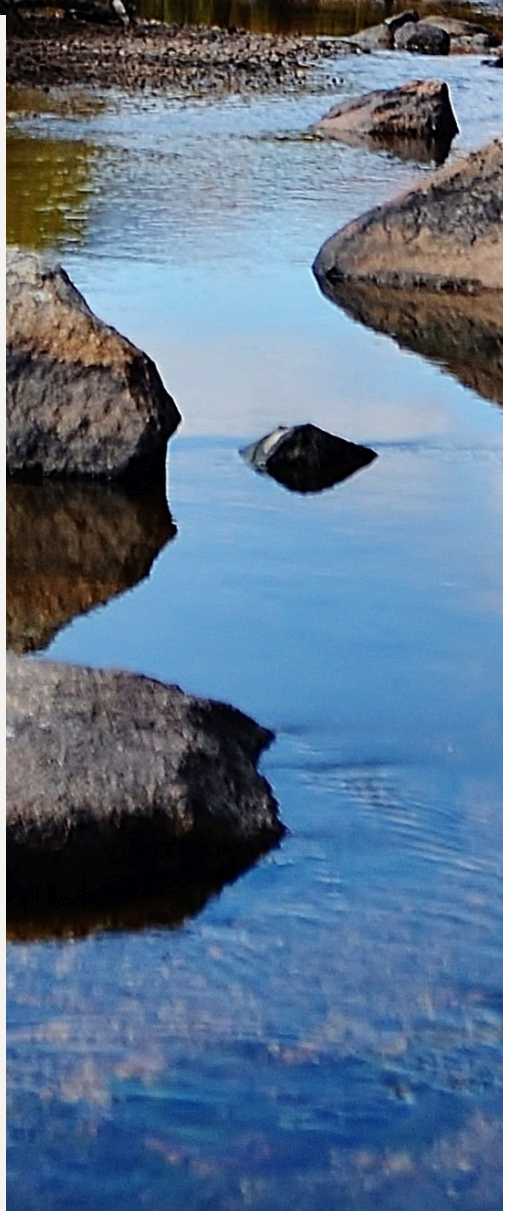


UNIVERSITY OF CALIFORNIA, DAVIS,
WATER MANAGEMENT LAB

Assessing Representation, Access, and Transparency Among Decision-Makers in California's Water Sector

Study Conclusion: Women, Latinos, and BIPOC Least Represented in Addressing Water Inequities



Water Education for Latino Leaders

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Executive Summary

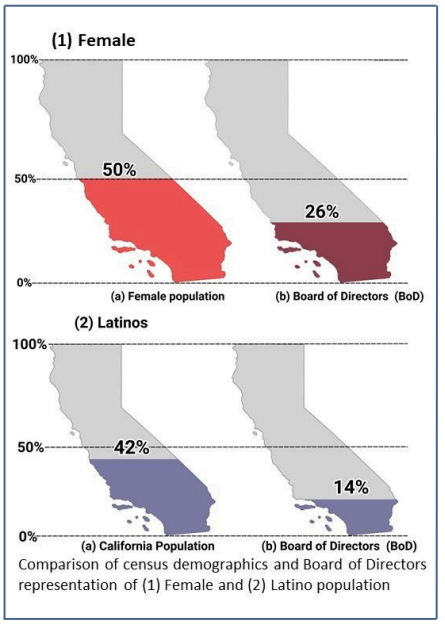
California agencies are struggling to ensure safe and affordable water for their customers, just as federal and state regulations are tightening. Our state's 150-year-old water infrastructure and outdated policies are also inadequate to address the pressures of population growth, economic activity, and climate change. Additionally, proposed solutions demand increasingly unstable funding. **Even more vital to reaching successful outcomes is the continuing public commitment to change among constituents and leaders in local and regional water agencies and districts.**

For 13 years, **Water Education for Latino Leaders** (WELL) has supplied comprehensive and objective training and education about California water governance and policy to more than 1,600 local Latino elected officials. With that knowledge, they can shape policies, increase buy-in, and develop solutions for their constituents. **Yet a significant challenge remains in that Latino and other communities of color suffer disproportionately from inaccessible, expensive, and polluted water supplies.** Some 56% of failing public water systems serve disadvantaged communities; 67% serve majority communities of color. **Solutions to these inequities mean that Latinos and their advocates must be part of the decision-making bodies and executive staff in local and regional water agencies and districts.**

Currently, they are not! This study was funded by WELL in collaboration with the University of California (UC) Davis Water Management Lab (principal investigator Professor Samuel Sandoval-Solis, PhD, UC Davis–University of California Agriculture and Natural Resources).

The study analyzed the composition of governing bodies in California's water sector. It identified 1,980 Public Water Agencies (PWAs) and sampled 688 (or 35%) of them, examining board members and executive (or C-suite) positions. R**esults show that historically marginalized communities**—including women, Latinos and Black, Indigenous, and People of Color (BIPOC)—**remain significantly underrepresented in these decision-making bodies.**

Board-Member Representation: Women make up 50% of California's population, yet hold only 26% of water sector board seats. Latinos comprise 42% of the state's population but account for just 14% of board seats. Non-Latino BIPOC comprise 23% of the state's population and hold only 5% of board seats. To achieve proportional representation, the number of women, Latino, and non-Latino BIPOC board members would need to double, triple, and quadruple, respectively. **C-Suite/ or Executive Positions:** Women in 21% of the PWAs hold 50% or more of executive roles; in 11% of these organizations there were women in C-suite positions, but they occupy less than 50% of executive slots. Alarmingly, in the remaining 67% of the PWAs sampled, there are no women represented in C-suite positions. To achieve proportional C-suite representation, women would need to double their representation, and Latinos and non-Latino BIPOC would need to triple theirs. Overall, 26% of PWAs surveyed had no female representation at all in either board member or C-suite positions.



Comparison of census demographics and Board of Directors representation of (1) Female and (2) Latino population

To foster equitable outcomes for Latinos and other excluded and underrepresented groups and to make these agencies and districts better represent and serve all of California, more diverse decision-making bodies and top executive leadership are urgently needed. The study, therefore, examined **systemic barriers** that prevent more diverse representation.

Access to Decision Making: Only 36% of sampled PWAs had publicly available information online on how to become a board member. Regions with easily accessible information had higher rates of elected board members. Conversely, regions with low accessibility to such instructions had a higher number of *appointed* board members. In some areas, board appointments accounted for 19%—a disproportionately high rate. The study also examined whether board members had prior advantageous knowledge before assuming their roles. Based on study criteria, 90% of board members met at least one of the four knowledge criteria markers; 33% met all four. Additionally, 15% of PWAs did not post their board of directors' meeting agendas online. These disparities raised concerns about water-related decisions equitably addressing the needs of all community members.

Systemic barriers that continue to prevent new candidates from stepping into board memberships and C-suite positions include a lack of awareness of the significance of these positions, a lack of advertising and instructions about how to become a board member, and a lack of or limited mentorship for newcomers. PWAs can implement policies aimed at closing these gaps, including increased funding for mentorships, leadership training, and outreach programs. Such initiatives will empower a new generation of water leaders from historically marginalized communities.

Addressing these structural barriers is key to ensuring that governing bodies more accurately reflect their populations. Study policy recommendations include:

- Transparency Measures: PWAs should provide easily accessible and written instructions (in multiple languages) on board membership eligibility and election procedures.
- Broad Advertisement: PWAs should establish outreach programs among underrepresented communities to inform and encourage participation in governance.
- Capacity Building: Increased funding is needed for leadership programs and workforce training that support board members and C-suite positions focused on women, Latinos, and BIPOC.
- Fair Access: Allowing fair access to the $50 billion water industry will strengthen local economies and create new employment and business partnerships for women, Latinos, and BIPOC business owners.

More diverse representation in water-industry decision making will produce other important benefits. Knowing diverse community cultures helps water agencies better understand constituents, such as when customer service representatives incorporate language traditions and agencies include nuanced social and recreational activities. Substantive programmatic policies supported by diverse representation will better serve and protect diverse and underrepresented communities—through better customer service or direct water lines, or by cleaning up contaminants in local service areas. More diverse leaders can better mobilize political will, thus boosting vital public support for funding, such as water rate increases or voter-passed bond and tax initiatives.

This study's **broad range of applications** includes having governmental and non-governmental organizations develop strategies for diversifying and strengthening their leadership and workforces. Study results can also inform policymakers' decision-making. Academic institutions can use the information to advance research-based solutions. Finally, information from the study makes for more innovative and robust communities that will better prepare California's water industry for the future.

Water governance is a critical determinant of economic and social well-being. WELL and the Water Management Lab are optimistic that this study will continue to spotlight structural inequities and pathways for **more inclusive governance** that can encourage solutions and drive positive change for California's water sector.

"*No taxation without representation*" was a rallying cry during the American Revolution. It is no less relevant today as women, Latinos, and BIPOC press for more diverse decision-making bodies that are more likely to foster equitable outcomes for under-resourced communities and promote an inclusive environment.



Photos above are from Educate 2 Lead, a leadership development program created by Water Education for Latino Leaders (WELL) and the California African American Water Education Foundation (CAAWEF). The program empowers women and BIPOC professionals in California's water and energy sectors with the skills, knowledge, and confidence to lead with equity and innovation in their organizations and communities.

Introduction



Discovering Water's Importance to California and Who Makes Decisions about It

Water is California's true gold. Access to water has determined the economic development of the state as a whole, including cities, towns, corporations, and individuals. Historic policy decisions about who gets water, how much, how rivers are protected, water quality regulations, and the economic investment in infrastructure have determined the current state of California's water system. Unfortunately, the current water system has revealed the outcomes of social injustice and water inequity. For instance, there are about one million Californians without access to safe, clean, and affordable water. And that is just the tip of the iceberg. California's other water-related problems include water quality affected by pesticides, fertilizers, and arsenic; elevated water prices; and groundwater overdraft, among other issues that reveal disparities between who has adequate access to safe water and who does not.

While these inequities demonstrate the need for investment in infrastructure and training for professionals in the water sector, there is also a vital need to focus on the people who are making decisions about water at the executive level. Those who make decisions about water determine who has access to how much and when, which ultimately determines the economic development and social well-being of California communities.

The Need to Analyze Governing Bodies in California's Water Sector

The need to evaluate the composition of decision-making bodies in California's water sector exists because historically marginalized communities largely remain underrepresented on the boards that oversee and set agendas for water regulation, water tariffs, and the construction/repair of infrastructure. Furthermore, high-ranking employees (referred to as C-suite positions), who provide advice and influence board of director agendas, are also not representative of the communities they serve.

Therefore, WELL hypothesized that decision-making groups that are representative of the communities they serve (e.g., in gender, ethnicity, socio-economic background, age, and location) will pay closer attention to the interests of the communities they represent than those representing only a narrow sector or group. Yet representation cannot be achieved without fair access to instructions for joining boards and increased awareness of the important role boards play. Furthermore, transparency is needed during decision-making processes in order to foster credibility within local communities.

Overall Goal and Objectives

The **overall goal** of this study is to assess the representation in and accessibility and transparency of decision-making bodies in California's water sector.

Representation

In this study, representation within decision-making bodies was evaluated by determining the gender and ethnicity of decision-making members and comparing them with the populations where they reside and serve.

Access

In this study, the accessibility of information about how to become a board member was evaluated by quantifying:

1. How many board members had prior knowledge or experience before attaining their positions, which may have motivated them or given them an edge over the rest of the population, and
2. How easy or difficult is it to access the bylaws and instructions for how to become a board member.

Transparency

In this study, the transparency of Public Water Agencies (PWAs) in their decision-making process was assessed by evaluating how many PWAs post the agendas of their board of directors' meetings online and how many of these agendas are also translated into Spanish.

Broader Impacts

The present study is a diagnostic of the representation in and accessibility and transparency of decision-making bodies in California's public water sector. It is acknowledged that there may be more analysis to be done and that this is just the first diagnosis of the composition of decision-making bodies. This analysis was conducted with publicly available data; thus, it can be replicated in other states.

Decision-Making Process in California's Water Sector

California's water governance system is structured through federal, state, and county governments, which develop laws and regulations governing water allocation, water quality, and environmental protection. These regulations serve as guardrails within which PWAs and individual water users must operate. While the higher levels of government define overarching policies, local PWAs have significant autonomy in how they implement these regulations, including decisions on water tariffs, infrastructure investment, and conservation projects.

PWAs play a crucial role at the local level, managing water resources, implementing regulations, and setting fees that directly impact community access to water. Decision-making bodies within PWAs determine ordinances, approve infrastructure repairs and upgrades, and oversee financial planning. The flexibility PWAs have in operating within regulatory frameworks means they hold considerable influence over local water governance, directly affecting water affordability, accessibility, and quality for residents.

Additionally, regional water boards serve as intermediaries between state and local agencies, ensuring that policies are consistently implemented while addressing region-specific water challenges. Conflicts between state, federal, and local policies are often mediated through administrative hearings, legal challenges, or regulatory negotiations. Enforcement mechanisms include state audits, compliance reviews, and, in extreme cases, penalties for noncompliance. However, a lack of adequate oversight and enforcement capacity sometimes allows disparities to persist, especially in underresourced communities.

Board members have decision-making power over how to navigate conflict situations. For example, at least every year board members and C-suite executives (e.g., a PWA director) meet to discuss planned budget revenues and expenditures for the following fiscal year. A PWA's director will analyze projected revenues from water fees, grants, and state and federal funds. Also, the executives will develop a list of expenditures for the operation and maintenance of current infrastructure, new infrastructure, labor, materials, etc. The decision to approve or reject projected revenues and expenditures are voted on by an agency's board of directors, based on analyses presented by C-suite executives. This is just one example of the important activities and decisions of these two groups.

Who Gets Elected? How? How Do They Make Decisions?

Public Water Agencies (PWAs) encompass a variety of governing structures, including mutual water companies and city-run, county-run, and special districts. These agencies supply water to various user groups, such as local communities (e.g., Quincy Community Service District), urban residents (e.g., City of Santa Barbara), agricultural users (e.g., Orland-Artois Water District), or large municipal networks (e.g., Metropolitan Water District). PWAs are governed by a board of directors, with board members typically elected by public vote.

Bylaws for each PWA outline the process for becoming a board member, with board members generally serving four-year terms and being eligible for reelection. Board members are elected to represent a specific district within a PWA jurisdiction and are responsible for making decisions on budgeting, water rates, infrastructure projects, conservation strategies, and policy. Board meetings serve as the primary forum for decision-making on regulatory compliance, budget planning, infrastructure investment, and environmental protection strategy. These meetings are generally open to the public, ensuring transparency and community engagement. One of the board's responsibilities is to appoint, oversee, and dismiss C-suite executives, a condition that makes their relationship sometimes challenging.

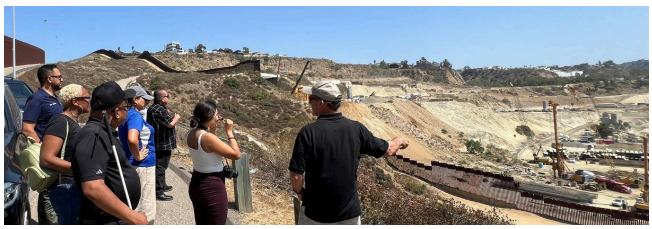
Despite the public election process, significant barriers exist for underrepresented groups in running for and assuming board positions. Voter participation in these elections is often low, particularly in rural and low-income communities, where awareness of election timelines and candidate platforms is limited. Additionally, running for board membership requires financial resources, campaign efforts, and community connections—factors that disproportionately advantage individuals with existing ties to the water sector.

Underrepresented Communities and How They Have Been Left Out

Underrepresented communities in California's water governance include women, Latinos, Native Americans, Black communities, and other historically marginalized populations who face systemic barriers to accessing leadership positions. These barriers stem from economic disparities, lack of political representation, language obstacles, and insufficient access to leadership training or mentorship programs. Many of these communities have been historically excluded from decision-making processes, resulting in policies that do not prioritize their needs. For example, Latino and Native American communities in California often struggle with inadequate water infrastructure, exposure to unsafe drinking water, and higher water costs. Because decision-making bodies do not reflect the demographics of the populations they serve, issues such as failing infrastructure, unaffordable water rates, and contamination often persist without adequate resolution.

Efforts to improve representation in decision-making bodies have included leadership development programs, advocacy campaigns, and policy reforms aimed at increasing access to board elections. Organizations like Water Education for Latino Leaders (WELL) and the Community Water Leaders Network (CWLN) have provided training and mentorship to aspiring water leaders from underrepresented communities. However, achieving meaningful representation requires systemic changes, such as targeted recruitment efforts, removal of financial barriers for candidates, and increased public awareness of election processes. By ensuring that decision-making bodies reflect the diversity of the communities they serve, California can move toward a more equitable and inclusive water governance system







Photos above are from the WELL UnTapped Fellowship Program, a six-month leadership development program designed for local elected officials in California who serve Latino and historically underrepresented communities. Through immersive, in-person sessions held across the state, Fellows explore the complexities of California's water systems, governance, and policy while developing inquiry-based leadership skills. The program equips participants to make informed, equitable decisions about water in their communities.

Methodology

Overall Process

The overall analysis consisted of three main components: (1) determining the PWAs to be sampled, (2) collecting the required data for the PWA board members and C-suite personnel, and (3) performing a descriptive statistical analysis of representativeness, accessibility, and transparency.

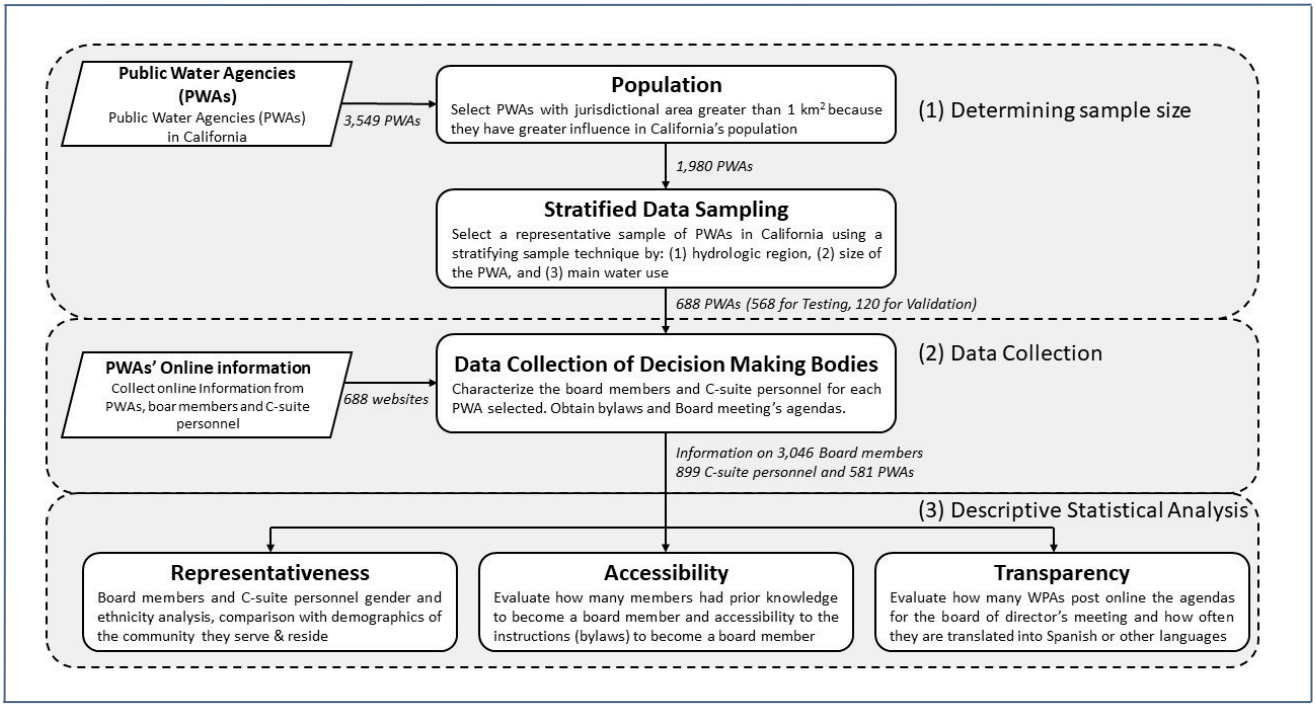


Figure 1. Main Components of the Research Study

Population and Stratified Data Sampling

There are 3,549 public water agencies (PWAs) in California, which include public water systems, agricultural water districts, urban water districts, federal and state water contractors, wholesalers, retailers, and other public or private utilities that deliver water to the end users. PWAs vary in their jurisdictional areas they serve. First, PWAs were selected that were greater than 1 km.2 because they have greater influence on California's population. There are 1,980 PWAs greater than 1 km.2 That was the population considered for analysis.

1. CALIFORNIA STATE GEOPORTAL. I03 WATER DISTRICTS. URL: HTTPS://GIS.DATA.CA.GOV/DATASETS/45D26A15B96346F1816D8FE187F8570D_0/ABO

From that population, a stratified sampling technique was used that took into account:

1. Sample size. As a first approach, data were collected for approximately 25% of the population (N = 1,980), consisting of about 500 PWAs. This number was increased to 568 to have an equal number of PWAs sampled in each quartile (as described in bullet point 3). Also, information for an additional 120 PWAs was collected and compared with the results of the larger sample to validate our statistical analysis. This study presents the results of the combined 688 PWAs and the validation process in Appendix A. The final sample size (688 PWAs) was determined based on human resources and how long they were available for data collection; it accounts for 35% of the PWA population.
2. Sample size per hydrologic region. The total number of PWAs selected in each of the 10 hydrologic regions of California follows the same distribution as the total number of PWAs in the state for each hydrologic region. Thus, a different number of PWAs was sampled in each region.
3. Sample technique within each hydrologic region. Spatial jurisdiction (i.e., the area) of the PWAs was used to rank agencies from larger to smaller jurisdictions and to divide them into quintiles (0.99 – 0.8, 0.79 – 0.6, 0.59 – 0.4, 0.39 – 0.2, 0.19 – 0.01). An equal sample number of PWAs was selected from each quintile.
4. Water-end use. To the best of the researchers' capabilities, for each hydrologic region and quintile, PWAs were selected with both municipal and agricultural water use. For certain hydrologic regions, it was difficult to find either municipal or agricultural PWAs because some are primarily populated with one or the other (municipal PWAs, e.g., South Coast, or agricultural PWAs, e.g., Sacramento).

Data Collection

Data was collected from online sources using a protocol established at the beginning of the project. Each PWA's web page was used to identify board member information, bylaws, jurisdictional maps, and board meeting agendas. Information about C-suite personnel was obtained from the Special Districts section of the Government Compensation in California website. The protocol can be obtained by request.

Groups Analyzed

For this study, three (3) groups were selected for analysis:

1. **Board Members.** These are individuals who were elected or appointed to a PWA board of directors (BoD) with voting power to make decisions regarding various aspects of PWA policy.
2. **C-suite Officers.** These are personnel working in a PWA at the executive level, such as the CEO, CAO, Chair, Chief, Director, etc. These executives not only respond to board member inquiries, but also manage the development of the board agenda and, oftentimes, provide direction for the PWA.
3. **Decision-Making Bodies (DMB).** It is the combination of board members and C-suite officers who constitute a PWA's decision-making body.

2. HTTPS://PUBLICPAY.CA.GOV/REPORTS/SPECIALDISTRICTS/SPECIALDISTRICTS.ASPX

Descriptive Statistical Analysis

We assessed the decision-making bodies by evaluating three characteristics: representation, access, and transparency.

Representation

The representation analysis focuses on determining the gender and ethnicity of the representatives of each of the decision-making bodies compared to the same criteria for the populations they serve.

Overall Gender Representation

For each PWA sampled, we determined the number of women in each of the three groups analyzed and compared those results with the population the PWA serves. This analysis was used to summarize gender representation at the state level.

Gender Representation within Each PWA

For each PWA sampled, the magnitude of representation—or lack of representation—of women was calculated. The results were summarized for every hydrologic region to show gender representation in each PWA. The following rubric was used for this purpose. The rubric for the board of directors is shown below, but this framework also applies to the analysis of the C-suite positions and for both groups combined.

- Female Majority: The relative frequency of women in a given group analyzed (e.g., board members) is greater than or equal to 75% (e.g., 4 board members out of 5 are women)
- Adequate Representation: The relative frequency of women in a given group analyzed (e.g., board members) is greater than or equal to 50% and less than 75% (e.g., 3 board members out of 5 are women)
- Some Representation: The relative frequency of women in a given group analyzed (e.g., board members) is greater than or equal to 33% and less than 50% (e.g., 2 board members out of 5 are women)
- Poor Representation: The relative frequency of women in a given group analyzed (e.g., board members) is greater than or equal to 1% and less than 33% (e.g., 1 board member out of 5 is are woman)
- Lack of Representation: There is no female representation in a given group analyzed (e.g., 0 board members out of 5 are women)

Overall Ethnic Representation

For each PWA sampled, ethnicity was determined for each individual identified as a board member based on six categories that coincide with U.S. census data: White non-Hispanic, Latino, Black, Asian, Native American, and Native Hawaiian or Pacific Islander. To present more succinct results, we consolidated the previous six categories into three categories: (1) White non-Hispanic, (2) Latino, and (3) Native Americans and other People of Color. This final category combines the last four categories from the census (Black, Asian, Native American, and Native Hawaiian or Pacific Islander). The distribution of the groups analyzed was compared with the population that each PWA serves. This analysis was used to summarize ethnic representation at the state level.

Access

Additionally, the availability of access by individuals to achieving board membership was assessed. First, the board of directors for each PWA was characterized in terms of the number of members, their appointment cycle, and how many terms they have served. Then the information (in the bylaws) about how to become a board member was evaluated as to whether it is available online and how easy or difficult it is to find that information.

Finally, the career paths of board members before they were appointed were evaluated to determine how many had some prior knowledge of the importance of board membership based on their career path. The data was further analyzed to determine how many board members did not have a career background in the water sector and may have run instead as a public community member.

Characterizing Boards of Directors

Boards of Directors were characterized by:

- The number of board members within each PWA
- How many terms have they served as a board member
- The expiration year for their term of appointment or election
- How they became a board member (e.g., elected or appointed)

Determining the Availability of Instructions on How to Become a Board Member

Public access to instructions on how to become a board member was characterized by:

- Determining how many PWAs have bylaws online or have online instructions available on how to become a board member
- Analyzing how easy it was to find instructions/information/documents online
- Determining whether PWAs included an online map of board member jurisdictions

Assessing the Career Paths of Board Members

We evaluated the career paths of board members to distinguish those who had prior professional experience and knowledge about the importance of board membership. For this purpose, we investigated the public profile of each board member (through their bios published on each PWA website and publicly available professional profiles) to address four questions:

- Was the board member related to the PWA (e.g., a former employee)?
- Was the board member's career related to the water sector (e.g., a consultant)?
- Did the board member previously work in a government agency or a non-governmental organization before their board membership appointment or election?
- Did the board member have a prior affiliation with a different board of directors (e.g., as a board member of another institution)?

After answering these questions, an estimate was made of how many board members did not have any prior information before becoming a board member versus how many had some or abundant information about how to become a board member and the importance of board membership.

Transparency

The transparency of the decision-making process was assessed by quantifying how often PWA board of directors meeting agendas were posted and whether they were translated into another language in response to the demographics of the PWA's constituency.

1. **Board of Directors meeting transparency:** It was determined how many PWAs post the agendas of their board of directors meetings and minutes from previous meetings. This was used as a sign of transparency regarding the topics discussed.
2. **Board of Directors meeting inclusivity**. It was determined how many agendas were translated into Spanish, considering that in many of these regions, the Hispanic/Latino population represents the majority of community constituents.



WELL staff visiting the Tijuana River during a WELL UnTapped Fellowship Session.

Results

Population and Stratified Data Sample

Table 1 shows the total number of PWAs that are greater than 1 km2 (N=1,980) and the number of PWAs sampled in this research project (n=688). Figure 2 shows the 10 hydrologic regions and the PWAs.

Table 1. Total Number of Public Water Agencies (PWAs) and Sample Size

	Hydrologic Region	Public Water Agencies		Sampled	
		Frequency	Rel. Freq.	Frequency	Rel. Freq.
1	North Lahontan	41	2%	15	2%
2	North Coast	144	7%	48	7%
3	Sacramento	431	22%	153	22%
4	San Joaquin	304	15%	111	16%
5	Tulare	233	12%	77	11%
6	South Lahontan	110	6%	39	6%
7	Central Coast	138	7%	44	6%
8	South Coast	396	20%	140	20%
9	Colorado River	68	3%	22	3%
10	San Francisco - Bay Area	115	6%	39	6%
		1980	**100%**	**688**	**100%**

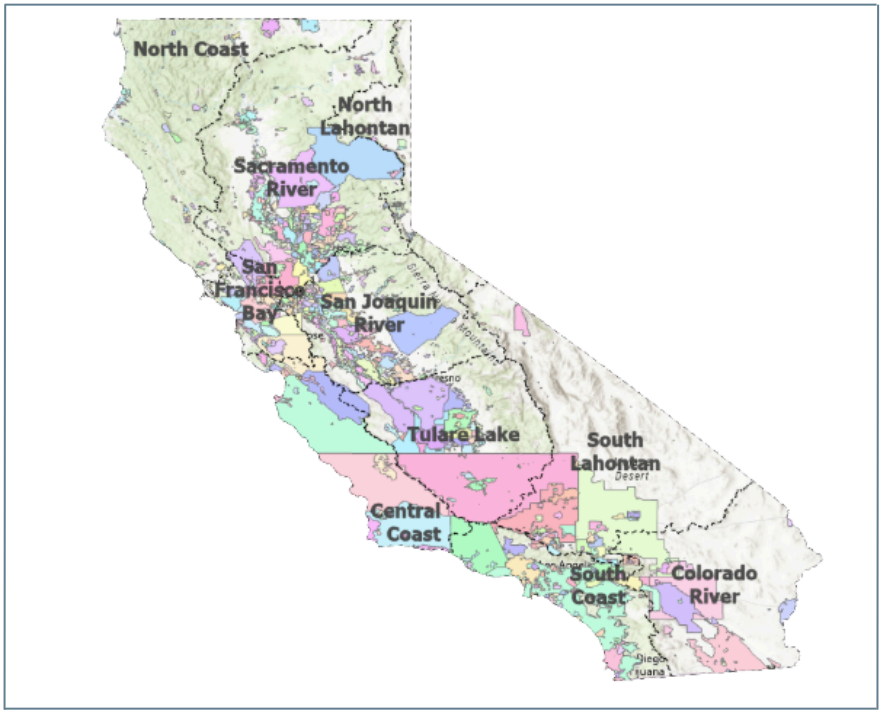


Figure 2. Hydrologic Regions and Water Agencies in California

Descriptive Statistical Analysis

Representation

This section presents the gender and ethnic representation of decision makers in California's water sector.

Overall Gender Representation

Figure 3 shows the percentage of women statewide as a point of reference and the percentage of women that represent sampled members of PWA boards of directors (BoD), C-suite positions, and both decision-making bodies (BoD + C-suite). Table 2 shows the important gaps for women in all three groups analyzed of the 3,945 individuals identified as board members (3,046) or C-suite personnel (899). Only 1,030 were women in board member positions (801) or C-suite positions (229). To reach equitable state distribution, women would need to double their participation in these decision-making bodies.

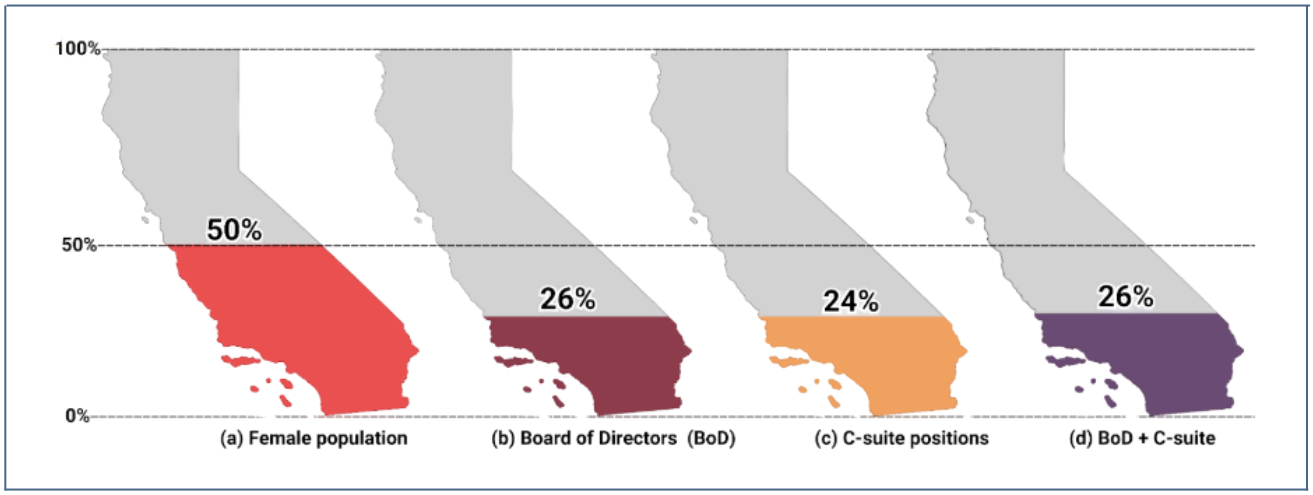


Figure 3. Comparison of (a) Female Population in California Versus Female Representation in (b) Boards of Directors, (c) C-suite Positions and (d) Overall (BoD + C-suite)

Table 2. Summary of Board of Directors (BoD) Members and C-suite Personnel Sampled

	Sampled	Female	% Female
Board of Directors (BoD)	3,046	801	26%
C-suite positions	899	229	25%
BoD + C-suite	3,945	1,030	26%

It is important to note that the 26% showing female representation in these decision-making bodies (BoD + C-suite) is not evenly distributed within each PWA. Figure 4 shows female representation within PWAs for (a) BoD, (b) C-suite positions, and (c) both. Figure 4(c) shows the overall distribution within decision-making bodies:

- In 21% of PWAs, women are adequately represented (14%) or make up a majority of the board (7%),
- By contrast, in 53% of the PWAs, women have some (22%) or poor (31%) representation.
- Of note is that in 26% of the PWAs sampled (181 PWAs), there is no (zero) representation of women in the decision-making body.

Furthermore, BoDs are typically composed of five or fewer board members (this issue will be characterized later in the section "Access – Characterizing Boards of Directors"). Results in Figures 3 and 4 show the precarious conditions women face in achieving representation within decision-making bodies. In most cases (75% or more), there are few or no women decision makers.

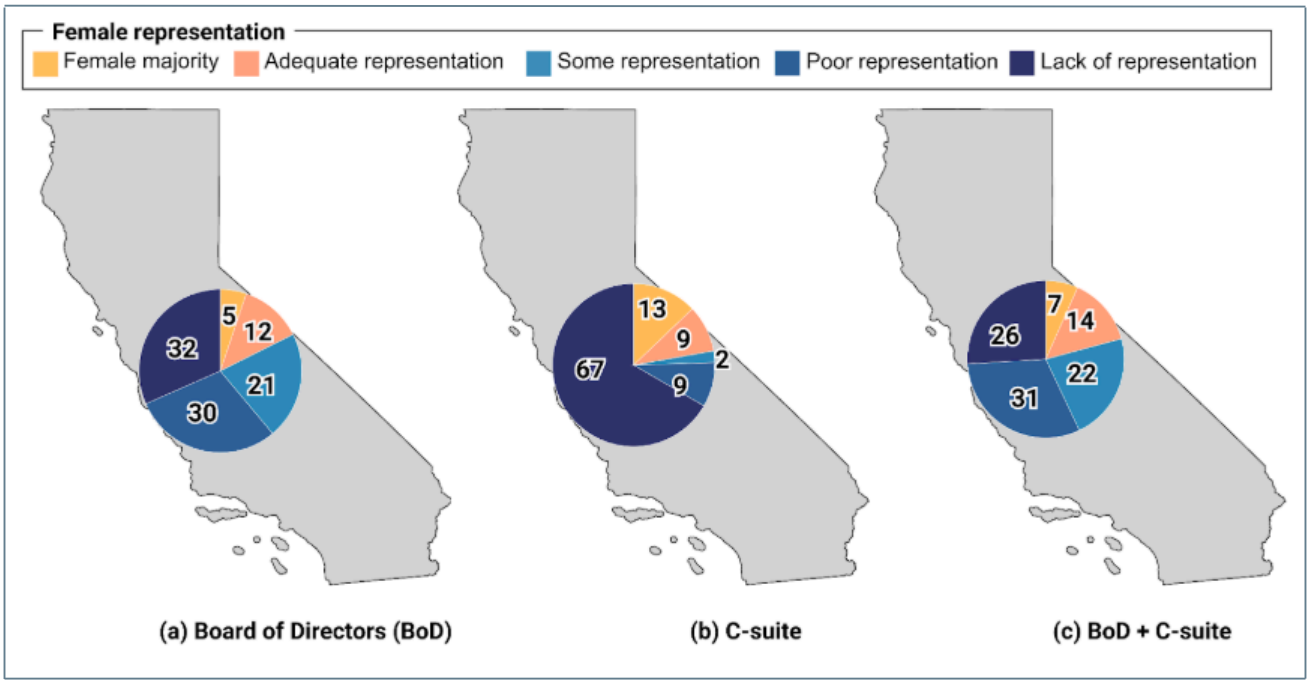


Figure 4. Female Representation in Decision Making Bodies (a) Boards of Directors, (b) C-suite Positions, and (c) BoD + C-suite

For each hydrologic region, the gender representation was estimated within PWAs for board members (Figure 5), C-suite positions (Figure 6), and both (BoD + C-suite) (Figure 7). These figures show in greater detail the gap in female participation in every hydrologic region.

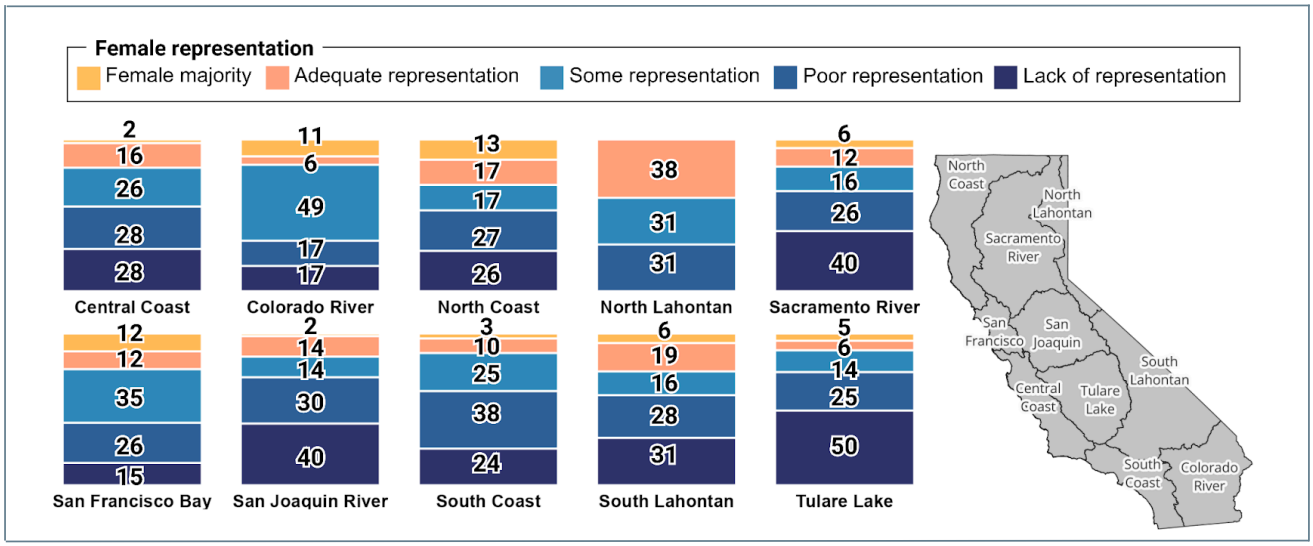


Figure 5. Women's Representation in Board of Directors Groups by Hydrologic Region

Notice the lack of representation of women in C-suite positions shown in Figure 6 across all regions. Table 3 shows the numbers of BoD and C-suite as sampled by hydrologic region.

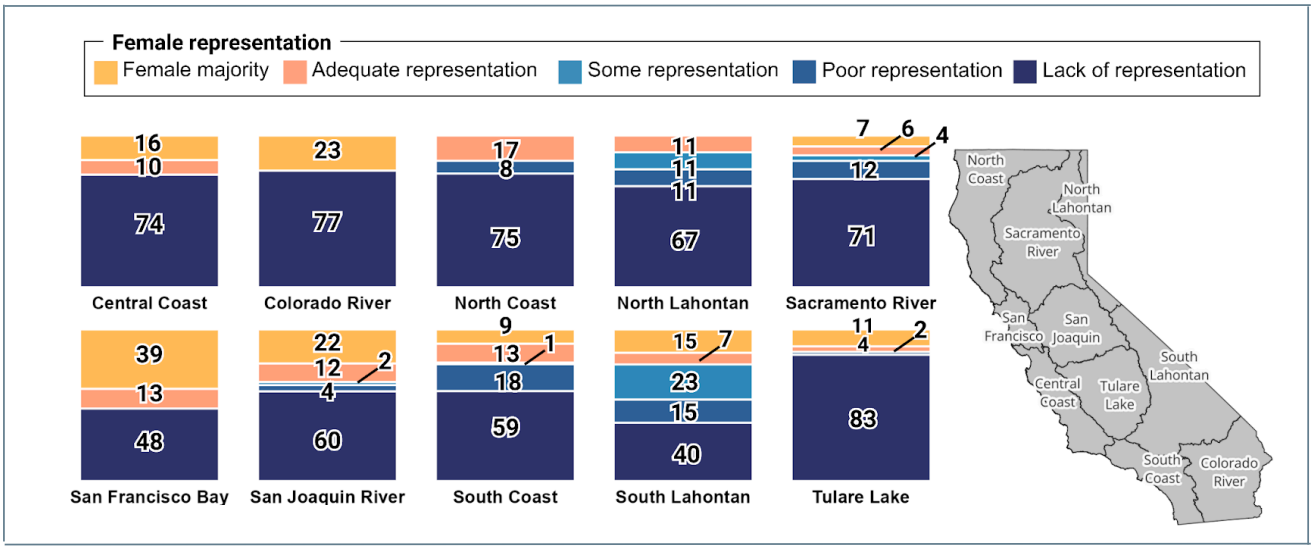


Figure 6. Female Representation in C-suite Positions by Hydrologic Region

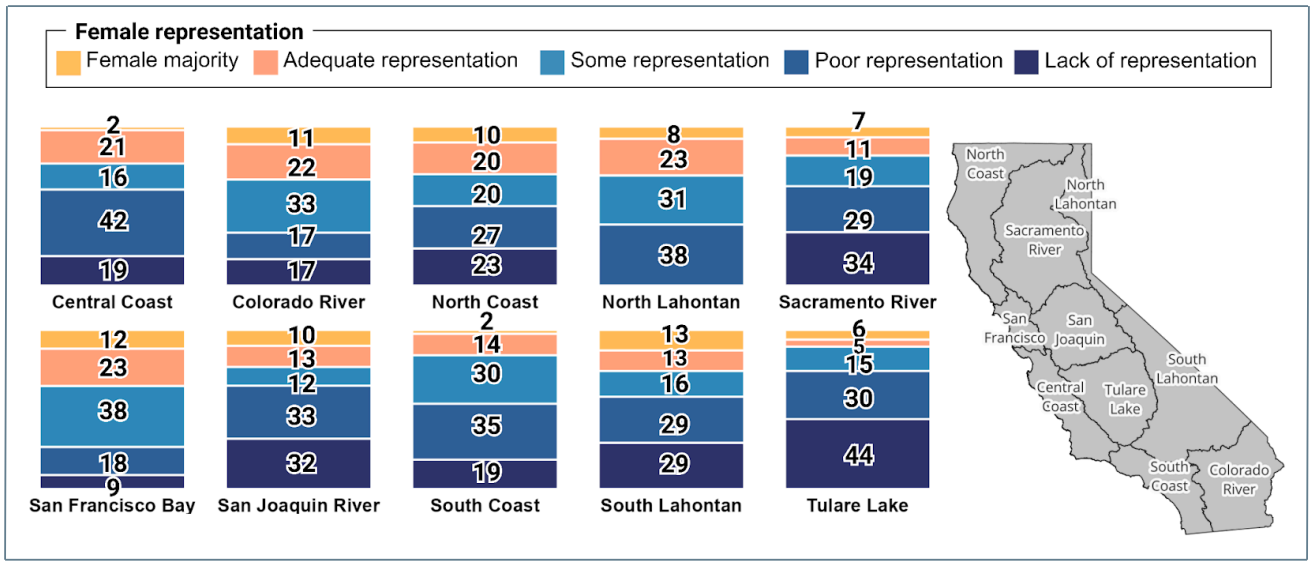


Figure 7. Female Representation in Decision Making Bodies (BoD + C-suite) by Hydrologic Region

Table 3. Board of Directors (BoD) Members and C-suite Personnel Sampled by Hydrologic Region

Hydrologic Region	Board of Directors (BoD)			C-suite			BoD + C-suite		
	Sampled	Female	%Female	Sampled	Female	%Female	Sampled	Female	%Female
Central Coast	240	63	26%	38	9	24%	278	72	26%
Colorado River	89	31	35%	16	3	19%	105	34	32%
North Coast	168	56	33%	65	12	18%	233	68	29%
North Lahontan	63	26	41%	28	6	21%	91	32	35%
Sacramento River	644	169	26%	210	49	23%	854	218	26%
San Francisco Bay	208	71	34%	34	16	47%	242	87	36%
San Joaquin River	412	95	23%	139	44	32%	551	139	25%
South Coast	694	179	26%	233	58	25%	927	237	26%
South Lahontan	188	53	28%	64	17	27%	252	70	28%
Tulare Lake	340	58	17%	72	15	21%	412	73	18%
	3,046	**801**	**26%**	**899**	**229**	**25%**	**3,945**	**1030**	**26%**

Overall Ethnic Representation

Figure 8 shows the percentage of White non-Hispanic, Latino, Native Americans, and other People of Color statewide as a point of reference, and the same percentages for the groups analyzed. Figure 8.1 shows that the representation of White non-Hispanics is at least double the state percentage of all three PWA groups analyzed. By contrast, Latinos (Figure 8.2) and Native Americans and other People of Color (Figure 8.3) would need to triple and quadruple their representation, respectively, to reach their state distribution. Figure 8 shows the significant representation gap for Latinos and Native Americans, and all People of Color in all decision-making bodies.

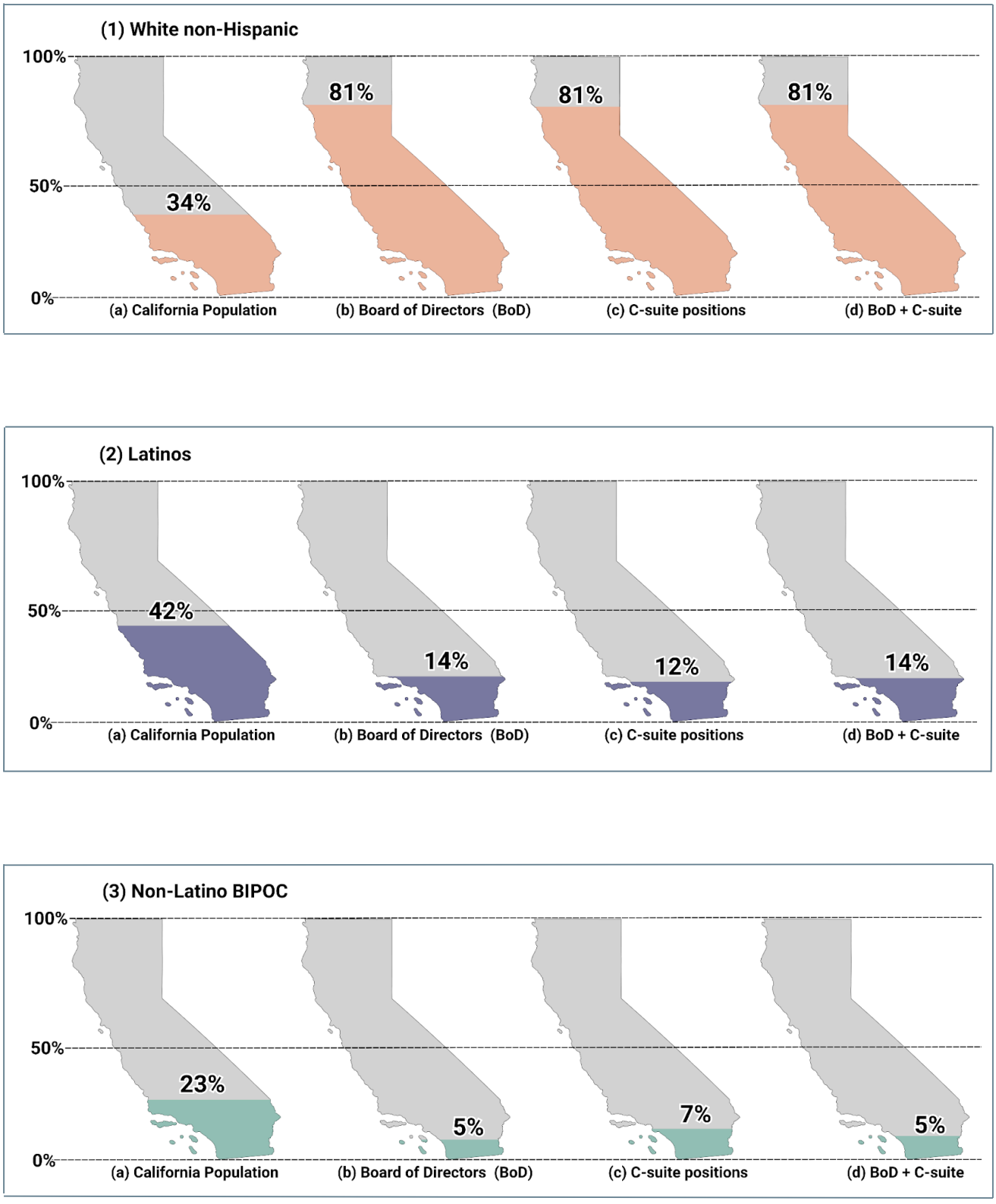


Figure 8. Comparison of Ethnic Distribution (1) White Non-Hispanic, (2) Hispanic or Latino, and (3) Native Americans and Other People of Color in the (a) State of California and (b) in Decision-making Bodies, (b) Board of Directors Groups and (c) C-suite Positions

For each hydrologic region, the representation of White non-Hispanic, Latino, Native Americans, and other People of Color was estimated within PWAs for boards of directors (Figure 9), C-suite positions (Figure 10), and both groups (BoD + C-suite) (Figure 11). The objective of these figures is to show the ethnicity gap across the 10 hydrologic regions. The census data is used as a reference point, and it is always shown in the upper dark green bars in all the figures.

In all the groups analyzed, White non-Hispanics are over-represented in all hydrologic regions, ranging from 125% to 200% of their census share. This overrepresentation is more acute in C-suite positions, which manage the development of board agendas and oftentimes provide direction for the PWA (Figure 10). For Latinos, there is consistent underrepresentation in all groups analyzed, even in the five regions where Latinos represent the majority of the population (i.e., Colorado River, San Joaquin, South Coast, South Lahontan, and Tulare Lake). In such areas, representation stands at 50% to 0% of the Latino census share in all groups. A similar case occurs with Native Americans and other People of Color. Even in the San Francisco Bay region, where this group represents the majority of the population, they are consistently underrepresented, with percentages ranging from 50% to 0% of their census share in all groups.

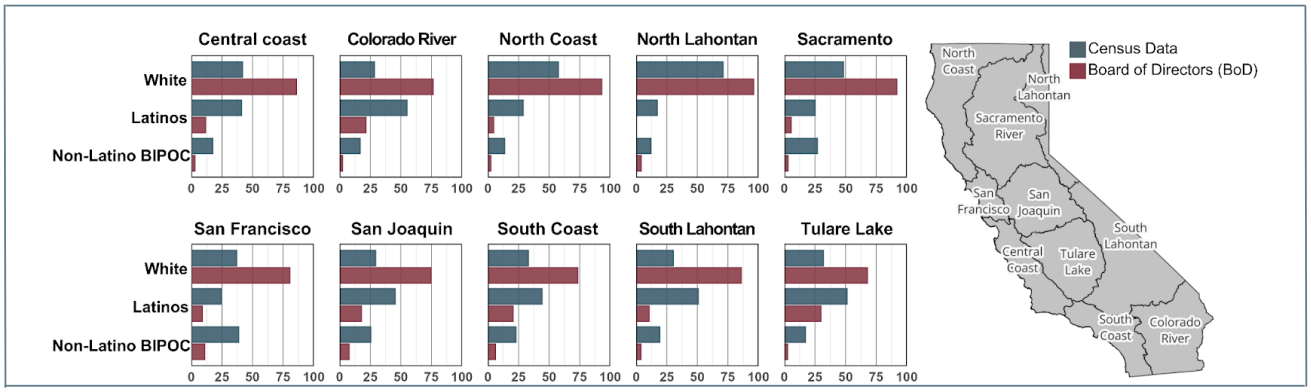


Figure 9. Representation by Ethnicity of **Board of Directors (BoD)** by Hydrologic Region

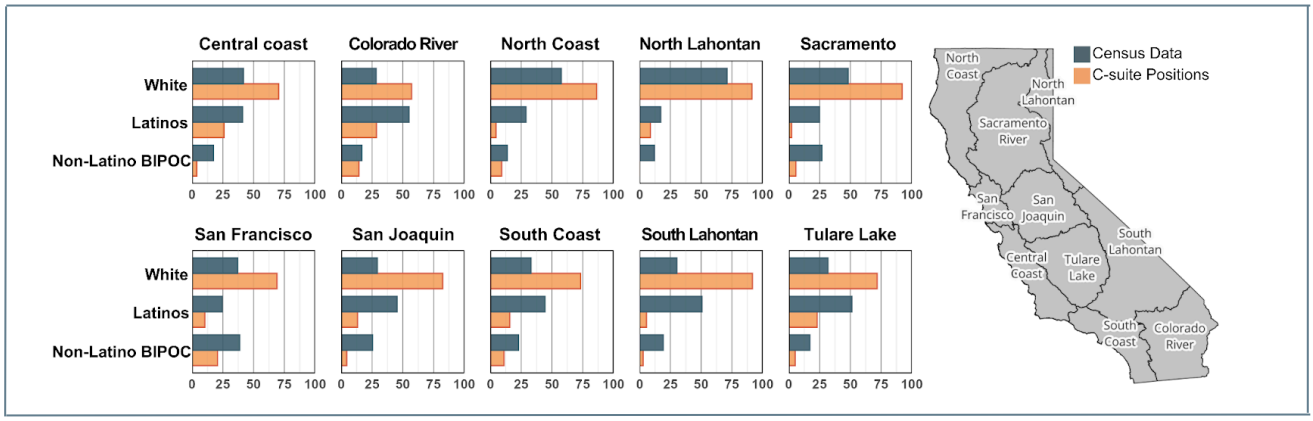


Figure 10. Representation by Ethnicity in C-suite Positions by Hydrologic Region

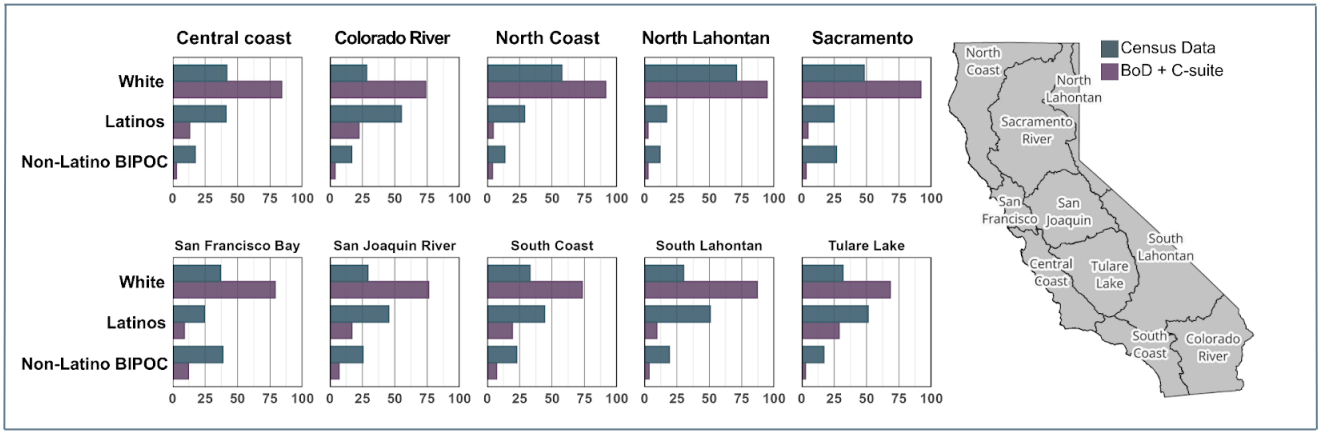


Figure 9. Representation by Ethnicity of the **Board of Directors (BoD)** by Hydrologic Region

Access

Characterizing the Board of Directors

From the 688 PWAs that retained data on gender and ethnicity (see Table 1), only 581 had enough board member data available to perform the access analysis (Table 4). Table 4 shows that despite reducing the number of PWAs sampled, the distribution within each hydrologic region follows a similar distribution to that of the entire population.

Figure 12 shows the distribution of the total number of members that constitute each PWA board. In general, most of the BoD groups are made up of five or fewer board members in the state of California.

Figure 13 shows the same distribution by hydrologic region. It shows that the Sacramento, San Joaquin, and Tulare Lake regions tend to have BoD groups with five or fewer board members, which concentrates decision-making power in the hands of a few people. By contrast, the South Coast region has the largest number of PWAs governed by boards with seven to ten members, suggesting that those agencies distribute decision-making power among more people

Table 4. Number of Public Water Agencies (PWAs) with Complete Data for Board Members

	Hydrologic Region	Public Water Agencies		Sampled	
		Frequency	Rel. Freq.	Frequency	Rel. Freq.
1	North Lahontan	41	2%	13	2%
2	North Coast	144	7%	34	6%
3	Sacramento	431	22%	124	21%
4	San Joaquin	304	15%	81	14%
5	Tulare	233	12%	66	11%
6	South Lahontan	110	6%	35	6%
7	Central Coast	138	7%	44	8%
8	South Coast	396	20%	128	22%
9	Colorado River	68	3%	18	3%
10	San Francisco - Bay Area	115	6%	38	7%
		1980	**100%**	**581**	**100%**

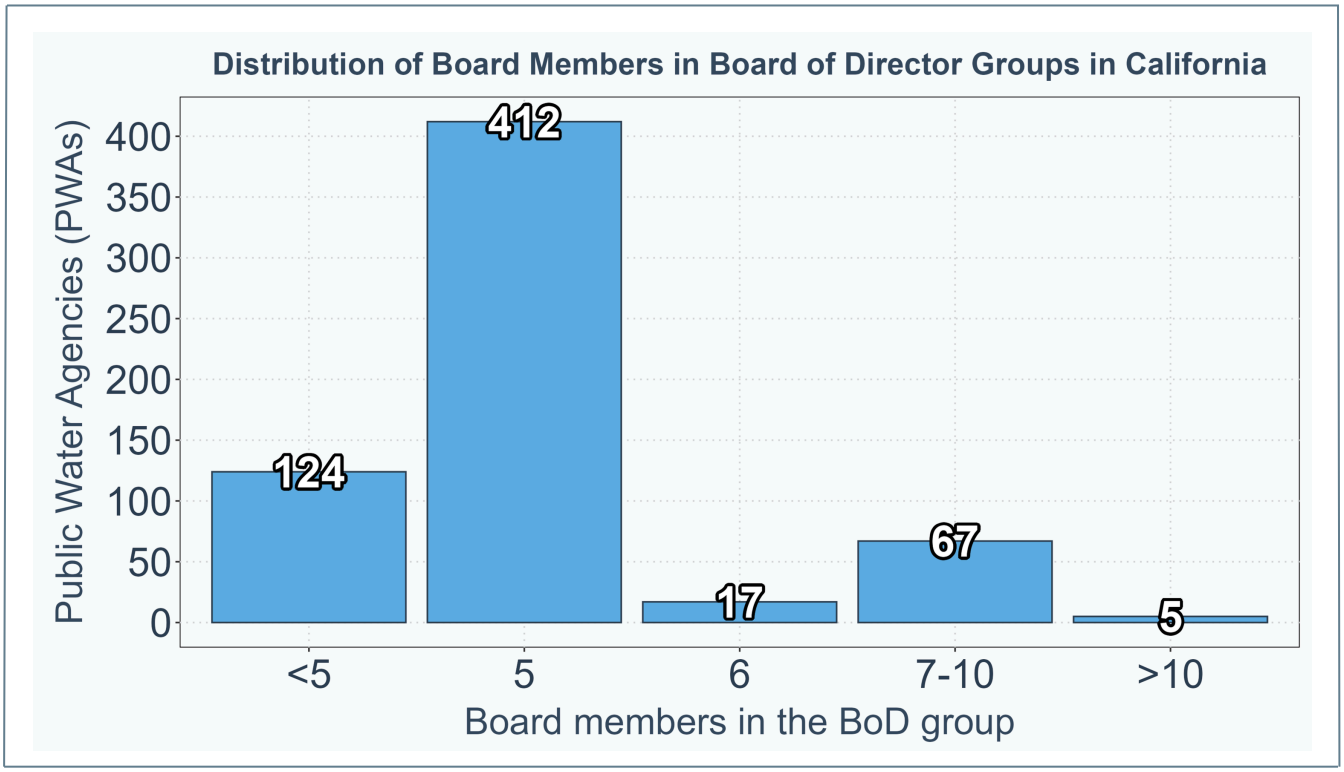


Figure 12. Distribution of Board Members in Boards of Directors
in Public Water Agencies in California

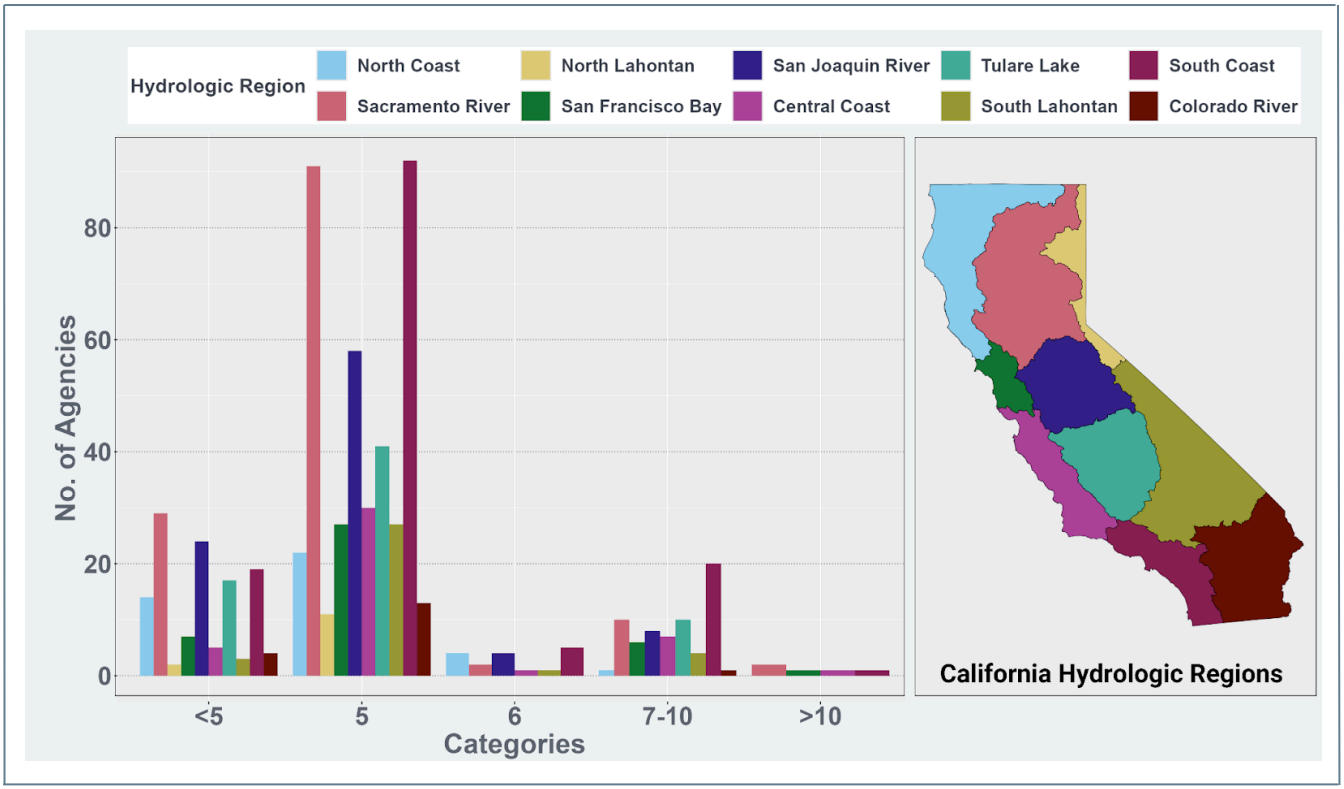


Figure 13. Number of Public Water Agencies Whose Board of Directors Group Is Integrated by
Number of Board Members for Each Hydrologic Region

Figure 14 shows the length of service for sampled board members, broken down by state and by hydrologic region. Most of the board members serve one term. It appears that those who make it to a second term stay for longer periods, sometimes more than three terms.

Figure 15 shows the end year for current board member terms. For most, their term expired in 2024. Either they were reelected or a new board member joined the board.

Figure 16 shows how members joined their PWA boards. Most were elected (89%), others were appointed (11%), or were volunteers (<1%). It is worth mentioning that in some hydrologic regions, a significant percentage of board members are appointed rather than elected by the public; for example, 19% of board members in the Central Coast are appointed. In other places, all the board members were elected, such as in the Colorado River (Figure 16).

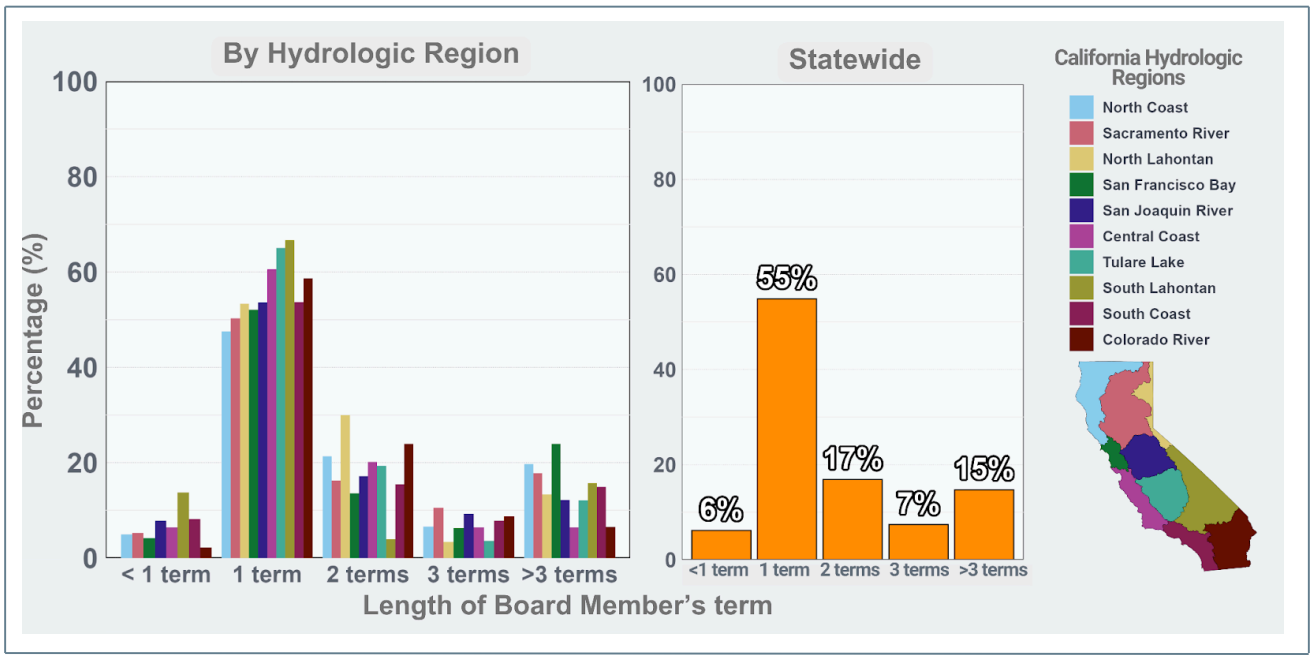


Figure 14. Number of Terms Board Members Were Appointed

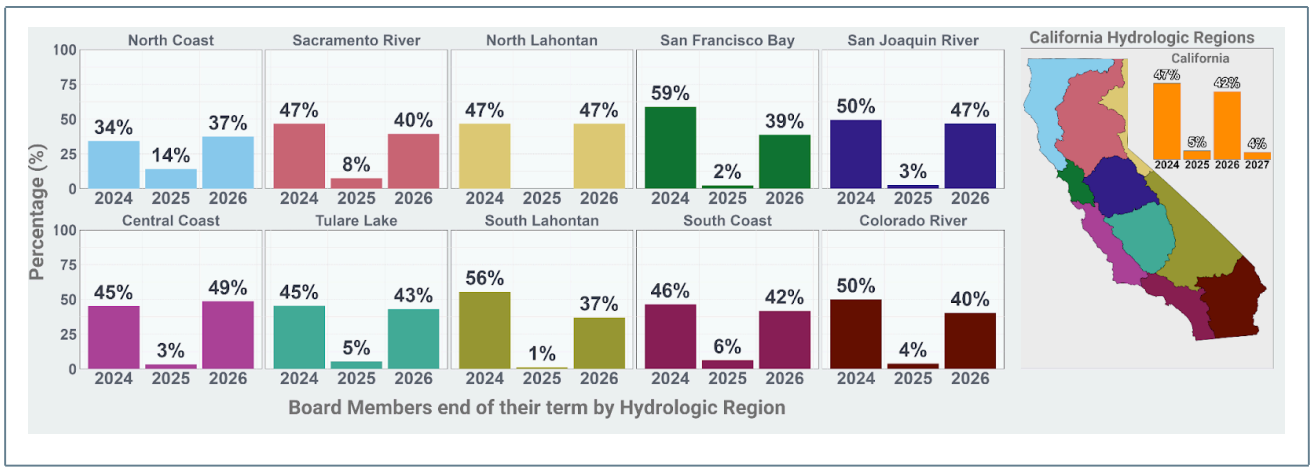


Figure 15. End-term Year of Current Board Members

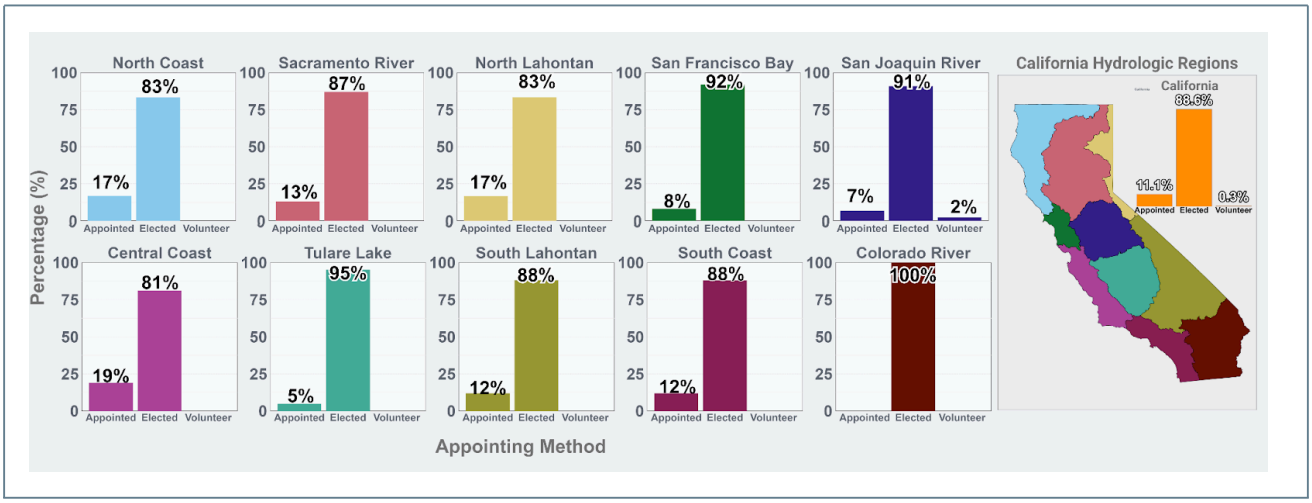


Figure 16. Method of Joining Board of Directors: Elected, Appointed, Volunteer

Availability of Instructions for Becoming a Board Member

Figure 17 shows the percentage of PWAs that have an online document available with instructions for becoming a board member. Statewide, only 36% of the agencies sampled made such documentation available. For example, in the Colorado River region, a high percentage of PWAs made these instructions available, which may be correlated with the high rate of elected board members. Similarly, in regions with low accessibility to instructions (e.g., South Lahontan, Sacramento, and North Coast), a high number of board members were appointed. Access to instructions/bylaws can be a determinant for whether board members are elected or appointed.

Figure 18 shows the ease of finding the documentation (instructions/bylaws to become a board member). Statewide, 56% of the time, the documentation was easy to find, demonstrating that there are different levels of accessibility. Similarly, in regions where the documents are easy to find, there appears to be a correlation to a higher rate of board members who obtained their seat by election rather than by appointment. Finally, Figure 19 shows the number of PWAs providing an online map of their jurisdiction and each board member's jurisdiction, only 47% statewide.

These three results indicate that information about how to become a board member is not readily available from many PWAs. When it is available, it is often difficult to find. Moreover, individuals seeking to run for board membership for the first time may not even have access to a map showing their potential jurisdiction.

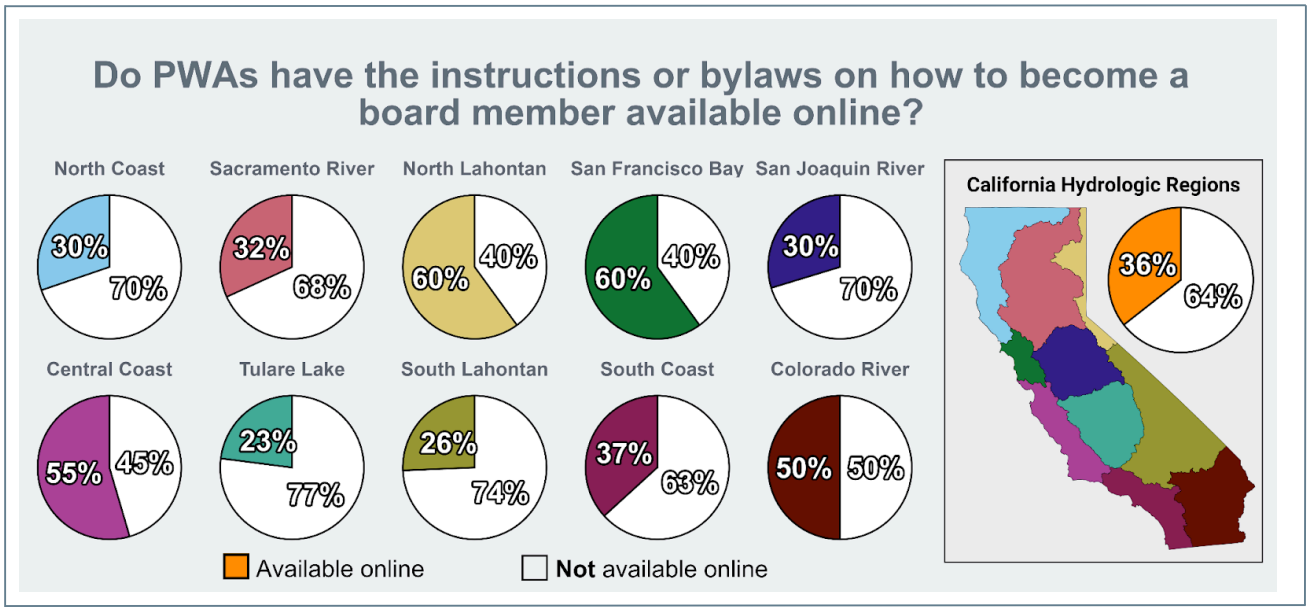


Figure 17. Percentage of Agencies with Online Bylaws or Documents about Becoming a Board Member

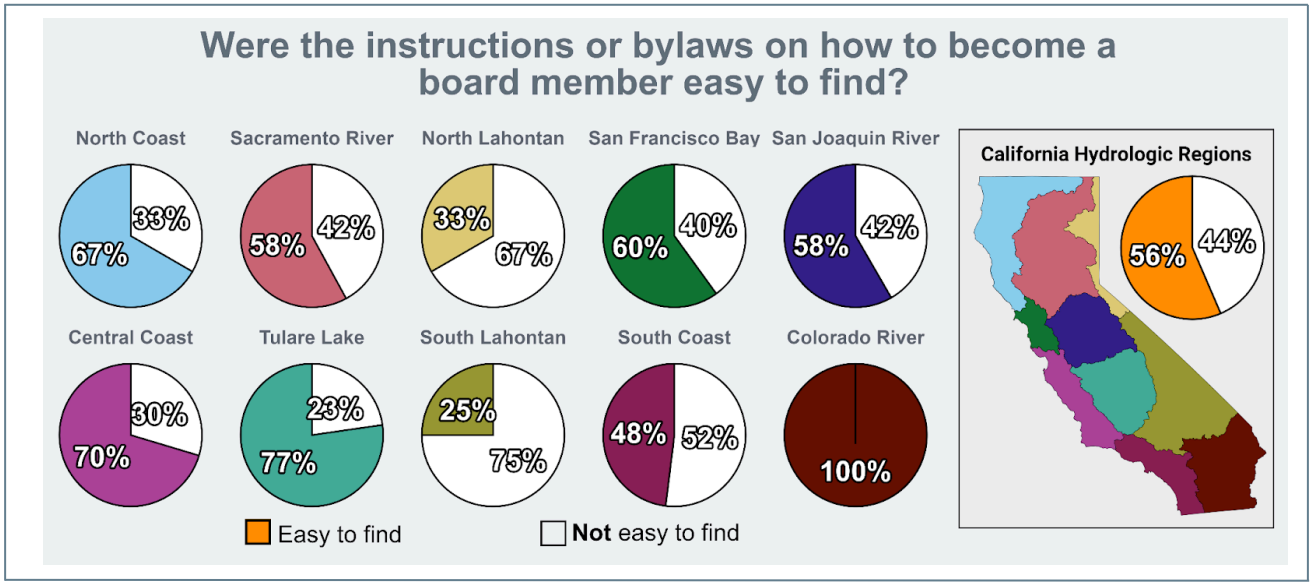


Figure 18. Was the Document about Becoming a Board Member Easy to Find?

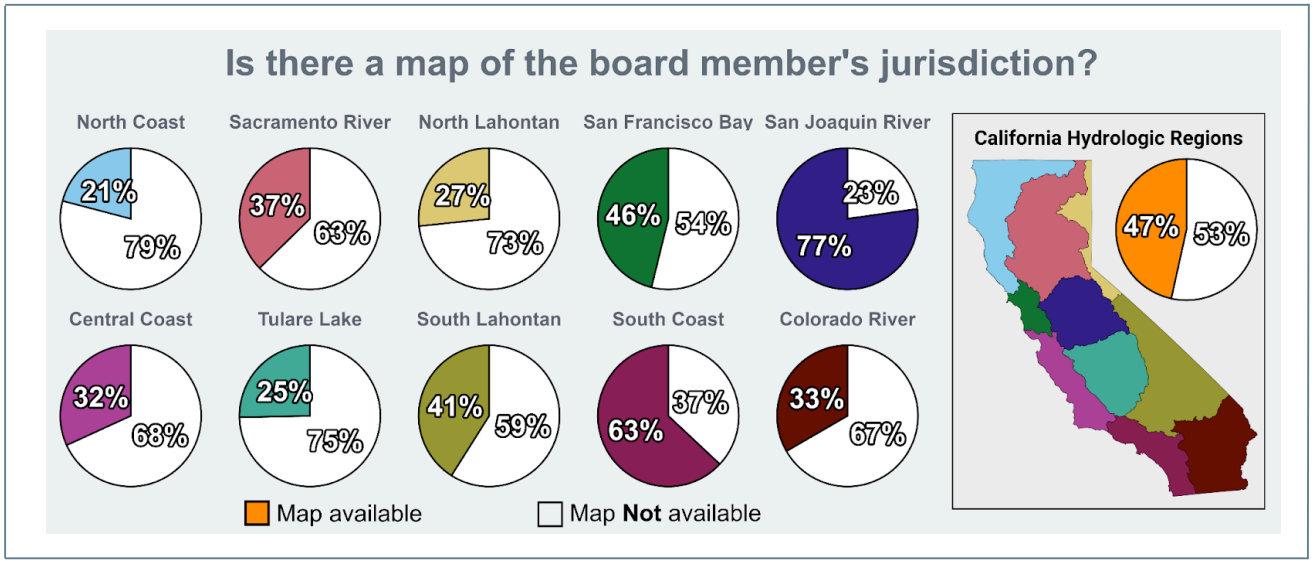


Figure 19. Is a Map of the Board Member's Jurisdiction Available?

Assessing the Career Paths of Board Members

A public profile was sought for each current board member, using bios published on PWA websites and professional career web pages (e.g., LinkedIn). The following four Yes-No questions were used to determine whether board members had prior professional experience with and knowledge of the importance of becoming a board member compared to the general public:

1. Was the board member related to a PWA (e.g., a former employee)?
2. Was the board member related to the water sector (e.g., a consultant)?
3. Did the board member work in a government agency or an NGO (e.g., as a bureaucrat) before their board membership appointment?
4. Did the board member have any prior affiliation with other boards of directors (e.g., are they a board member in another institution)?

These questions provide insights into whether current board members had prior knowledge about how to become a board member and if they understood the role's importance. If any of these questions received a yes response, that board member was categorized as an insider with prior advantageous knowledge about board membership. By contrast, if all the questions received a negative response, the board member was considered an outsider without prior knowledge about board membership and someone who may have run for office based on individual motivation.

Figure 20 shows the percentage of current board members who were insiders (yellow columns) with at least some prior knowledge compared to outsiders (blue columns) who lacked prior knowledge.

These results demonstrate that most board members had some prior advantageous knowledge about board membership. Their career paths, experience, or networks provided prior information about the importance of becoming a board member compared to the general public, who may have lacked that advantage.

Figure 21 shows the extent of insider knowledge among board members. Most had more than one information piece about how to become a board member and the importance of board membership. For 33%, the response was yes to all four questions, meaning that they used to work for the agency, were working in the water sector, had previously worked for the government or an NGO, and served on other boards. These results highlight the importance of networking and the advantages of some careers in providing the self-confidence and financial means to run for an open board seat.

Finally, for those with only one piece of information, Figure 22 shows the particular piece. Most of the water board members had experience serving on other boards, indicating they likely have the financial resources and time to spend on their board appointments, which do not always pay a salary.

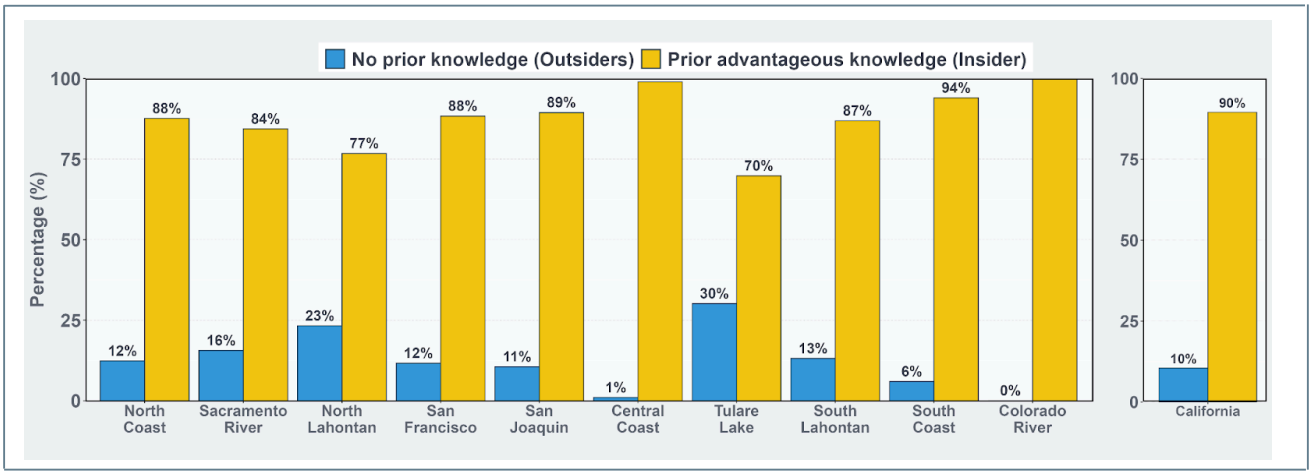


Figure 20. Comparison of Board Members with Prior Advantageous Knowledge (Insiders – Yellow Columns) Versus Those Without Prior Advantageous Knowledge (Outsiders – Blue Column

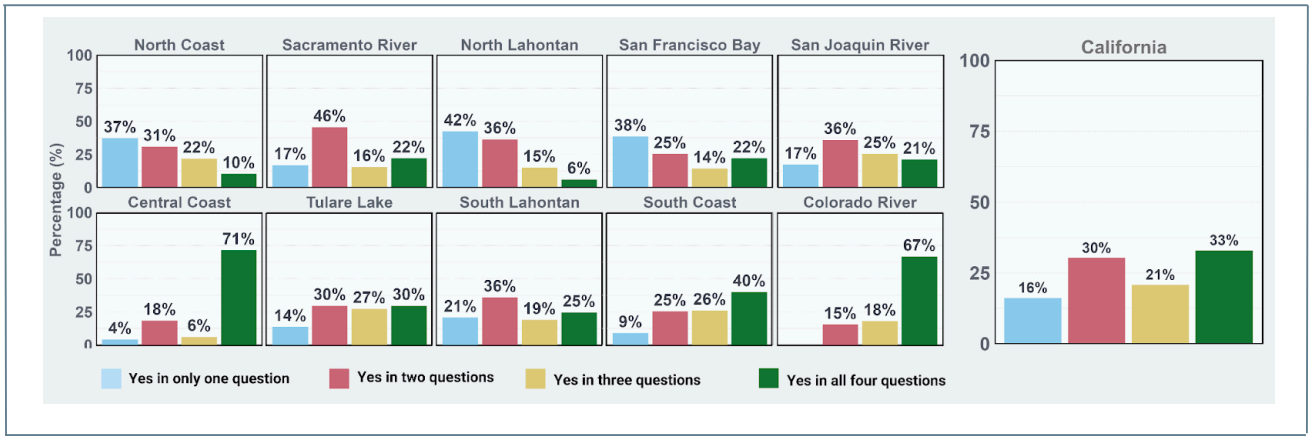


Figure 21. Extent of Board Member Prior Knowledge

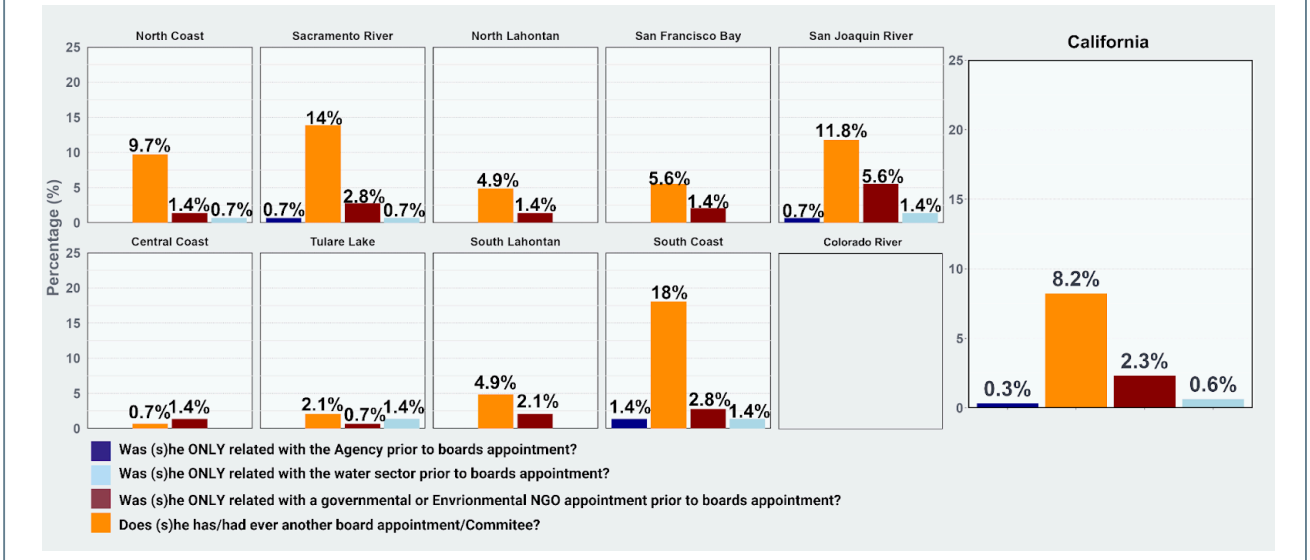


Figure 22. What Was the Knowledge Piece for Board Members with Only One Point of Prior Knowledge?

Transparency

Board of Directors Meeting Transparency and Inclusivity

Figure 23 shows how many PWAs posted Board of Directors meeting agendas online. Statewide, 85% of the sampled agencies provide online Board of Directors meeting agendas, showing transparency about the topics to be discussed. Under the Ralph M. Brown Act (California Government Code § 54950 et seq.), local agencies, including water districts, must post meeting agendas at least 72 hours before a regular meeting to ensure public access and participation.

Figure 24 shows that statewide only 2% of those agendas are translated into Spanish, an extremely low number considering that in many regions, a majority of the community is Latino, and considering that some underrepresented communities (e.g., Latino farmworkers) are not fluent in English and are likely to be among the most affected constituents of board decisions.

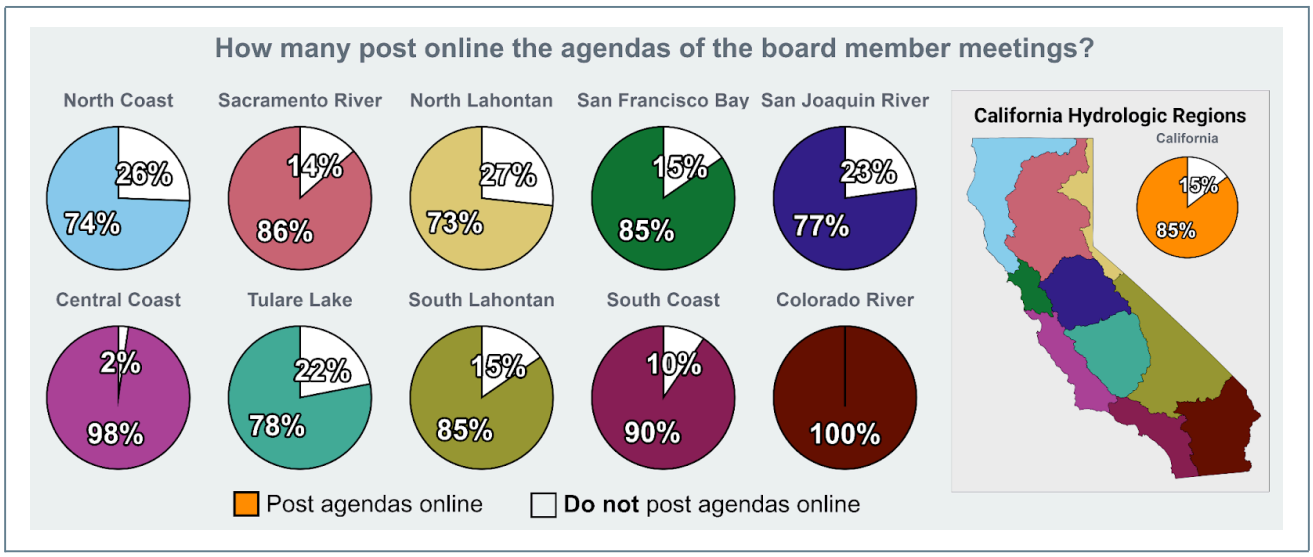


Figure 23. Percentage of PWAs Posting Board of Directors' Meeting Agendas Online



Figure 24. Percentage of PWAs That Translate Board of Directors' Meeting Agendas into Spanish

Conclusion and Discussion



This study analyzed 688 Public Water Agencies (PWAs) out of 1,980 agencies with a jurisdictional area greater than 1 km.2 The sample was stratified by considering 10 hydrologic regions and the jurisdictional size of their water agencies. Within each PWA, three groups were analyzed: (1) the board of directors (BoD) whose members approve/reject the PWAs budget, set customer water rates, and decide on loans and new infrastructure projects, (2) C-suite executives who manage information, develop BoD meeting agendas, and often provide direction for the PWAs, and (3) decision-making bodies that are the combination of BoD and C-suite individuals.

Underrepresented

Women are severely underrepresented on PWA boards of directors, in C-suite positions, and in decision-making bodies. To equal their population distribution in the state, women would need to double their participation in all PWA decision-making bodies. Women are adequately represented in only 21% of PWAs sampled and have poor representation in 53%. In 26% of PWAs, women have no representation within the decision-making body. This study highlights the precarious position of women in terms of representation in the decision-making bodies of PWAs, which is perhaps even more unsettling given that many boards consist of five or fewer members. It is important to note that in 75% or more of the cases, there are few or no women at all in PWA decision-making bodies.

Latinos, Native Americans, and other People of Color are also severely underrepresented in boards of directors and C-suite positions, and decision-making bodies. In order for these ethnic groups to achieve their census representation, their numbers in decision-making bodies should triple (Latinos) and quadruple (Native Americans and other People of Color). The representation of White non-Hispanic officials is at least double their state population percentage in all the groups analyzed, and they are overrepresented in all regions. By contrast, Latinos, Native Americans, and other People of Color are consistently underrepresented even in regions where they are the majority of the population.

Uneven Field

Most boards of directors are comprised of five board members or fewer. One important component of BoDs is turnover; most board members fulfill just one term. However, board members who are elected or appointed to a second term tend to stay in those positions for longer periods, often more than three terms. Most board members obtained their seats through elections; however, in some regions, a significant percentage of board members are appointed; for example, 19% of board members in the Central Coast are appointed.

Furthermore, agency websites often fail to post their bylaws or provide clear instructions on how to attain board membership, making it difficult for the public to understand the process or its significance. In just 36% of the PWAs analyzed, bylaws or board membership instructions were available. Moreover, when such documents were available, they were "easy to find" on just 56% of PWA websites. Access to these instructions/bylaws can be correlated to whether board members are elected by the public or appointed by officials. In regions with low accessibility to instructions, there is a higher percentage of board members who obtained their seats by appointment. By contrast, in regions where the instructions are easy to find, there are higher rates of board members who obtained their seats through elections. Also, a jurisdictional map is available for only 47% of the PWAs.

These results indicate that information about becoming a board member is not always readily available and that when it is, it is often difficult to find. First-time candidates for board seats often do not have a map of the jurisdiction for which they will be responsible. This shows that the path to becoming a board member is an uneven field, though board members from the general public are sometimes elected despite the lack of information on how to become a board member.

A Leg Up on Becoming a Board Member

The public profile of each board member was reviewed to determine which members had prior professional experience and knowledge about the importance of becoming a board member in comparison to the general public. Four questions were used to determine the existence of this prior knowledge or experience: (1) Did the board member previously work in the PWA? (2) Work in the water sector? (3) Work for the government or an NGO with some understanding of government? and/or (4) Is or was previously a member of another board of directors? If there was a "yes" answer to any of the questions, that board member was categorized as an insider. If all of the questions generated a "no" response, the board member was categorized as an outsider; those without prior knowledge or experience were considered to likely have run for office based on individual motivation.

In the state of California, 90% of board members had some prior knowledge about the importance of board membership that they attained from their career paths, experience, or networks. This was an advantage that likely provided a leg up on becoming a board member compared to the general public without the same background. Among those board members with an advantage, more than 75% demonstrated knowledge in at least two of the areas investigated, as evidence of their insider status in the water sector. 33% of board members sampled generated yes responses for all four questions, meaning that they used to work for their PWA, had worked in the water sector, had worked for the government or an NGO, and had served or were currently serving on other boards.

These results highlight the importance of networking and demonstrate that many board members had an advantage based on their careers, which provided awareness of the importance of becoming a board member, the self-confidence to serve, and the financial means to run for an elected seat.

For those board members who only had one piece of extra information, most had experience serving on other boards; thus, they also had the financial resources and time to serve as board members. Of note is that most board members with insider knowledge were not water professionals before their appointment. This result demonstrates that board members attained the position through various routes, but not necessarily via a career as a water professional. This fact highlights the need for further education, training, and instruction about hydrology, water in California, and leadership skills for all PWA board members.

Transparent but Not Inclusive

This study's results indicate that in 85% of the PWAs analyzed, board meeting agendas were available online. However, in only 2% of cases was the agenda translated into Spanish, including within the five hydrologic regions (Colorado River, San Joaquin, South Coast, South Lahontan, and Tulare) in which the Latino population is a majority. Additionally, only 2% of board meeting agendas are published in both English and Spanish statewide, showing a lack of inclusion. However, there is more work to be done besides simply translating agendas in order to make these public agencies more inclusive of the communities they serve.

The Way Forward

Education

The first step to addressing a societal problem is to recognize it and communicate it to the public. The present study has identified and quantified gaps in representation and a lack of access to and transparency in decision-making bodies in the California water sector. This study has demonstrated the need to communicate such findings to the general public.

All Californians recognize that water is one of the state's most important challenges. However, not every Californian is aware that local officials making the decisions about their water may not be representative of the communities they serve. This demonstrates a disconnect between the people making decisions and the communities affected by those decisions. This challenge cannot be solved by a single institution, individual, or group of people, and thus, it is necessary for every Californian to be aware of the situation.

Providing Support for Underrepresented Individuals to Run for Board Seats and Attain C-suite Positions

People from underrepresented groups (women, Latinos, Native Americans, and other People of Color) require support all along the way if they are to reduce the existing gap in representation, from learning how to run for a board seat to maintaining the seat to obtaining training about how to make informed decisions.

Institutions do exist that assist individuals who want to run for publicly elected positions (e.g., board member seats), such as the Central Valley Partnership (CVP), Community Water Leaders Network (CWLN), Self Help Enterprises (SHE), Environmental Defense Fund (EDF), and the Water Leadership Institute (WLI), among others. These groups provide training in leadership skills, the fundamentals of water systems, community organization, and other vital skills.

Other institutions support elected officials in their current roles by guiding informed decision-making, effective communication with constituents, and collaboration with fellow elected officials. Such groups include Water Education for Latino Leaders (WELL) and the Community Water Center (CWC). Some institutions (e.g., WELL) also provide training to current PWA officials and employees, enabling them to move up into C-suite positions. The most effective way to reduce the representation/access gap is to provide ongoing support to individuals from underrepresented groups. The current system is not representative and difficult to access; therefore, supporting the work of these institutions is instrumental to solving this challenge.

The Greatest Challenge: An Issue of Scale

According to estimates, at any given moment, there are approximately 10,000 PWA board members (5 board members times approximately 2,000 agencies). Estimates indicate that women hold about 26% of BoD positions; thus, there should be about 2,500 women currently on PWA boards. This means that the gap is equal to 2,500 women needed to equal the state population distribution.

If all the aforementioned institutions (CVP, CWLN, SHE, EDF and WLI) focus only on supporting women in running for board seats, and would train 100 women per year (approximately 20 women per institution), and all the women trained get elected, that represents 1% of the 10,000 board members appointed in any given year. Thus, it will require 25 years (the 25% gap over the 1% filled every year) to remove the gap.

This is an issue of scale: It is not feasible to bridge the representation and access gap only by supporting the aforementioned institutions. The problem is systemic, and therefore the solution must also be systemic. While these institutions can lead the way to reduce the gap, it would require every PWA to implement effective practices and policies. Here are some examples of possible practice and policy changes:

- Have all PWAs post easily accessible online instructions/bylaws indicating how to become a board member.
- Make public announcements when board seats are up for renewal or are open for election.
- Provide professional training for board members and C-suite personnel about the how-tos of informed decision-making (WELL's Untapped Fellowship program is an excellent example of that type of professional training).
- Create information campaigns that reach out to underrepresented communities to share about the role of PWAs and the importance of board membership.

Overcoming this issue of scale is a multi-factor problem that will require an all-hands-on-deck approach encompassing societal awareness and education, continuous professional training and support, supporting institutions that are already leading the way, and inclusive practices and policies within PWAs. These are just some of the actions needed to mitigate the lack of representation and access of historically marginalized individuals to leadership positions within decision-making bodies in the California water sector.

Future Work

In future iterations of this study, state and regional water quality control boards will be considered in the analysis since these groups are governing bodies that set policy and provide water rights to users. The state and regional boards are also in charge of ensuring water quality standards throughout the state. Finally, county boards of supervisors will be included in the future analysis because those governing bodies are in charge of land use and waivers for water regulations.



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La causa continua!









Water Education for Latino Leaders

Our Mission

WELL educates and trains local Latino elected officials about California water policy to promote timely and equitable actions that serve to develop a robust economy, healthy communities, and a resilient environment for all Californians.

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