportion of Elected Board Members that Were Latino, by Geographic Segregation
(Using Theil Index Instead of Dissimilarity Index)


Notes: The proportion of the over-18 population of the district that is both Latino and eligible to vote (i.e., a native-born or naturalized U.S. citizen) is plotted along the x -axis, with the associated marginal effect $\left(\beta_{1}+\beta_{2} *\right.$ proportionLatino from Equation 1) on the y-axis. The x-axis ranges over the common support of the proportionLatino variable in the treatment and control groups. We show the distributions of the observed values of proportionLatino in the treated group (top) and control group (bottom). 95\% confidence intervals are shown in gray.

Figure B.6: Marginal Effects of Conversion to Ward Elections on Proportion of Elected Board Members that Were Latino, by Geographic Segregation (Defining High Subgroup as Top Third of Treated Units)


Notes: The proportion of the over-18 population of the district that is both Latino and eligible to vote (i.e., a native-born or naturalized U.S. citizen) is plotted along the x -axis, with the associated marginal effect ( $\beta_{1}+\beta_{2} *$ proportionLatino from Equation 1) on the y -axis. The x -axis ranges over the common support of the proportionLatino variable in the treatment and control groups. We show the distributions of the observed values of proportionLatino in the treated group (top) and control group (bottom). $95 \%$ confidence intervals are shown in gray.

Figure B.7: Marginal Effects of Conversion to Ward Elections on Proportion of Elected Board Members that Were Latino, by District Size (Defining High Subgroup as Top Third of Treated Units)


Notes: The proportion of the over-18 population of the district that is both Latino and eligible to vote (i.e., a native-born or naturalized U.S. citizen) is plotted along the x-axis, with the associated marginal effect $\left(\beta_{1}+\beta_{2} *\right.$ proportionLatino from Equation 1) on the y -axis. The x -axis ranges over the common support of the proportionLatino variable in the treatment and control groups. We show the distributions of the observed values of proportionLatino in the treated group (top) and control group (bottom). 95\% confidence intervals are shown in gray.

Figure B.8: Marginal Effects of Conversion to Ward Elections on Proportion of Elected Board Members that Were Latino, High Geographic Segregation (Dissimilarity Index > 0.29)


Notes: The proportion of the over-18 population of the district that is both Latino and eligible to vote (i.e., a native-born or naturalized U.S. citizen) is plotted along the x -axis, with the associated marginal effect ( $\beta_{1}+\beta_{2} *$ proportionLatino from Equation 1) on the y -axis. The x -axis ranges over the common support of the proportionLatino variable in the treatment and control groups. Point estimates with $95 \%$ confidence intervals are shown for low, medium, and high subgroups of the data, defined over the distribution of the treated observations. All estimates are statistically significantly different from one another at $p<.05$, except for low vs. medium. The histogram at bottom shows where the observed values of proportionLatino fall, with treated observations in red.

Figure B.9: Marginal Effects of Conversion to Ward Elections on Proportion of Elected Board Members that Were Latino, Large Districts (Enrollment > 13,700)


Notes: The proportion of the over-18 population of the district that is both Latino and eligible to vote (i.e., a native-born or naturalized U.S. citizen) is plotted along the x -axis, with the associated marginal effect ( $\beta_{1}+\beta_{2} *$ proportionLatino from Equation 1) on the $y$-axis. The x-axis ranges over the common support of the proportionLatino variable in the treatment and control groups. Point estimates with $95 \%$ confidence intervals are shown for low, medium, and high subgroups of the data, defined over the distribution of the treated observations. All estimates are statistically significantly different from one another at $p<.05$, except for medium vs. high. The histogram at bottom shows where the observed values of proportionLatino fall, with treated observations in red.

