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Voter Receptivity and Elite Legislative Behavior on Public Land Protection: A Northern California Analysis

California is at approximately 24% of its 30% goal for public land conservation through Gavin Newsom's 30x30 plan, a trailblazing piece of climate change and conservation legislation (Newsom, 2024). Newsom's "30 x 30" plan to conserve 30% of state lands and coastal waters by 2030 has become pertinent to ensuring public land and natural resource production and recreational use will continue for years to come. Public land is critical in this journey since about 15% of California's land is public (BLM, 2024). To explore the impact of future legislation on California's environmental future, my research question asks broadly: How does the housing demographic affect the introduction and implementation of public land legislation? Specifically, are voters in rural counties of Northern California less likely to favor the introduction and implementation of policies strengthening public land protection than urban counties? This is explored through a comparative analysis of elite legislative behavior by California Senators and voter receptivity in regard to environmental legislation with the inclusion of public land protection within rural and urban counties in Northern California from 2014 to 2024. I find that rurality and housing density directly affect voter receptivity to enacting public land conservation legislation and discussing the necessary resources needed to create impactful legislation.

Context and Significance:

Since Governor Gavin Newsom's swearing-in in 2018, California's emphasis on conservation has been a critical priority. The California Air and Water Resource Board estimated that the quality of California's natural and working lands (NWL)¹, which covers more than 90% of the state, is definitively deteriorating (Wong, 2021). As well as this, due to human activity and a lack of public land protection, native species in California have declined by 20 percent, and California has lost more than 1 million acress of natural area in the last 20 years due to rapid urban sprawl and human activities such as logging, mining, and fishing (Guiterrez, 2020). This means that the race to conserve what is left has already begun.

However, not all of California agrees with the motion to make conservation a top priority. Its diversity in demographics across the state makes finding common ground for new natural resource legislation difficult. In a PPIC statewide survey based on 1,648 California adult residents in 2024, views on the legislature's handling of the environment are split along traditional party lines (72% Democrats, 44% independents, 13% Republicans). A specific issue is voter opinion on climate change perceptions across California, where most new environmental legislation is working to mitigate climate risks. Approval of the legislature's handling of this issue was highest in the Bay Area (61%) and lowest in the Inland Empire (41%) and the Central Valley (40%; 53% Los Angeles, 48% Orange/San Diego) (e.g., Californians and the Environment; Baldassare et al., 2024). This is due to the partisan divide on whether or not California should be adapting to its new climate or prevent worsening its conditions. According

¹ Natural and Working Lands (NWL) defined by U.S. Climate Alliance as: "forests and woodlands, grasslands and shrublands, croplands and rangelands, coastal and freshwater wetlands, and urban green spaces."

to the PPIC survey, more Democrats believe in legislation that strengthens climate mitigation, while the majority of Republicans believe in legislation for climate adaptation.

This struggle to find compromise amongst political parties and racial differences in environmental legislation has been especially prominent in the 2021 legislative session. Democratic Senator Alex Padilla reintroduced a public lands package with co-sponsor Senator Dianne Feinstein that aims to restore and expand protections for over 1 million acres of California's public lands, designating nearly 600,000 acres of new wilderness, more than 583 miles of new wild and scenic rivers, and over 100,000 acres of an expanded national monument-two of the most rural counties in this research's data set. The additional goal of this bill is to reverse racial and economic disparities in access to the outdoors and serve densely populated areas of the state that do not have access to nature. However, this legislation was unpopular to Republican California Senators representing the rural counties in which these new designations would occur, such as Trinity and Lake, which are included in this research's data set. These legislators argued that the bill had too much opportunity for federal overreach for public lands. Increasing management and reducing the opportunity to have multi-use lands. Although the bill passed, it demonstrated the significant divide across public land priorities, making it essential to understand the priority differences for different demographics across the state.

Due to these examples and an established divide in voter opinion, there is difficulty in proposing bipartisan legislation on public land conservation. Seeing how policies strengthening vulnerable public land will be affected by voter priorities, the main object of this research is to look at different housing densities in Northern California counties and how their variables and demographics will result in either more pro-public land legislation or less.

Literature Review:

Causes of Support for Environmentalism in Voters:

One of the gaps this project seeks to fill is how specific environmental goods, in this case, public land, are affected by voting variation. My more specific analysis can help answer questions about the correlation of public land, county partisanship, and housing demographics. In an analysis of environmental referenda voting in California from Ecological Economics, there is evidence that spatial dependence explains part of the variation in the voting outcome and can say that proximity to an environmental good is relevant in voting patterns (Wu & Cutter, 2011). Therefore, the measure of how close each county is to public land and how their legislator voting patterns are critical to the results of my project. However, it is essential to consider nuances when using county-level data. Aggregation bias is higher when the agents within the aggregation unit are more heterogeneous; therefore, with this project, it is recommended to air on the side of caution when suggesting the use of counties as measures of data because it can be "problematic and misleading" (Wu & Cutter, 2011). Other critical demographics to consider as control variables are political partisanship, education, race, etc. That is why public land proximity and party alignment within the counties in the project sample are considered confounding variables.

Regarding party alignment as a confounding variable, there are patterns in environmental issues and partisan divide in California. This is also confirmed by the Pew Research Center

report release with a supporting survey of 12,638 U.S. adults, including 10,491 registered voters (5,861 of whom are Democrats or lean to the Democratic Party) conducted Jan. 6-19, 2020. It showed that in California, there is near consensus among Democrats that environmental protection is essential compared to about 21% of Republicans who say the same thing (Kennedy & Johnson, 2020). We review in my research design that this pattern is also seen in my research where higher approval of state environmental legislation that affects public land improvement and restoration is highest in democratic-urban counties.

Public land management is ordinarily reliant on conditions written into environmental or climate legislation. American states have become increasingly essential battlegrounds for interest groups attempting to influence the political process. The Center for American Progress released a report stating that outdoor recreation on publicly managed land in the United States contributes three times more to the U.S. economy than oil, gas, and coal production (McConville & Zeno, 2023). Unsurprisingly, money and other policy actors have become influential factors in including public land protection in environmental policy. In UC San Diego's "Interest Group Political Spending and State Environmental Policy," they analyze this influence through the impact of partisan competition and control on environmental group lobbying across 20 states (2023). Farver's dissertation studies the unexplored questions regarding group strategy and influence in this area, and finally, it will examine the impact of group political spending on environmental policy outcomes. Farver finds that lobbying groups spend more when they are in the offense for new legislation. Environmental groups increase lobbying activity when Democrats control the governorship because there is a higher opportunity to pass pro-environmental legislation (Farver, 2023). This is the pattern that my data is reaching to show

through graphing elite legislation behavior on environmental legislation over my temporal scope and party alignment in both rural and urban counties.

Causes of Differences in Voting Behavior and Attitudes Between Rural and Urban Voters:

To analyze all potential causes for differentiation in voting behavior in rural and urban voters, it is important to acknowledge general differences outside environmental legislation. Firstly, the general demographics of rural and urban areas are vastly different. The idea that rural areas tend to have a higher concentration of Republicans and Republican-leaning independents, while a majority of Californians in urban communities identify as Democrats or lean toward the Democratic Party tends to be relevant across the years. As reported in March 2024 by the PPIC, immigrants make up only 13.5% of rural Californians, compared to 27.3% of urban residents. This matters because 48% of immigrants in California lean Democratic, while only 21% lean Republican (PPIC, 2024). Additionally, lower concentrations of minority voters in rural areas influence overall voting patterns. Pew Research Center data further highlights that nearly all California Democrats prioritize environmental protection, compared to only 21% of Republicans (Kennedy & Johnson, 2020). This is another reason why partisanship is a substantial confounding variable in this research.

Economic differences are another potential factor when considering differences in attitudes and voting behavior in rural and urban voters. In general, across the U.S, there is a theory that rural counties are less receptive to more progressive policies because the U.S. has experienced "deindustrialization and various other changes in jobs and the economy" and rural areas have less of a chance to adapt (Lieberman & Mettler, 2020). economic outcomes tend to be

worse for Californians who live in remote rural areas than those who live closer to cities because urban areas have adapted more effectively and created new jobs to accommodate these changes (PPIC, 2024). Therefore, the reliance on multi-use public land, which may have more job opportunities than in other industries, can be considered a threat to their rural economy. This could ultimately discourage many rural voters from voting for environmental and public land legislation, which could pose a threat by imposing various fines, tightening restrictions, or preventing specific work on the land.

Theory and Hypothesis:

I hypothesize that *if a county is more rural in Northern California, the less receptive resident registered voters will be to enacting public land protection legislation.* This hypothesis and theory are based on the causal mechanism that rural counties in Northern California, where more of the population has a direct relationship (i.e., closer in proximity) with public lands, will be less receptive to more robust state control on environmental regulations surrounding protected public land. This is due to potential fines for direct or indirect pollution, fear of excessive federal oversight on land use, restrictions on recreation, and tax increases for the management and protection of public lands. Therefore, my focus is on finding the patterns between rural districts and their elected legislators' political affiliations and their voting history on legislation with the inclusion of public lands protection. These all act as demonstrators of public receptivity. With this in consideration, my operational hypothesis is: *In Northern California counties, as housing density decreases (i.e., in rural counties), there will be a related decline in voter receptivity*.

favorable public opinion, and the likelihood of implementing public land protection legislation introduced federally and locally.

Research Design:

For this research, I chose Northern California Districts - which will begin with Assembly District (AD) 29 and 27, to have the counties within that I would use as my units of analysis. At the same time, AD 08 will be omitted due to its extenuating borders to pass into what would be considered Southern California. The counties within the Assembly Districts are analyzed by the district boundaries current to 2024. The housing density (then determined as urban or rural) of each relevant Northern California county is the independent variable of my hypothesis. Therefore, my focus is on finding the patterns from 46 Northern California counties from 2020-2024 in regard to rural counties and their partian majority, resident voting history on legislation that affects public lands, as well as their elected legislators' political affiliations. These all act as demonstrators of public receptivity.

My independent variable for this research project is the rurality of my counties, *whether rural* or *urban*. I measured and found the necessary data for the variables on the official state website of the Rural County Representatives of California (RCRC), which includes the official list of rural counties in California. The reason this cannot be defined by specific numerical density is that there is no official definition of rural in the U.S.. Therefore, it was more fitting to use the RCRC's definitive list and then extract the counties included in my sample. When housing density is measured in Figure 2, the Census Bureau provided density for counties as "person per square mile." Through this, an individual can see the increase and decrease in

housing density across the counties and see the potential relationship to positive votes on environmental legislation.

Both dependent variables used for this research are "the amount of state legislation positively voted on and implemented that strengthens public land protection" and "the amount of local legislation positively voted on and implemented that strengthens public land protection." Specifically, between the years of 2020-2024. These specific operationalizations were chosen because it is the most representative data for voter receptivity to state and local public land protection legislation. For state legislation, like Proposition 4, introduced on the ballot in 2024, using the average percent of "yes" votes across counties is a direct representation of receptivity. Using California Senators' votes, in which they represent their districts for local legislation, serves the same purpose. The data for this variable was extracted from Ballotpedia, County Voter Records, California Legislative Archives, and the California Assembly.

It is also important to consider political party alignment as a confounding variable in this study, as this may affect the hypothesis because many rural areas tend to lean politically conservative, which means voters are often skeptical of stricter government regulation over land. Only 55% of Republicans in California stated that voting positively on environmental issues is essential to them (Baldassare et al., 2024). Therefore, they would be less likely to be receptive to implementing these policies. Conversely, urban districts are often more liberal and more likely to vote for environmental regulation and conservation efforts. The data sources used have been the political party of the Assemblymember for each district, VoteSmart, and Ballotpedia from the last 4 years.

Research Method:

The correlation method used to find a relation between *positive votes by California Senators for local legislation strengthening public land conservation* and *housing density* was Pearson's correlation test. This test shows the strength and direction of a relationship between these two dependent and independent variables. The process included extracting the housing density of each of the 46 counties from the 2020 Census and counting each pro-environmental legislation vote by each representing California Senator from 2020-2024. The criteria for the legislation to be considered in the data was if it would directly affect any public lands or inhabitants of it. An example of this would be legislation on California wildfire preventatives, as they usually involve forests on public lands.

This works to show a correlation between partisanship and housing demographics, as well as the population's voting pattern. The patterns reinforced that rural counties are more Republican-leaning and less receptive to public land protection legislation. Extracting data from several official county websites through archived election results, registered voters, party majorities, etc, helped build a thorough database.

Results:

This research project investigates the relationship between housing density (rurality), county partisanship, and the likelihood of California senators voting in favor of local pro-public land conservation legislation. Analyzing data from all 46 counties included in the sample, this research tracked senators' votes on pro-environmental legislation and registered voters' votes on pro-public land conservation legislation at a state level during legislative sessions from 2020 to 2024. These findings suggest that rurality and partisanship play key roles in shaping public land legislation and policy outcomes in California.

All 46 counties in this sample reported their senators' votes on environmental legislation from legislative sessions in 2020-2024. All votes for pro-environmental legislation were counted and tracked by county. The majority of pro-public land conservation votes were reported from Democratic counties (n=20) versus Republican counties (n=26). The distribution of the number of pro-votes, the highest being 16 cumulatively, across counties is represented by color gradients on the map of California shown in Figure 1.

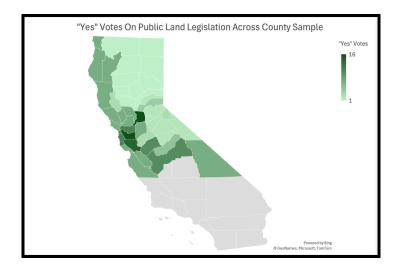


Figure 1. Source: VoteSmart

The significant finding in this research was that as housing density decreases, the less likely their California senator will vote positively on local pro-environmental legislation. Through Pearson's correlation test, housing demographic and voter receptivity to environmental legislation is statistically significant (0.0035, p<0.05) (Appendix Table 1). Figure 2 demonstrated this relationship using the dependent variable of "positive votes by California Senators on local pro-environmental legislation" and the independent variable "housing density" to visualize the potential correlation. County voter majority partisanship was also included in the data points. This data showed a moderate, positive correlation (R = 0.422) (Appendix Table 1) even in rural counties; as housing density increases, so will receptivity. Therefore, local legislation is more likely to be voted on positively and passed in counties with democratic voters and high housing density.

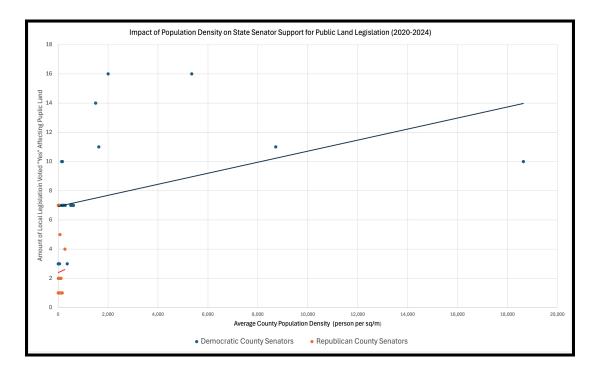


Figure 2. Source: U.S. Census Bureau (2020) & Cal. State Senate Archive

In order to explore partisanship as a confounding variable, all votes for legislation strengthening public land conservation and management from 2020-2024 (Proposition 4) were counted. Each Northern California county (n=46) was recorded and notated as majority Republican or Democrat, rural or urban, and by how many of their voters voted "yes" on Proposition 4 in 2024. After averaging, the results show that Democratic-Urban counties (D-UR) had the highest "yes" votes on Proposition 4 (65%), then Democratic- Rural (D-RU) (60%), and finally Republican-Rural counties (R-RU) at 44% (Figure 3).

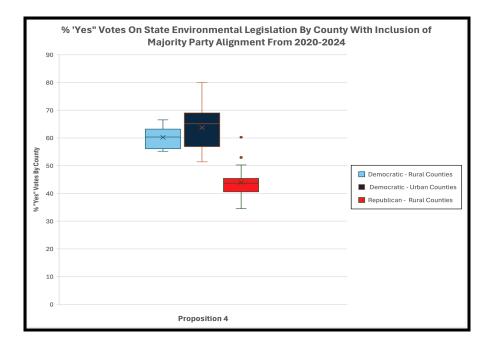


Figure 3. Source: Election Results, CA Secretary of State

The results show differences between majority county partisanship and voter responses. Respondents from Democratic-Urban counties (D-UR) counties had higher individual approval rates than any of the other counties. Following secondly Democratic- Rural (D-RU), then finally Republican-Rural counties (R-RU). There were no Republican-Urban counties from which to add additional data. This graph could suggest a relationship between county partisanship, precisely their voter's ideologies, and how they vote in alignment with other residents on environmental issues.

Discussion & Research Implications:

Voter Receptivity:

The research question posed, "Are voters in rural counties of Northern California less likely to favor the introduction and implementation of policies strengthening public land protection than urban counties?" has favorable results for the hypothesis proposed. The relationship between housing density and voter receptivity to environmental legislation is statistically significant (0.0035, p<0.05) (Appendix Table 1), which suggests that as housing density decreases, voter receptivity to local pro-public land conservation legislation will increase as well, implying that housing density is a reliable predictor of voting patterns. This finding does align with patterns discussed in the literature review, which states that rural voters may perceive public land protection measures as an overreach by the federal government.

Senator and Voter Partisanship:

The results graphed in Figure 3 suggest a relationship between the confounding variable of partisanship in this research. Democratic counties, specifically urban ones, generally had higher pro-votes on average than the Republican-Rural counties (R-RU) sample. The finding that Democratic-Urban (D-UR) counties had the highest average "yes" votes (65%) on Proposition 4 does suggest an alignment between more progressive political ideologies, especially on environmental causes. However, the Republican-Rural (R-RU) counties showed lower receptivity (44%) on Propositive 4, suggesting that the proposition may not reflect their priorities. This is also corroborated by the Pew Research Center survey highlighting the ideological gap in environmental priorities between Republicans and Democrats.

Policy Implications:

These findings can hold implications for policymakers to support and propose new legislation strengthening public lands in California. The correlation between rurality and lower support for public land protection does bring concern about the lack of voter turnout. It is important to use resources to seek out alternative explanations and resolve issues causing low receptivity and low voter turnout, such as unclear definitions of public lands, boundaries to voting centers, or lack of access to resources explaining the impact of new propositions. Public land management groups and environmental advocates should prioritize lobbying efforts in regions with established support while encouraging opportunities for all voters, regardless of county, to give input on newly proposed legislation. These findings can be critical to filling policy gaps in future environmental legislation.

Limitations and Research Extensions:

This study does have potential limitations that are important to recognize. First, proximity to public lands is critical when considering voter attitudes. However, that relies on data collection that is highly extensive to calculate and collect from websites with limited accessibility, such as the official Bureau of Land Management Website. It would have been beneficial to measure the locality of public land managed by the Bureau of Land Management 50 miles or closer from the borders of each relevant northern county. If this acted as a confounding variable, it may help determine if it influences the relationship between rural and urban counties with the policy implementation. This is because voters in rural areas closer to public lands may have more direct interactions with those lands, leading to opposition to policies that oppose activities like logging or hunting. As for urban counties, they might support public land protection out of environmental concern or recreational purposes even if there is less direct

contact. This has been the case before in studies taking place in the greater Western United States, where demographic variables, such as geography and economic conditions, are more influential in determining levels of environmental support than just the urban or rural nature of the county (Salka, 2001).

Secondly, reliance on data from California Senate districts makes data vulnerable to changes, especially due to the redistricting of senate districts that occurred in 2022. This is why the original intention of using Assembly Districts was altered because of unclear boundaries. A geographic change also can affect partisan divide, housing density if boundaries are extended, can potentially skew the official labeling of a county as "Rural" or "Urban." Since there is already difficulty in finding district data across office Senate websites, it adds additional potential for Senator votes to be miscounted and conflicting population data available. Therefore, the Senate Districts used for the project were enacted after the 2022 redistricting.

A suggestion to help bridge policy gaps when creating legislation representative of California's environment would be voter surveys. Counties could distribute or encourage their residents to take part in a survey that asks them what their top priorities are when it comes to public land legislation. In addition, gauge how many jobs rely on public land, how often public land is used recreationally, and if there are other concerns with new environmental legislation. Not only will this help fill in critical data, but it can also help legislators discuss their constituents' concerns.

Conclusion:

The results of this research help deepen the understanding of the relationship between rurality, voter behavior, and public land legislation in Northern California. By examining their relationship, this research helps identify voting patterns that are critical to helping bridge gaps in policy formation. One of the most significant findings is the role of housing density as a predictor of voter receptivity to pro-environmental legislation. This statistically significant correlation supports the hypothesis that voter receptivity to public land legislation will decrease as housing density decreases. In addition to this, with increased housing density, counties with more democratic voters often tend to prioritize public land conservation more regularly despite further proximity to these lands.

Partisanship was also critical to measure as a confounding variable, displaying itself as a prominent variable in differences between rural and urban areas. Regardless of their rurality, they showed higher support for environmental initiatives than their Republican counterparts (Figure 3). This reinforces the importance of political alignment in shaping attitudes toward public land protection. It also highlights the need for bipartisan strategies to build broader coalitions in support of conservation efforts, much like Gavin Newsom's 30 x 30 plan has sought to do. The integration of party affiliation into the analysis not only strengthens the hypothesis but also provides insight for legislators and stakeholders seeking to create policy reach across the entire state.

However, the study is not without limitations. The nuances of redistricting laws and patterns in the temporal scope made voting data challenging to obtain and weakened its reliability. The other limitation concerns the absence of detailed data on proximity to public lands, which restricts the research's ability to use it as a strong confounding variable. As discussed, voter attitudes may be shaped by close proximity to public lands, particularly in rural areas. For this purpose, the recommendations for research extension included distributing surveys across rural counties to gauge environmental priorities, providing more resources to fill in missing voter data in rural counties, and discussing boundaries that prevent voters from expressing public opinion on policies introduced.

The recommendations and impact of this research have a broader impact. Policymakers can use these insights to help address gaps in voting turnout in rural areas and then assist in addressing specific concerns about public land regulations. Distributing surveys across rural areas on high priorities in land conservation can help create an understanding of the factors that prevent voters from supporting environmental policy. Stakeholders can then build a more inclusive and practical approach to public land conservation.

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Appendix:

1. Table 1

Test:	Result:	Conclusion:
Pearson Test	0.422	moderate, positive
P-Value	.0035	Statistically Significant (p<0.5)

Table 1: Correlation Results From Figure 2 Statistics