

Water System Consolidation in California:

Lessons learned and key opportunities



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Executive Summary

Over the last fifteen years, state regulators have actively promoted consolidation as a priority solution for struggling water systems. Today, more than 280 consolidation projects have been completed with important benefits for the communities served. Nonetheless, the pace and scale of consolidation is not keeping up with the need for solutions and many promising projects never come to fruition. This report aims to set the stage for the next chapter in California's consolidation efforts by capturing the experiences and recommendations of a diverse array of individuals and organizations involved with consolidation projects from across the state.

Common consolidation challenges

- **Project duration** — Due to complexity, bureaucracy, miscommunications, and resistance, consolidation projects take a very long time to implement.
- **Funding eligibility and process** — Limited funding, evolving eligibility and prioritization criteria, and cumbersome requirements can delay or even prevent projects from coming to fruition.
- **Capacity** — Significant technical, managerial, and financial capacity is required to implement consolidation and sometimes, to manage the consolidated system(s) afterwards as well. Where capacity is limited, it is a frequently cited barrier to consolidation.
- **Legal barriers** — A wide range of legal barriers surface during consolidation projects ranging from liability and proposition 218 to public water systems without legal standing and housing code violations.



California Consolidation
Convening held in Davis,
California in April 2026

- **Coordination and communication** — The complexity of consolidation projects often necessitates many involved partners, creating significant coordination and communication challenges.
- **Lack of political will and resistance** — Many projects face either some degree of resistance from individuals or groups or stagnation resulting from a lack of political will. Some projects face both.
- **Affordability** — Whether directly attributable to consolidation or not, most consolidations are associated with rate increases. The burden of rate increases can also be inequitably distributed among households and communities.

Best practices, recommendations, and lessons learned

The report identifies best practices and recommendations to address the identified common challenges spanning participating water systems, funding applicants, technical assistance providers, counties, local and state regulators, and funding agencies. The report also identifies three key lessons learned from California's experience implementing consolidations.

- Consolidation can be highly effective in addressing challenges facing small and even medium sized systems, but it is not a magic bullet. Consolidation also has limits and tradeoffs, necessitating a broader strategy for ensuring the human right to water and resilient services in a changing climate.
- It is important to have both flexibility and consistency in implementing state and local policies related to consolidation as well as distributing funding support.
- Despite significant progress, there remains a need for a stable, consistent funding mechanism that can provide reliable support to potential projects from conception to construction.

Key opportunities for scaling progress

Beyond addressing the common challenges that delay and even prevent consolidations from coming to fruition, scaling consolidation as a solution to reach more and different communities will require new approaches to this work. The following opportunities stand out as promising directions for growing the reach of collaborative solutions statewide.

- Regional consolidation planning
- Promoting managerial consolidation and shared service/staffing models
- Advancing capacity building and information exchange
- Integrating consolidation with climate resiliency and hazard mitigation efforts
- Incentivizing and empowering local action on consolidation

Consolidation Case Study Library

The following case studies were developed by UC Berkeley and UC Agriculture and Natural Resources to share the experiences of water systems from across the state who have participated in consolidation projects. You can view each write up by selecting English or Spanish beneath the case study name. For questions or to learn more contact Kristin Dobbin at kdbdobbin@berkeley.edu.

Case study	Number of systems involved	Type of consolidation	Consolidation structure	Governance of consolidated entity	County	Keywords
The formation of the Ukiah Valley Water Authority (English / Spanish)	5	Managerial	Umbrella Organization	Joint Powers Authority	Mendocino County	Regionalization, Drought, Water supply
Golden State Water Company - Clearlake System Acquisition of Crescent Bay Improvement Company (English / Spanish)	2	Managerial	Acquisition	Investor-Owned Utility	Lake County	Water quality, TMF capacity
Keyes Community Services District Regionalization (English / Spanish)	6	Physical	Master Meter & Acquisition	Independent Special District	Stanislaus County	Regionalization, Water quality, Extraterritorial service, Mobile Home Parks
Sultana Community Services District's Annexation of Monson (English / Spanish)	2	Physical	Acquisition	Independent Special District	Tulare County	Drought, Water quality, Water supply, Domestic wells
Tahoe City Public Utility District acquires the Madden Creek and Tahoe Cedars water systems (English / Spanish)	3	Managerial	Acquisition	Independent Special District	Placer and El Dorado Counties	Regionalization, Fire suppression, Deferred maintenance

Extending Diablo Water District services to Santiago Island Village Mobile Home Park (English / Spanish)	2	Physical	Master meter	Independent Special District	Contra Costa County	Mobile Home Parks, TMF capacity
The City of Perris transfers their drinking water and sewer systems to Eastern Municipal Water District (English / Spanish)	2	Physical	Acquisition	Independent Special District	Riverside County	TMF capacity
Lewiston Community Services District's consolidation of Lewiston Park Mutual Water Company (English / Spanish)	2	Physical	Acquisition	Independent Special District	Trinity County	Water quality, TMF capacity
City of Coachella acquisition of the Mesquite Mutual Water Company (English / Spanish)	2	Physical	Acquisition	City	Riverside County	Water supply, Deferred maintenance
Connecting Saint Anthony Mobile Home Park, Manuela Garcia Water, and Seferino Huerta to Coachella Valley Water District (English / Spanish)	4	Physical	Master meter	Independent Special District	Riverside County	Water quality, Mobile Home Parks, Regionalization
Extending water service from Cal Water Visalia to domestic well households in West Goshen (English / Spanish)	1	Physical	Acquisition	Investor-Owned Utility	Tulare County	Water quality, Water supply, Domestic wells, Drought

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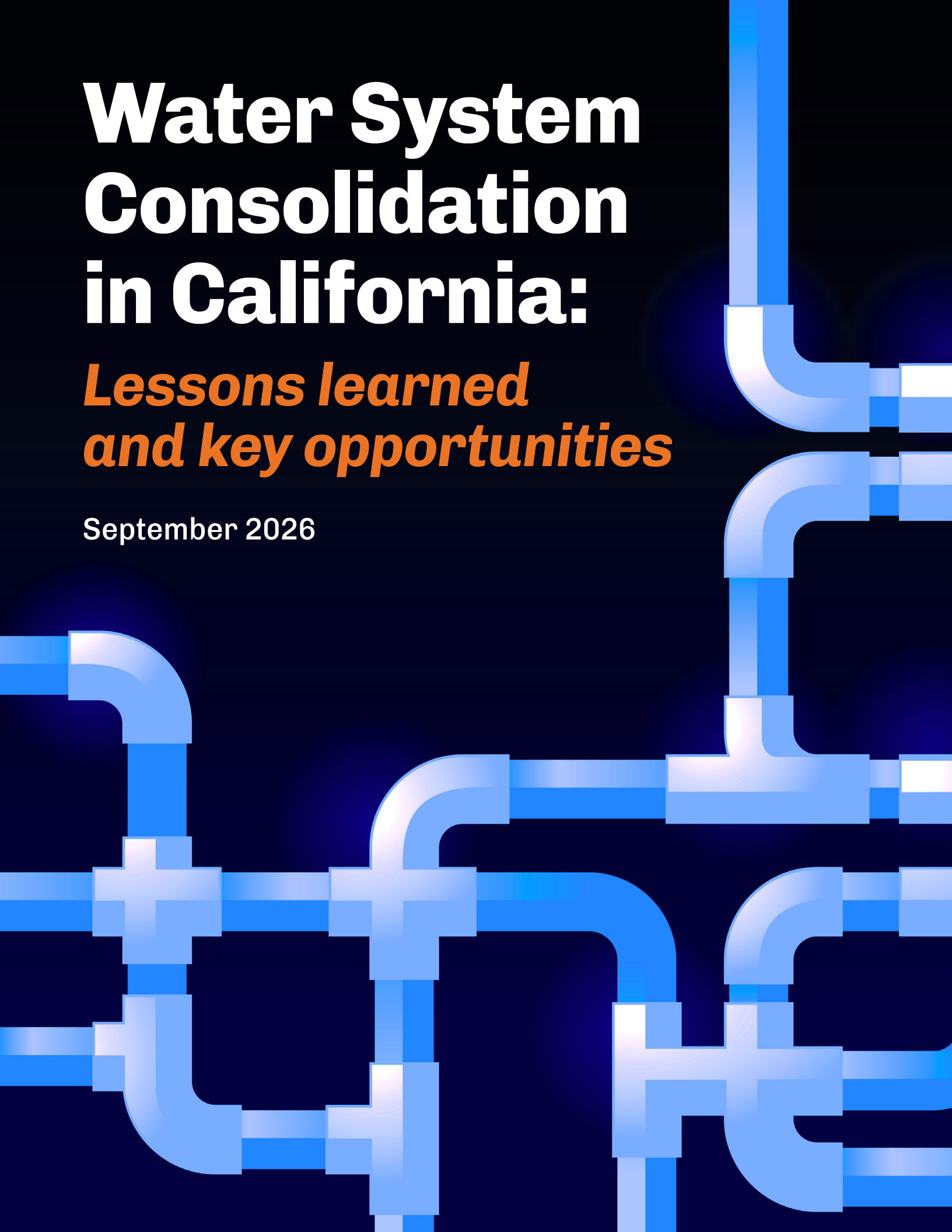
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Introduction

The fragmented nature of drinking water provision in the United States has long been a point of both discussion and concern. Even preceding the passage of the Safe Drinking Water Act in 1974, sector experts advised that significant consolidation would be necessary to support long-term regulatory compliance.¹ Nonetheless, for many years afterwards, system consolidation primarily occurred in an ad-hoc and voluntary manner at the behest of local interest. However, this has begun to shift in recent years. As regulatory burdens mount and infrastructure and treatment costs accelerate, state and federal regulators have turned their attention to leveraging consolidation as a policy solution for addressing the chronic challenges facing small water systems.

In California, targeted efforts to advance water system consolidation can be traced back to the passage of the state's human right to water law, AB 685, in 2012. In the nearly fifteen years since, the state has developed robust funding programs for consolidation, including the Safe and Affordable Funding for Equity and Resilience (SAFER) program and expanded technical assistance support for consolidations including legal and planning assistance. These new resources have been accompanied by legislative and policy changes including allowing for mandatory consolidation under certain circumstances and introducing consolidation incentives, as well as administrative reorganizations resulting in dedicated agency staffing focused on small systems and consolidation.

The outcome of this innovation has been a rapid increase in the number of initiated and completed consolidations across the state. Since 2015, at least 280 consolidations have been completed, and the 2025 Safe Drinking Water Plan identifies another 260 as being planned or in construction.² These projects have brought safe drinking water to communities that had gone without it for years or even



Residents and community partners celebrate the groundbreaking of a consolidation project connecting domestic well households in West Goshen to Cal Water's Visalia system in June 2025.

Source: Community Water Center

decades, bolstered climate resilience, facilitated affordable housing development, and have been leveraged to bring in additional state and federal infrastructure funding.³ But these successes have been hard fought. Some projects take over a decade to complete, many others stall at various phases of the process never to reach completion.

A 2018 workshop hosted at UC Berkeley identified eight challenges impeding progress on consolidations including information gaps, uncertainties caused by changing regulatory standards, affordability, and state preference for full consolidation.⁴ Some of these challenges have been resolved or improved in the intervening years. Others remain significant hurdles for projects across the state. New challenges have also emerged. Leveraging expertise from technical assistance providers, regulators, local government representatives, and most importantly, water systems themselves, this report identifies common challenges encountered in recent consolidation projects, lessons learned, recommendations, and key opportunities to inform next steps. The report draws on several data sources including the 2024 California Water System Consolidation Survey (a survey of water system managers with recently completed or in-progress consolidation projects), eleven comparative case studies of consolidations completed since 2018, forty interviews, and a practitioners' convening with more than 40 participants held in Davis, CA in April 2026.

Defining Consolidation

This report defines consolidation as the merging of governance, financial, and management functions of water provision between two or more water systems or between a water system and unregulated water users. This definition is intentionally broad, including both physical and managerial consolidation, as well as extending regulated water service to state small water systems or domestic well users. Consolidation can be accomplished via a variety of pathways including annexations, acquisitions, mergers, and umbrella organizations.⁵ While the term consolidation is common in the drinking water sector of California, some actors use different terminology such as municipal service extension, acquisition, or regionalization.

Receiving System: Consistent with California law, we refer to the water system that will persist after a consolidation as the “receiving system.”⁶ A receiving system in a consolidation may be one of the participating systems that takes over service provision in the service area of the other participating systems, or a receiving system may be an entirely new entity created for the purposes of consolidation. Residents served by the receiving system prior to consolidation are receiving system residents or customers.

Subsumed System: Similarly, we refer to any systems that will cease to exist independently through the implementation of a consolidation as a “subsumed water system” and their served residents as subsumed system residents/customers (including domestic well users).⁷

Common Challenges and Best Practices

While each consolidation is highly locally specific with its own unique set of circumstances, there are also many shared challenges that arise time and time again across projects and contexts. Here, we identify seven common challenges in need of attention as well as the creative strategies that have been or could be used to address them.

Project duration

Consolidation projects are often immensely complex, requiring many carefully timed bureaucratic processes, significant environmental review and engineering studies, and multiple simultaneous legal deliberations. This itself leads to variable project timelines that can take many years. Add

on top of this numerous other sources of delay, and many consolidation projects far exceed even conservative timeline expectations. One interviewee described implementing a consolidation project as “torturous and long.” Many others named the length of time these projects take as the hardest part of consolidation.

Some of these sources of delays can occur at the local level. This can be due to limited resources or understanding of the consolidation process (e.g., missed requirements), as well as challenges securing necessary easements/properties. Resistance to consolidation is also a common source of delay, whether through intentional delay tactics or stemming from hesitancy or a lack of urgency among project participants.

Protracted project timelines can also be the result of delays among regulatory or funding agencies. Given the many bureaucratic processes that can be associated with any given project (e.g., Local Agency Formation Commission (LAFCO), Fish and Wildlife, Division of Financial Assistance, Tribal review), application review, budget approvals, and obtaining permits for each of these processes all add up. Commonly cited delays include cross-cutting requirements between state and federal funds, involvement of multiple regulatory and funding agencies and associated coordination, unclear application and documentation requirements, and requirements that are ill-suited to consolidation projects (versus traditional, single-system capital improvement projects that the State Revolving Fund was designed for). Delays at one level can cascade into other parts of the project. For example, delays in the distribution of funds can halt critical outreach work necessary to secure consolidation agreements. Miscommunications, staff turnover (including the use of different project managers for planning and construction), and procedural redundancies all exacerbate this challenge. For example, in one case a feasibility study funded through technical assistance was conducted without the crucial information that an agreement with a prospective receiving system had been reached. This new information significantly altered the options under consideration in the study.

As consolidation projects go on, the length of time they take can itself become the source of additional problems. Long project timelines can lead to funding gaps as inflation outpaces approved budgets which ironically necessitate funding amendments causing still further delays. Extended timelines can also lead to a loss of faith among the involved communities that the project will be completed. In at least one instance, we heard of a water system dropping out of a proposed project because it was frustrated with how long it was taking.

Relevant best practices

- Conduct meetings at the outset of a project to discuss the project timeline and relevant milestones with residents to set expectations about how long the project will take.
- Host a project kickoff meeting with all involved parties where the anticipated timeline and all applicable steps, approvals, and requirements are clearly discussed.
- Determine funding sources as early as possible in the process and clarify associated requirements to avoid delays and unnecessary costs. Where funding uncertainty exists, prepare application documents assuming the need to comply with federal and state requirements.
- Avoid the potential of parallel long-term projects involving the same receiving system by identifying all public water systems and domestic wells in the project vicinity and conducting targeted outreach. Maintain flexibility to allow for the potential of additional project participants during implementation.

- Where applicable, begin work with Tribes at the outset of the project.
- Start on any necessary land acquisition, easements, and transfers as soon as possible and identify back-up options for contingency purposes.
- For domestic well consolidations, start the process of securing property owner agreements early using trusted organizations and community leaders to build buy-in.
- All project partners (water systems, funding and regulatory agencies, technical assistance providers, etc.) should prioritize consistency in assigning staff (including attorneys) and group projects associated with specific water systems under one staff member or team. When staff turnover occurs, follow a clear handoff procedure to ensure forward momentum.
- Where feasible given availability and cost eligibility, utilize a singular funding source which can help limit bureaucracy in implementation.
- Provide clear guidance, templates, and checklists for all components of the application process including resources for projects that must complete federal crosscutters.
- Among regulators, funders, and technical assistance providers, foster staff expertise on specific project types by developing specialized staffing teams (e.g., domestic well and mobile home park projects, Investor-Owned Utility (IOU) acquisitions, etc.) and/or peer learning groups and cross-training.

Funding eligibility and process

State and federal funding has been essential for advancing consolidation projects across California. As one consequence, challenges associated with obtaining or leveraging funding are common roadblocks for many projects. One such challenge relates to funding eligibility. Some applicants are not eligible to receive common state or federal grants due to income thresholds, lack of an eligible applicant (e.g., domestic well owners) or other restrictions.

Funding prioritization criteria can have a similar effect. The state's prioritization of failing and at-risk systems can direct funding away from projects with willing partners towards intractable and conflict-ridden ones, prioritizing need over feasibility. It can also prevent investment in systems where consolidation is under consideration or in the planning stages for fear of loss of construction funding eligibility. And in some cases, systems that are not formally considered as failing but meet the criteria have struggled to document their challenges to access funding that they should qualify for. Further, changing criteria between years and programs causes uncertainty and risk for project proponents and can contribute to loss of momentum on projects when funding that had been anticipated becomes uncertain or inaccessible, even when the planning work has been ongoing for years.

34% of respondents to the 2024 California Consolidation Survey reported difficulty applying for and receiving funding.⁸

Challenges relating to funding eligibility for specific project costs is another issue. Some critical project components, such as community outreach and engagement for domestic well projects or improvements on private property, can be difficult to include in funded scopes of work. There are various reasons for this including liability concerns, limited funding, and varying funder priorities and preferences. Particularly for inexperienced applicants, it is also common for potentially eligible expenses to be left out of the budget due to lack of awareness. For example, only some receiving systems receive reimbursement for staff time or other expenses incurred during a project, which in turn can be essential for the long-term success of the project.

To receive any public funding in the first place, a willing applicant is a prerequisite. However, in many projects it is difficult to find an entity that wants to take on that role. Liability is a principal concern for many, as is a State Water Board funding clause that requires the recipient to complete the project even if the funding is revoked. The above-mentioned funding uncertainty can further compound these concerns. In essence, there is a “chicken and egg” problem in which the state wants a firm commitment to see the project through by the applicant prior to committing funds whereas the applicant wants a firm funding commitment from the state before agreeing to sponsor the project. For smaller entities the need to front costs and then wait for reimbursement can also make serving in this capacity infeasible. The length of time it takes to apply for and receive funding is also a significant constraint that project proponents frequently cite as a source of delays and is often a deterrent from starting or continuing with potential projects.

Relevant best practices

- Wherever possible, route funding through applicants with previous grant and consolidation experience (e.g., county, regional water district).
- Utilize the Water Board’s expedited drinking water program whenever possible to minimize requirements and delays.
- Utilize technical assistance funding for planning rather than applying for planning funding to avoid multiple rounds of funding applications and review.
- Leveraging multiple funding sources for different aspects can be a helpful strategy for navigating eligibility restrictions related to specific project components. However, in doing this it is essential to carefully coordinate the various scopes of work to ensure there are no funding or coordination gaps, which are a common challenge for projects relying on multiple funding streams.
- Leverage bridge loans (with fees and interest paid for using grant funding if possible) to expedite projects hamstrung by cashflow challenges.
- To every extent possible, funding agencies should maintain consistent funding eligibility and prioritization criteria and ensure internal consistency with respect to eligible expenses and the funding process.

Technical, managerial, and financial (TMF) capacity

Consolidation projects require a great deal of resources, including time, expertise, and money, to complete. Even with grant funding to cover the costs, these projects can pose technical, managerial, and financial (TMF) capacity challenges for involved systems. Existing TMF limitations for both receiving and subsumed water systems also significantly shape how and if projects proceed by impacting system participation. For under-resourced systems, time and staffing constraints may make active participation in consolidation challenging or even infeasible on top of their existing day-to-day duties, especially when involved systems are heavily or entirely dependent on volunteers. This, in turn, can prevent or limit participation and significantly delay and even impede progress.

Importantly, capacity is not always improved post-consolidation. In fact, in some cases consolidation can place additional TMF demands on the receiving system after the project is complete. For example, significant deferred maintenance or a lack of good record-keeping from a low-TMF subsumed water system can lead to increased staffing demands and maintenance costs post-consolidation for the receiving system and make it challenging to comply with upcoming regulatory deadlines. These challenges and the lack of capacity to maintain previous maintenance or operational standards can diminish staff morale. Newly installed infrastructure can also be a challenge when operations

and maintenance costs exceed the revenue generated by the additional customers. Umbrella organizations, such as Joint Powers Authorities, can create redundancy in monthly meetings, increase administrative costs, and make it challenging to fill board positions. Consolidations of mobile home parks or other small systems completed via master meters have similar issues in that the subsumed water system owner retains responsibility for local maintenance and billing.

Notably, capacity concerns are not limited to the involved water systems. The increasing numbers of consolidation projects have stretched the capacity of existing technical assistance providers who are often assisting with many projects at once. Limited staff capacity across regulators and funding agencies contributes to delays as well. And counties' capacity to participate in consolidation projects is also often far below what would be desirable.

Relevant best practices

- Potential receiving systems should carefully consider the long-term sustainability of operating the subsumed water system and proactively identify post-consolidation operations and maintenance needs. Such considerations should be fully considered in any feasibility analyses.
- Leverage technical assistance to compensate for limited local capacity, particularly in domestic well and mobile home park projects and those involving systems with administrators or in receivership.
- Provide board training and support to build the water system's capacity for post-consolidation success.
- Leverage contract services for engineering and the funding application process to reduce strain on the applicant's capacity as needed.
- Where adequate records on infrastructure are missing, include funding to map the system at the outset of the project.
- Incorporate infrastructure upgrades and automation (e.g., radio read and automated meter reading) into scopes of work to reduce operational needs post-consolidation.
- Include infrastructure improvements that address outstanding challenges as part of the funded scope of work for a given consolidation project.

Legal barriers

A wide range of legal barriers can surface before, during, and after a consolidation. Among these, concern about liability is one of the most common. Many receiving systems are worried about the short- and long-term financial and legal liabilities of taking on a failing system, including concerns about litigation, regulatory compliance, and financial obligations (e.g., payout of subsumed water system's employee pensions). How any given project is implemented can raise additional concerns. Contract provisions in funding agreements and consolidation agreements implicating liability are often highly controversial and can stall projects indefinitely. This can be particularly acute in projects involving Investor-Owned Utilities for which standard processes and contract provisions often diverge from those of government institutions.

Liability is also a common concern when it comes to implementing private property improvements. One way this is often addressed is through the development of a second grant agreement to fund private-side improvements as a parallel project, although this can lead to delays, disjointed projects, and raise concerns among receiving systems about ensuring alignment with their systems' standards. In other cases, private property improvements are left as the responsibility of the small system owner, which can prevent participation.

Other commonly encountered legal barriers include unpermitted or improperly permitted mobile home parks, small water systems without legal standing, concurrent property ownership, unadministered estates, substandard housing with code violations, and undocumented easements. All of these require time, and often legal support, to resolve. Lastly, California's Proposition 218 frequently limits rate setting and financing options for consolidation, which can reduce the prospect for economies of scale benefits. Proposition 218 can also complicate out-of-boundary service arrangements.

Relevant best practices

- Examining potential liabilities and making infrastructure improvements prior to the transfer of systems can reduce costs and liabilities.
- In cases of informal or complex property ownership arrangements, all parties should be prepared to be maximally flexible, leveraging variances and exceptions to keep the project on track.
- In cases where a subsumed water system is completely dissolving because of consolidation, be prepared for costs associated with that dissolution and incorporate them into the approved scope of work.
- Where water quality challenges persist post-consolidation, providing bottled water to customers may help alleviate liability concerns.
- For unionized workforces, it is helpful to include a preliminary agreement on bargaining in the consolidation application submitted to LAFCO. Alternatively, developing such an agreement can be a condition of approval.
- Set up an escrow account to pay for unexpected costs during or after consolidation, thereby limiting the receiving system's liability.
- Coordinate with local government partners and the Department of Housing and Community Development to address permit and code violations and identify pathways to achieve compliance while also advancing the project.
- Identify non-rate revenue to support consolidations as much as possible, including leveraging grant funding wherever possible.
- Provide templates on different types of consolidation agreements.
- Find ways to expedite consolidation where the subsumed water system doesn't have legal standing such as leveraging administrators or receivers.

Coordination and communication

In their most basic form, consolidations require successful coordination between two water systems, which itself can be challenging. As projects grow more complex, they require coordination with a diverse range of state, federal, Tribal, county, and technical assistance representatives. Projects with a high number of involved entities commonly face coordination challenges that cause delays and a loss of momentum, which can be discouraging for the involved systems and impact community buy-in. Domestic well consolidation projects, which functionally are akin to coordinating between dozens of involved water systems with each property owner acting as their own system whose representatives must understand and sign off on the project, are similarly impeded by high coordination costs. The complexity of the consolidation process and variability in how specific projects are implemented only add to these challenges as does the fact that the priorities and requirements of regulators across different scales can conflict with one another.

Putting best practices into action



Eastern Municipal Water District and City of Perris define shared goals and procedures using MOUs

In 2021, the City of Perris approached Eastern Municipal Water District (EMWD) about the possibility of consolidating their water and sewer services into the regional district. Soon thereafter, the two entities entered into a Memorandum of Understanding (MOU) to explore the potential of consolidation. The MOU was expressly designed to support collaboration between EMWD and the City by defining a shared goal: to assess the feasibility of a potential consolidation for the long-term benefit of all involved residents. The MOU also outlined an agreed-upon process for collaboration, committing to equal sharing of all costs, mutual indemnification, and “hold harmless” provisions. The MOU was essential for facilitating the years of meetings that followed, setting the standard for productive collaboration. In early 2024, a new MOU was developed defining a work plan and terms for the consolidation. This revised MOU committed both parties to the complete transfer of ownership of the City of Perris systems and was in effect until the completion of the transfer agreement in October 2025.



Sacramento Suburban and Del Paso Manor Water District leverage joint board meetings and an advisory committee to ensure transparency and clear communication

In 2021, a Sacramento Grand Jury found that the Del Paso Manor Water District (DPMWD), which served approximately 3,000 homes in Sacramento County, had abdicated its mission to provide safe and reliable drinking water at an affordable rate. In 2023, the Sacramento LAFCO initiated the dissolution of DPMWD after finding that it had chronic service deficiencies and was not actively engaged in efforts to remediate those deficiencies. This series of events made reorganization a necessity. DPMWD found a willing partner in their neighbor, Sacramento Suburban Water District (SSWD), which at the time served more than 47,000 connections. From the start of their reorganization discussions, the two boards committed to conduct joint board meetings. This approach made sure that all board members were informed of, and participated in, the process. To keep communication channels open the SSWD Board then established an advisory committee composed of the five former DPMWD board members to help oversee the transition process post-consolidation.

Many projects also struggle with challenges resulting from misunderstandings, both among project partners and among residents. Misinformation, rumors, and disinformation can all shape public perceptions of a project with significant consequences. Technical assistance can be a major help in this regard, but combating this can be challenging when important aspects of the project are in flux as they often are. Rising levels of fear and distrust in public institutions is only compounding the challenge of ensuring clear, direct communication with impacted residents.

Relevant best practices

- Formally document a shared vision for consolidation and a commitment to productive collaboration early in the process such as through a Memorandum of Understanding (MOU).
- Ensure regular community meetings throughout project planning and implementation to provide updates (project milestones, expected road closures, etc.). Also provide shareable written materials and clear information on the web.
- Make sure public outreach teams and materials are available in all relevant languages.
- Door knocking can be a particularly good way to contact elders and non-English speaking populations.
- Be mindful of potential safety concerns and current political dynamics when conducting outreach, particularly in domestic well communities whose residents may be less

accustomed to interacting with service providers. Ensure outreach workers clearly state who they are and why they are there.

- Facilitate active county and LAFCO participation in all phases of planning and implementation.
- Maintain regular calls with participation of all involved parties including water systems, technical assistance providers, funders, regulators (including LAFCO), and county officials to ensure regular communication and keep everyone informed.
- Facilitate direct communication between counterparts of the involved systems (e.g., those in charge of billing, lawyers) rather than relying on indirect communication through project leads.
- Ensure direct and ongoing communication between regulators and involved system leadership (e.g., board members) rather than relying solely on consultants or technical assistance providers.
- Proactively counter the spread of misinformation through regular communication with customers.
- Ensure alignment of messaging between involved systems/partners.
- Conduct meetings in person whenever possible.
- Where the subsumed water system's employees will not be transferred to the receiving system, short term contracts can help ease the transition and facilitate important information exchange.
- Where feasible, leverage the expertise of the subsumed water system's leadership by creating an advisory committee to support the post-consolidation transition.

Lack of political will and resistance

Many consolidations face overt resistance or at least lack of political will from some participants at some stage of the process. In more challenging cases, the entire consolidation process can be shaped by these forces. The root causes of resistance are diverse and context specific. In many cases, resistance stems from past conflict, which can include previous failed attempts at consolidation or collaboration, decades-old feuds between individuals, or histories of redlining and/or discrimination. Resistance also frequently arises in relation to many of the core issues to consolidation like water affordability, representation, and local control. Notably, local control seems to be of particular concern where there are relative size differences between consolidation partners and can be tied to fear of losing local connections and a direct line of communication with the local water service provider. In cases where consolidation might impact water sources or treatment, consumer trust and preferences regarding their tap water can also ignite controversy.

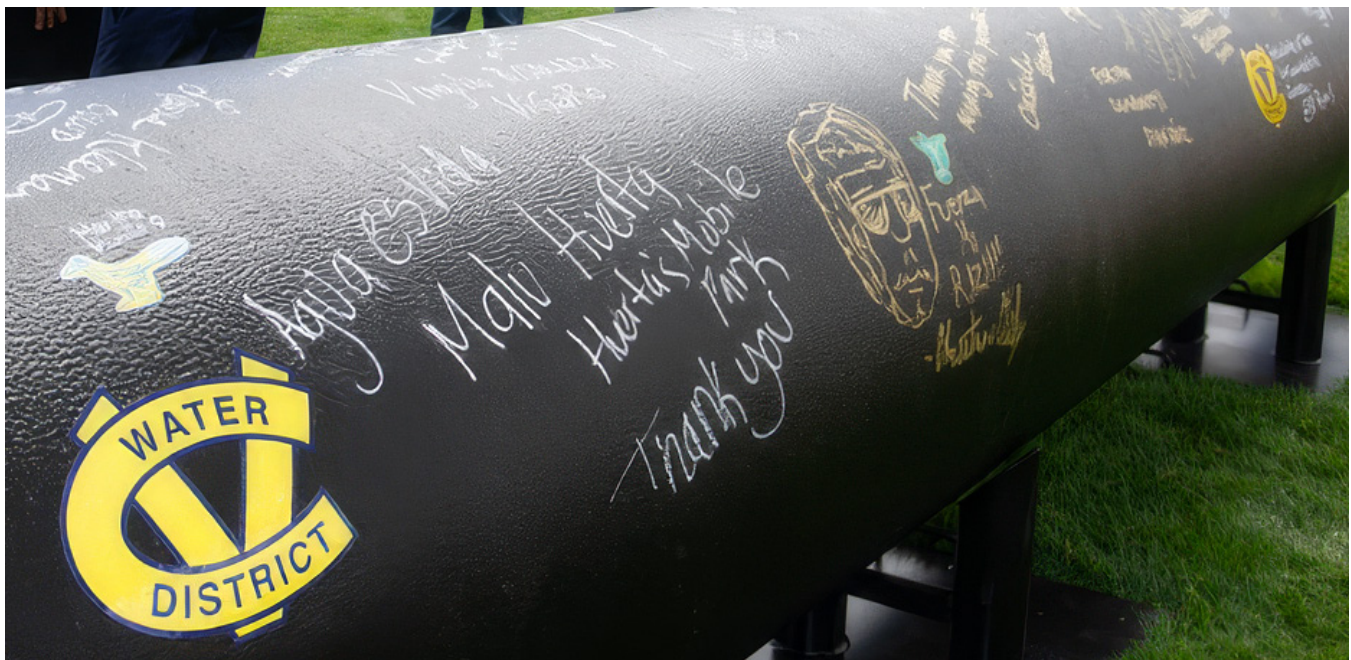
Importantly, it is not uncommon for receiving and subsumed water systems or associated communities to have distinct concerns about consolidation, nor for there to be stark differences in opinions within individual impacted communities. Among subsumed water system residents, varying views on the quality and reliability of their current water supplies can underpin some of these differences. In the case of domestic well users, requirements to destroy their existing wells can also act as a barrier to participation for some households.

Although resistance can come from groups, it's also true that individuals or a few members of local governance can be the source of significant resistance on their own, particularly individuals who have procedural power within the process. Questions of influence and economic well-being can be raised when board members, consultants, or staff perceive a threat to their current positions.

These individuals can take a variety of tacks to slow or stop a consolidation project, including missing deadlines, fomenting resistance among governing board members, or implementing policies to preclude consolidation. In the case of multi-owner properties requiring easements or mobile home parks, a single resistant property owner can halt the process entirely. While resistance can emerge from misunderstandings or legitimate grievances that water providers and project partners can work to address through education and compromise, it's also true that resistance can be the result of prejudice or NIMBYism. Trying to understand the source of resistance can be an important first step to determining how to address it.

Relevant best practices

- Ensure transparency and ongoing communication with system staff to address potential concerns. Create opportunities for staff from involved systems to meet.
- Where rate increases will be necessary, start the customer education process as soon as possible. In some cases, systems have even had success with inaugurating rate increases before consolidation to reduce financial barriers.
- Involve all board members in consolidation discussions rather than utilizing ad-hoc committees. Where infeasible, regular communication with all board members should be a top priority.
- Regularly communicate to customers throughout the planning and implementation of the project, including clearly articulating the rationale for the consolidation.
- Allowing private well communities to keep their wells for non-drinking water use can improve community buy-in but must be accompanied with appropriate safeguards to protect local groundwater supplies.
- Involvement of local elected officials can help move stalled projects forward.



Residents signed water main at a community celebration in Mecca celebrating ten years of efforts by the Coachella Valley Water District's Disadvantaged Communities Infrastructure Task Force.

Source: Coachella Valley Water District

- Conduct outreach not just to the subsumed water system customers, but also to receiving water system customers.
- Community engagement and outreach is key to building buy-in among residents, especially if there are affordability concerns or other points of resistance. Examples include social media posts and hosting community tours.
- Identify and articulate consolidation benefits for all systems/communities (e.g., infrastructure or resiliency benefits). Importantly, different systems/communities can experience and promote different benefits to the same consolidation project.
- Work to air the goals and concerns of all the board members and staff from each water system as early as possible in the planning phase. Consider interviewing board members individually to uncover any unique perspectives.
- Invest in public outreach and education to promote awareness of the benefits of consolidation.
- Incrementalism can help build (or re-build) trust between partners. Starting with mutual aid or other collaborative agreements can support relationship building and reduce resistance. Similarly, umbrella organizations like Joint Powers Authorities can ease transitions and help demonstrate the benefits of collaboration. Allowing consolidations to move at the speed of trust by funding these key milestones can help move projects along.

Affordability

Although consolidation is often considered a way for systems to build economies of scale, concerns about a consolidation's impacts on drinking water affordability are common for receiving and subsumed water systems alike. This concern is often partially driven by the difficulty of determining the full rate impacts of a consolidation prior to its completion for any of the involved systems. However, concerns over reduced affordability are also well-founded in practice. Consolidation is often an expensive prospect, particularly when one or more of the involved systems needs significant investment. Based on findings from the 2024 California Consolidation Survey, 80% of consolidations result in rate increases for subsumed water system customers. In 24% of cases, rates also increase for customers of the receiving system.⁹ In many cases rate increases are not a direct result of consolidation but rather infrastructure investments needed to correct artificially low-rates, remedy deferred maintenance, or address an ongoing water supply or quality challenge. Nonetheless, this can create a public relations challenge among residents and can contribute to resistance from a variety of parties. Besides infrastructure investments, the need to remedy pre-existing differences in rate schedules between the involved water systems can also lead to rate increases. Notably, there are also cases where consolidation can support household affordability, particularly when there is significant public investment in upgraded infrastructure and/or where consolidation builds economies of scale (e.g., making water treatment economically feasible by increasing service connections).

Affordability challenges are often most pressing for low-income communities but are not limited to them. Affordability challenges can also be particularly acute for mobile home park residents and other water systems consolidated via master meter agreements. Under these arrangements, the subsumed system retains responsibility for billing customers and maintaining the local distribution system. It is also not uncommon under these arrangements for per-unit water costs to be higher for subsumed system customers compared to receiving system customers. In the case of non-mobile home parks, these extra costs are generally passed on to residents using either a flat or metered rate, resulting in elevated residential rates compared to the receiving system. In the case of mobile

home parks, operators often have discretion in how they allocate these additional costs among residents and may do so through usage charges or raising monthly rents for all residents. The former can help ensure equity by pricing based on consumption but entails additional expenses on the part of the park operator (e.g., meter installation and reading), while the latter can have an outsized impact on low-income, elderly, and disabled residents. In either case, when residents are not direct customers of the receiving system, they are not eligible to participate in the receiving water systems' low-income rate assistance program if applicable.

Relevant best practices

- Where possible, phase in rate changes over time.
- Promote and pursue full consolidations instead of wholesale arrangements that can increase costs. Not only can this improve affordability, but it can also incentivize participation by allowing the subsumed water system to fully relinquish water-related responsibilities.
- Communicate costs and benefits associated with both consolidation and non-consolidation, including rate implications.
- Leverage the planning phase to conduct or update median household income studies and rate studies.
- Use unified rate structures wherever possible.
- Expect that additional participants may want to join in during or after the project is implemented. Plan for expanded capacity in infrastructure design by including T-junctions in areas of potential future service expansion.
- Leverage operations and maintenance funding through the SAFER program to fill fiscal gaps and address affordability concerns for newly consolidated systems.
- Provide templates/best practices for rate setting and dealing with Proposition 218 constraints.

Best practices and recommendations for common challenges:
Coordination and Communication

Challenges	Examples	Current Best Practices	Future Initiatives & Solutions
What are some of the key challenges related to your topic? (One per row)	How does this challenge impede projects? Provide some examples.	What strategies have you or others used to address or help address this challenge?	What else is needed to address this challenge? What do you want to see implemented?
Educating involved parties about process of why agencies, customers, citizens, etc. are involved in the process	Develop plans, consistent messaging	Develop plans, consistent messaging	Develop plans, consistent messaging
Varied interests, while some may be aligned, each stakeholder has unique circumstances	Doing a cost-benefit analysis can be confusing for some	Create a strategy to understand costs and benefits and balance revenue generation vs. revenue generation	More access to communication, open channels and alternative materials
Information asymmetry - no information, some - disinformation, some - misinformation	Project Delays	Regular communication, regular updates, regular meetings, regular communication, regular updates, regular meetings, regular communication, regular updates, regular meetings	Clear project, regular updates, regular meetings, regular communication, regular updates, regular meetings
Lack of alignment or order of authorizations or actions needed to move forward	Project stalled or delayed	Regular communication, regular updates, regular meetings, regular communication, regular updates, regular meetings	Update, regular communication, regular updates, regular meetings
Trade property issues and well concepts - have legal/technical agreements	Delays, costs, failure to build, upgrade, etc.	Regular communication, regular updates, regular meetings, regular communication, regular updates, regular meetings	Clear project, regular updates, regular meetings, regular communication, regular updates, regular meetings
Complexity of project steps	Delays, Dispersive to even start project	Regular communication, regular updates, regular meetings, regular communication, regular updates, regular meetings	Update, regular communication, regular updates, regular meetings
Putting together different services	Harder, slower to get project done	Regular communication, regular updates, regular meetings, regular communication, regular updates, regular meetings	Update, regular communication, regular updates, regular meetings

Participants at the April 2026 Consolidation Convening brainstormed best practices and solutions for common coordination and communication challenges on a poster.

Source: Kristin Dobbin

Lessons Learned

Consolidation has not only benefits, but also limits and tradeoffs

Among the most important lessons we can take away from California's experience with consolidations over the last fifteen years is that, while consolidation is highly effective at addressing key challenges facing water systems, it is not a magic bullet. This is true even when it comes to facilitating access to safe drinking water.¹⁰ According to the 2024 California Consolidation Survey, improved water quality was achieved in 75% of cases. Water supply, in turn, was improved in 74% of cases.¹¹ In other words, water quality and supply improvements are common but not guaranteed. This finding was also supported by subsequent case studies.¹² Key factors influencing consolidation outcomes in this

regard include changing regulatory standards and the degree of capital improvement investments included as part of, or implemented after, consolidation.

Of course, water quality or supply improvements are not the only reasons a system might be interested in consolidation. Many survey respondents reported additional benefits including increased resilience, capacity, customer satisfaction, affordability, representation, and participation. Overall, respondents reported achieving benefits associated with 80% of the motivations for consolidation. Rural water systems and those with pre-existing relationships with the other involved systems were particularly likely to report achieving their goals with consolidation.¹³

As important as acknowledging the potential benefits and limitations of consolidation, it is equally important to acknowledge that consolidation can come with tradeoffs.¹⁴ For example, consolidations can strain a system's capacity both during and after implementation. Consolidation can also increase costs for involved systems and/or increase residential water rates. Identifying potential tradeoffs is an important consideration in planning consolidation projects. Mitigating these tradeoffs — whether with incentives, operations and maintenance funding, staffing support, etc. — can help build support for consolidation and advance successful projects.

The need for both flexibility and consistency

Implementing consolidation projects, regardless of the approach to consolidation, is an exceedingly complicated process and is highly dependent on local context. No two consolidations are the same. As such, the importance of flexibility is one of the most commonly identified lessons learned. Many interviewees emphasized the importance of being flexible and adapting plans as needed, including reworking plans if specific land was not available for purchase or allowing for variances in fire hydrant siting to accommodate uncommon parcel boundaries. Maintaining flexibility can also increase the impact of the project by facilitating the participation of new systems or households during and after construction. Many interviewees and convening attendees also wanted more flexibility in designing, funding, and implementing projects to accommodate unique local needs. This speaks to an important tension between the rigidity of regulatory and funding processes and the fluid nature of consolidation projects. While unlikely to be resolved anytime soon, looking for ways to increase flexibility and build pathways for funding that are less constrained than previous models built for traditional single-entity capital improvement projects will be key to scaling consolidation as a regulatory solution.

At the same time, flexibility must not come at the expense of process clarity and consistency. There is an apparent need for more detailed, accessible information to guide water systems and technical assistance providers through the convoluted consolidation process (e.g., flowcharts, step-by-step check lists). There is also a clear need for more guidance on roles, expectations, and goals related to consolidation. While regulators and policymakers have largely tried to avoid being overly prescriptive, for many, lack of clarity on state goals for consolidation and how to weigh these goals against local priorities has contributed to project delays and frustration. For example, interviewees reported confusion about what constitutes acceptable pathways for consolidation and what benefits need to be achieved to merit state or federal funding. Lastly, many involved with consolidation projects across the state report inconsistencies in the rules and procedures for implementing projects. While some of these inconsistencies undoubtedly arise from variable funding sources and differences among local jurisdictions, others were attributed to unclear policies and variation between project managers. This lack of consistency in implementation not only can cause delays but also limits the ability of water systems, counties, and technical assistance providers who are engaged in many projects to fully leverage their unique advantage of experience towards efficiency.

The perpetually important role of funding

Among the most notable successes in California's recent history of consolidation is the launch of the SAFER program. Established by SB 200 in 2019, SAFER not only prioritized consolidation as a top safe drinking water solution, but also provided a historic influx of funding through the new Safe and Affordable Drinking Water (SADW) Fund with far fewer restrictions than existing sources like the Drinking Water State Revolving Fund. Yet SADW funds have been influenced by shifting political priorities and pressures, creating eligibility uncertainties that can impact projects, which can take years to get to the stage of submitting a funding application. As of 2026, the fund, which was initially funded through 2030, faces the prospect of significant cuts and even zero percent allocations in future years. Over the same period, we have seen a historic influx of federal funding through the 2021 Infrastructure Investment and Jobs Act followed by an unprecedented funding pause and significant federal retrenchment. Thus, there remains a need for a stable, consistent funding mechanism that can provide reliable support to potential projects from conception to construction.

These changes also raise the uncomfortable question of how California can continue to advance the goals of consolidation in an era of limited funding. The large and growing cost of physical consolidation projects only complicates this matter. While seemingly bleak, the prospect of evolving our funding approach to consolidation does offer new opportunities. While existing funding approaches are primarily reactive in nature and focus heavily on regulatory compliance, new models could more fully address priorities among domestic wells and state small systems and foster proactive approaches such as building capacity or resilience.

Advice from water system leaders on navigating the consolidation process:

"You just have to start and adapt. There will be challenges and imperfections which you have to be prepared for. Some are silly like where are we going to park all these trucks now? But you have to just jump and do it."

"Recognize and use the ways in which consolidation can be a political win for politicians if you get them involved."

"It takes time and leadership to integrate different employee cultures. Be patient and persistent."

"The biggest thing is just because it hasn't worked in the past doesn't mean it can't work now."

"Don't give up. If something isn't working, try something else."

"We need to be okay with being uncomfortable because we want to know all the answers and we don't have all the answers. Sometimes you have to look like you don't know what you're doing."

"Put your own personal interests to the side to look at the overarching benefits to everyone."

Policy Recommendations

While the previously described best practices can go a long way to mitigating common roadblocks encountered across the state, more is needed to fully address common challenges. This section details recommendations suggested by water systems, technical assistance providers, and others involved in consolidation efforts across the state to help expedite successful consolidations.

Funding agencies

- Expand technical assistance, particularly for consolidation agreements, system appraisals, and funding applications. Ensure parity with eligible activities under planning grants for technical assistance work plans to avoid the need for planning grants where possible.
- Build in more flexibility to eligibility criteria for grant funding. For example, consider using affordability as eligibility or scaled funding approaches.
- Reduce duplicative and unnecessary requirements and reviews wherever possible within and between projects and adapt requirements to better fit the needs of a diverse array of applicants. For example, only requiring TMF capacity review for receiving systems once every five years or waiving the requirement for an authorizing resolution for Investor-Owned Utilities in which decision-making processes look different than systems operated by local governments.
- Leverage planning funding to advance property acquisition as much as possible by funding due diligence, appraisals, negotiations, and conditional acquisition agreements.
- Explore opportunities to provide minimum funding guarantees to attract and retain willing project applicants and reduce the perceived risk by potential partners.
- Streamline review to expedite projects using the model of the State Water Board's expedited drinking water program. Expand the expedited program and increase access.
- Move towards a more flexible, design-build approach to funding projects that integrates planning and construction.
- Eliminate contractual barriers for funding applicants such as requirements to complete the project if funding is not available.
- Modify eligibility and prioritization criteria to allow for repairs and capital projects ahead of consolidation which, in turn, can facilitate consolidation and address acute system challenges in a timelier manner.
- Create opportunities within the State Revolving Fund to support post-consolidation construction upgrades.
- Fast track consolidations of failing and at-risk systems through expedited review and streamlined application requirements.
- Where already existing, increase consolidation incentives and provide more flexibility in how they are used. Where incentives are not available, introduce them to facilitate the consolidation, especially of failing and at-risk systems.
- Systematically collect data and feedback from grant recipients to improve the funding process.
- Include funding for the purchase and installation of household water meters as part of consolidation grant agreements. This is particularly important for mobile home parks or other projects where master meter connections are used.

Regulatory agencies

- Increase coordination and alignment between agencies, working towards standardized data collection, shared forms, and process compatibility wherever possible (e.g., aligning the time horizons for required financial projections). This should include formal mechanisms for data sharing and communication between divisions and agencies.
- Develop a mechanism to track consolidations across the state regardless of funding source or type of system involved.
- Provide more guidance on system valuation, including valuation for mutual water systems. Develop pathways for third-party or peer review of water valuation studies.
- Standardize processes for assessing and reporting affordability impacts to customers.
- Provide grace periods for compliance deadlines for recently subsumed systems to give receiving systems time to improve record keeping, get familiar with the system, etc.
- Target consolidation outreach to potential receiving systems who are more likely have the resources to support the project rather than potential subsumed water systems.
- Where available, increase use of mandatory consolidation powers. Where not available, look for ways to promote priority consolidations through conditions and incentives (e.g., approval of desired annexation or acquisition contingent on consolidation).
- Develop tools and resources that help coach small systems through the consolidation process.
- Clarify and communicate roles and responsibilities related to consolidation.
- Clarify the goals of consolidation and associated outcome measures.
- Accelerate public outreach and educational efforts to increase public awareness about consolidation, including both the benefits and the process. This could include public workshops, educational materials, targeted outreach, etc.

Counties and LAFCOs

- Include assessments of consolidation feasibility in Municipal Service Reviews and SB 552 drought resiliency plans.
- Look for opportunities to incentivize priority consolidations in line with local priorities.
- Provide information and checklists for the review, permit, and approval process and requirements.
- Coordinate with state regulators during the development of Municipal Service Reviews and transmit finalized documents to all relevant agencies and offices.
- Prioritize securing services from existing water providers in reviewing and approving new development proposals.

Legislature

- Identify and implement solutions for ongoing liability issues hindering consolidation efforts, including liability associated with private property improvements for mobile home parks and other privately operated small systems and liability for receiving systems consolidating systems with compliance challenges (both known and unknown).

- Move towards mandatory individual metering for water services in mobile home parks as is done for electricity and gas services.
- Streamline the process for addressing tax liability associated with consolidation.
- Explore opportunities for policies and programs that reduce deferred maintenance and artificially low water rates among small systems, both of which can significantly impede consolidation projects in a variety of ways.
- Address constraints imposed by Proposition 218 on extending infrastructure and rate setting.
- Adopt a statewide low-income assistance program that could mitigate resistance to consolidation based on affordability concerns.
- Create opportunities for, and incentivize, regional planning that can identify and prioritize potential consolidation projects.
- Expand the State Water Board's mandatory consolidation powers for intractable cases involving failing water systems. Develop complimentary pathways for mandatory consolidation at the local level.
- Expand opportunities for advance payment in lieu of reimbursement (e.g., eligibility, percent of funds provided in advance, etc.).
- Guarantee a stable funding source capable of supporting long-term projects.

Key Opportunities for Scaling Progress

Beyond addressing the common challenges that delay and even prevent consolidations from coming to fruition, there is a clear need to evolve and expand how this work is approached. Even fully implementing all the best practices and policy solutions described previously, consolidations would remain costly and time intensive (and at times, also controversial and inadequate). Are there opportunities to do more with less, reach more communities or reach new communities? Here we identify five promising opportunities for expanding the reach of consolidation.

Regional consolidation planning

The current ad-hoc and piecemeal approach to consolidation planning limits opportunities for efficiency, coordination, and collaboration. However, it doesn't have to be this way. Across the state, there are examples of regional approaches to consolidation planning that can serve as models for a more comprehensive approach (see below). In these examples, we see how regional planning leverages planning funding to prioritize and expedite local projects. In doing so, regional planning also builds local capacity and expertise, facilitates shared learning, and creates networks of support for projects throughout the planning and implementation pipeline.

Achieving regional planning necessitates a regional champion, but this champion need not be the same everywhere. Counties, water districts, non-profits, and many others can fill this role. There are also a variety of formats and venues that planning can proceed through, from task forces to special projects or initiatives. Regardless of approach, there should be a single, unified funding recipient with the capacity to manage or support simultaneous projects.

Identifying the appropriate scale for regional planning is challenging and context dependent. The scale should match the jurisdiction of the relevant convener(s). Where this implicates a

Examples of regional planning



Coachella Valley Water District's Disadvantaged Communities Infrastructure Task Force

The mission of the Coachella Valley Water District Disadvantaged Communities Infrastructure Task Force is to “secure access to safe affordable drinking water, wastewater, and flood control services in historically disadvantaged Coachella Valley regions through strategic planning, funding procurement, needs assessment, and reporting”. First convened in 2017, the primary focus of the Task Force has been the development of a Domestic Water Supply Master Plan and Sanitation Master Plan prioritizing consolidation projects in the Eastern Coachella Valley. To date the effort has received over \$100 million in grants for included projects. This historic investment in this underserved region has been made possible by the unique structure of the Task Force which includes community members as well as representatives of community-based organizations, county agencies, mobile home park owners, and state and local elected officials.



Placer County Water Agency's County-Wide Master Plan

The County-Wide Master Plan (CWMP), first developed by Placer County Water Agency in 2010, is a dynamic project database that supports regional collaboration and coordination by identifying, tracking, prioritizing, and funding water and stewardship project needs across Placer County. In 2019, the CWMP and associated Financial Assistance Program started allowing the submission of projects that meet one or more of the eight project elements, including access to safe and reliable drinking water through voluntary consolidations. To date, these efforts have supported 6 water system consolidations with an additional 3 projects that are in progress and several more under consideration. Ongoing updates have been key to this success. Placer County Water Agency provides technical and collaboration resources for updating the CWMP, while providing the grant resources for planning and project development through the Financial Assistance Program. This is particularly important to support the participation of small, geographically dispersed systems across the county. Outreach is conducted through semi-annual small purveyor meetings held for both the mountain and foothill regions of the county. PCWA also collaborates individually with at-risk systems that may have interest in consolidating into a PCWA system. Communication with these local water systems and government stakeholders has been key for establishing and maintaining good working relationships between the districts and systems.

large area, sub-regions based on geography or key infrastructure can be used to make planning more manageable. Proximity matters not just for physical consolidation but also for managerial consolidation. Potential consolidations should be large enough to ensure economies of scale while also ensuring that staff can reasonably cover the whole region.

Financial and community support are both critical to the success of regional planning efforts. In most cases, dedicated funding is needed to develop a regional master plan and prioritized list of projects. Wherever possible, this funding should be used to initiate the engineering and environmental work necessary to secure construction funding for these projects. In this way, funding regional planning is an investment that can be leveraged to bring in additional funding. Importantly, the most effective regional plans will advance a community-driven vision for the future. As such, bottom-up community engagement through outreach, the involvement of community-based organizations, and ongoing participation of impacted community water systems is essential.

Promoting managerial consolidation and shared service/staffing models

While physical consolidation makes up the vast majority of completed consolidations since 2015,¹⁵ there is keen interest around the state in advancing managerial consolidations and other models of shared services and staffing. There are several reasons for this. First, managerial consolidation and shared service/staffing models have the potential to serve geographically isolated community

water systems without reasonable physical consolidation prospects. Second, lack of technical and managerial staff is a key challenge facing many small systems. Even with physical consolidation, due to size, geographic, and other barriers, many systems will still lack the staffing they need for long-term, sustainable operations. Thus, developing opportunities for systems to partner, whether through full administrative consolidation or more narrow collaborative agreements, is an essential, complementary solution to physical consolidation.

Despite limited implementation of managerial consolidation in the state, there is significant precedent. Many drinking water utilities, including not just Investor-Owned Utilities but also cities and special districts, operate more than one regulated system with distinct public water system identification numbers. Many more have contractual arrangements in which a neighboring system supports their operations. These arrangements are not limited only to medium and large systems. Where they have sufficient capacity, small systems make excellent candidates for receiving systems and/or regional system operators. Examples also abound in other states. In 2023, New Mexico created regional utility authorities to consolidate management among rural systems. In Illinois, the EJ Water Cooperative provides a mix of retail and wholesale drinking water service across 19 counties in addition to contract services like billing, reporting, and water quality testing for nearby systems.

Such models have the clear potential to expand the number of communities participating in collaborative solutions. Because these models avoid costly capital investments to connect systems, managerial consolidations may also be more affordable for residents and less constrained by state and federal funding availability. Importantly, however, the success of managerial and shared service models depends on workforce availability. Thus, growing the water workforce, both certified operators and management staff, especially in rural areas, is essential to its success. Where water systems are failing or suffering from deferred maintenance, capital investments will also likely continue to play an important role to rightsize staffing with operational needs.

Advancing capacity building and information exchange

Capacity is a key constraint limiting California's progress on consolidation across scales. At the system level, limited TMF capacity is often a key barrier that delays, or even prevents, consolidation. In some instances where consolidation is achieved, consolidation can put strain on receiving systems' staffing, finances, and operational capacity in such a way that deters future consolidations. At the regional level, many technical assistance providers are stretched thin by the growing number of projects that can span decades. At the state level, hundreds of simultaneous consolidation projects limit the efficiency of the funding pipeline. Thus, there is a critical need to build capacity to do this work across all levels.

Information exchange has an important role to play in achieving this. Somewhat ironically, despite the fact that many of California's community water systems have completed a consolidation project or



Participants debrief their breakout group discussions at the California Water System Consolidation Convening held in Davis, California in April 2026. Source: Kristin Dobbin

have one in planning or implementation, many feel alone in this work. This sentiment is also common to technical assistance providers and local government staff involved in promoting and supporting consolidation projects; they are often unaware of similar projects happening in other parts of the state. While local projects are unique in their specifics, any challenge a project might be facing has more than likely been faced in some form by another project. In some cases, that other project might have solved the problem or at least found a work-around. That there is a huge benefit to learning from other projects is also clearly demonstrated by the advantages funding applicants and technical assistance providers gain from experience across projects and time. While this expertise should be intentionally cultivated and leveraged, it can also be emulated through information exchange. There is immense opportunity in facilitating people to share consolidation experiences, troubleshoot problems, and build collective expertise. This is the case not only in the planning and implementation of consolidation projects, but also pre-consolidation when hearing examples of how other communities pursued consolidation and to what ends can be enormously influential.

Integrating consolidation with climate resiliency and hazard mitigation efforts

In many California communities, consolidation has been pursued for natural hazard mitigation benefits, including increasing storage and distribution capacity and developing new water sources. Such climate resiliency benefits are among the most common outcomes of consolidation. In the 2024 California Consolidation Survey, more than 50% of respondents reported increased system resilience as a realized or expected benefit of their consolidation project.¹⁶ At the present time, however, it can be difficult to secure funding for proactive consolidations targeting resiliency benefits. Unless drought, fire, or other disaster impacts have already occurred triggering an acute public safety hazard, these projects typically fall outside of the prioritization criteria for public funding given limited resources.

This lack of intentional integration with climate resiliency and hazard mitigation goals is a significant missed opportunity. First and foremost, this approach has limited much needed adaptation in the drinking water sector. Where consolidations are happening, resiliency benefits should not be incidental, but rather integrated into the design of the project to further adaptation needs. Second, climate resiliency and disaster preparedness benefits are an important incentive that can help drive local support for consolidation among both receiving and subsumed water systems and residents. Leveraging this potential by maximizing and messaging these benefits will help to expand the scale and pace of consolidation and further state climate and resiliency goals at the same time.

Finally, consolidation also has an important role to play in emergency management. Across the state, consolidation has played an important role in disaster recovery, particularly from fire and drought. Yet in almost all cases, consolidation planning has only begun post-disaster, often in a piecemeal manner. Imagine what could be accomplished if pre-disaster data collection, mapping, and other planning activities had already taken place and post-disaster there were funding and technical assistance programs ready to systematically support regional recovery efforts that promote future resilience. Given that natural disasters and extreme weather are increasing in frequency under climate change, ensuring that best practices and resources are available to inform efforts at all stages of emergency management is essential.

Further integrating consolidation into climate mitigation and emergency management will require increased multi-agency coordination as well as funding programs that incentivize climate-ready benefits. Rather than achieving this fully through drinking water funding, consolidation should also

be encouraged through climate focused programs as well. This includes those under the direction of the Department of Water Resources and the Strategic Growth Council as well as with state and local emergency services. This will require outreach and education as many of these potential partners have not previously been intimately involved with drinking water policy and may lack awareness of consolidation and its potential benefits.

Incentivizing and empowering local action on consolidation

Thus far, state regulators have played an outsized role in advancing water system consolidations in California. There have been important successes to this approach, but there are also limitations. State agencies alone do not have the capacity to directly facilitate consolidation to the degree that many, including themselves, would like to see. Moreover, many of the key opportunities to advance consolidation fall outside of the jurisdiction of drinking water regulators. For example, many have noted that consolidation could be leveraged as a transitional strategy for water systems with aging staff and board members seeking retirement. Similarly, opportunities for affordable housing or economic development can serve as powerful motivators to pursue consolidation in communities with water capacity limitations.

This points to a need to incentivize and empower local action on consolidation. Counties and LAFCOs will be key to achieving this. Municipal Service Reviews provide regular opportunity to assess a county's drinking water landscape and identify opportunities to improve the quality, efficiency, and sustainability of service delivery. Leveraging these reviews to do this analysis and then ensuring these recommendations are communicated and acted upon provides one path forward locally. Standing drought task forces, now mandatory under SB 552, provide a similar opportunity to identify vulnerabilities and promote action from a hazard mitigation point of view. And general plans, while they do not mandate specific water elements, do necessitate an integrated analysis of the sufficiency of water resources with respect to housing, safety, and environmental justice. Other potential local champions for consolidation include groundwater sustainability agencies, wholesale water purveyors, and regional water districts. Additionally, community-based organizations and relevant member associations can play an important role in identifying potential consolidations and facilitating conversation. This type of integration will not necessarily emerge organically. Rather, there will be need to be active coordination with diverse partners and decision-makers.

Conclusion

California has come a long way in the last fifteen years with respect to water system consolidation. Hundreds of communities have benefited from completed projects, each of which was only possible thanks to the sustained commitment of many people over many years. Learning from these efforts and the experiences of those involved is essential for making the projects that come next year, and the years after, faster and easier, and identifying the gaps highlights opportunities to serve more communities and needs. Focusing on these dual objectives, this report aims to set the stage for the next chapter in California's consolidation efforts by capturing the experiences and recommendations of a diverse array of individuals and organizations involved with consolidation projects from across the state. Future work should build on this effort by facilitating further information exchange among project proponents at the state and local level. It is abundantly clear from this work that there are dozens, if not hundreds, of Californians ready to collaboratively advance solutions and contribute new ideas in this space.

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Lewiston Community Services District's consolidation of Lewiston Park Mutual Water Company

(Trinity County)

Background

Lewiston Community Services District (LCSD) is an independent special district in rural Trinity County. The district was originally formed in 1960 to provide fire services and later expanded its authority to include street lighting and recreation. It wasn't until 2012 that LCSD requested and received authorization to provide water and wastewater services following the district's acquisition of the Lewiston Valley Water Company with 51 service connections. LCSD acquired the company at their request to help address chronic water system deficiencies. Ultimately it was necessary to construct a new water treatment plant and storage facilities, for which LCSD secured grant funding.

Soon after, State Water Resources Control Board approached LCSD about acquiring the Lewiston Park Mutual Water Company, which provided water to 550 customers through 168 service connections. The LCSD board was initially reluctant to take on such a large (by comparison) system which also had significant infrastructure deficiencies but ultimately agreed as part of an arrangement to receive a \$17 million grant to bring their failing wastewater system into compliance.

Construction of an intertie between the two systems began in 2016 and was completed in 2017, funded through Integrated Regional Water Management program. This funding was also used to install two new fire hydrants as well as a flow metering station. Then in July 2018, LCSD formally acquired the Lewiston Park Mutual Water Company system.

Post-consolidation, LCSD once again needed to pursue grant opportunities to replace deteriorating infrastructure in the consolidated system. With funding from the Integrated Regional Water Management program and the Drinking Water State Revolving Fund, the distribution system for the acquired system was fully rebuilt with expanded fire capacity and new fire hydrants. This project was completed in July 2025.



The old Lewiston Bridge across the Trinity River.

Source: Angela Feltes, [Shutterstock.com](https://www.shutterstock.com)

Accomplishments

- ➔ Prior to consolidation, Lewiston Park customers regularly received water boil notices when surface water was drawn from the Trinity River. Consolidation with LCSD eliminated this issue, ensuring a consistent supply of safe drinking water.
- ➔ System upgrades have also improved reliability and efficiency throughout the service area, while increasing resilience to drought and wildfires.
- ➔ LCSD has been highly successful in obtaining grants to make improvements to their water and wastewater systems. In the last fifteen years the district has rebuilt most of its infrastructure including a new water intake, a new treatment plant, new storage facilities, rebuilt distribution lines and a brand-new wastewater treatment plant. Some of these investments were only possible with consolidation given their high costs and LCSD's small number of connections.

Challenges

- ➔ LCSD has struggled to find operators qualified to manage their state-of-the-art facilities. Due to their remote location, LCSD has had to contract out for operators at significant expense to the district.
- ➔ Even post-consolidation, LCSD is an extremely small system (234 service connections). The community is also a severely disadvantaged community. This combination has made it very difficult for the board to keep up with increasing operations and maintenance costs without imposing hardship to residents. Despite rate increases of 3% in 2019, 2020, 2021, 2022, 2023 and 2025, LCSD continues to struggle to cover the cost of operating their system.
- ➔ LCSD cannot afford a general manager, leaving grant and system management to volunteer board members. This, in turn, has caused board member burnout and raised significant concerns about long-term technical, managerial, and financial (TMF) capacity and sustainability. LCSD has reached out to nearby districts about sharing the costs of a general manager, but they have not found a system willing to do so.

“We have a plant that’s first class, no question about that. It just costs so much money to run.”

Key Takeaways

Regional funding programs offer opportunities to fund consolidation projects

LCSD has leveraged state bond funding through their local Integrated Regional Water Management group, the North Coast Resource Partnership, to fund the physical consolidation project and later to partially fund a complete replacement of the consolidated water system's distribution system. Such regional programs, while inconsistently funded, offer technical assistance and grant opportunities with different eligibility and prioritization criteria than statewide grant programs. Often these programs also offer incentives for projects that benefit disadvantaged and severely disadvantaged communities.

Very small consolidated systems may still need operations and maintenance support

Receiving systems can face financial strain trying to balance affordability with sustainability, pointing to the need for proactive planning to cover operation and maintenance costs as part of consolidation agreements and potential, supplemental operations and maintenance funding as part of grant packages. This is particularly true for very small systems acting as receiving systems and systems serving severely disadvantaged communities. In this case, while grants addressed infrastructure deficiencies, LCSD continues to struggle with ongoing costs despite consistently raising their rates.

Capacity investments are as important as infrastructure

Beyond sustainable operations and management funding, to be successful, consolidated water systems need sufficient human capacity to operate effectively. Post-consolidation, LCSD has struggled not just financially but managerially and technically as well. Because they have not been able to afford to hire a general manager, that labor has been done on a volunteer basis by district board members, and the lack of regional operators has caused further challenges. Whether through Technical Assistance programs, investing in regional shared services arrangements, or covering the additional costs of contract labor, there should be plans in place to ensure adequate staffing to sustain the achievements associated with consolidation long-term.

Next Steps

LCSD is continuing to explore options for addressing their staffing needs. The district recently applied for Technical Assistance funds to get additional support in managing the system. PACE Engineering, on behalf of the district, is currently conducting a rate study to potentially further increase rates to cover the district's operating expenses.



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Highlights

Water systems involved (service connections at the time of consolidation)	1. Lewiston Community Services District (Independent Special District): 51 service connections 2. Lewiston Park Mutual Water Company (Mutual Water Company): 168 connections
<u>Consolidation structure</u>	Acquisition
<u>Consolidation type</u>	Physical
<u>Governance of consolidated entity</u>	Independent Special District
Motivations for consolidation	• Lewiston Park Mutual Water Company's groundwater well production was decreasing leading to increased reliance on the Trinity River. Because the system's treatment plant was not sufficient, this led to regular boil water notices • LCSD was seeking additional grant funding to address challenges with their wastewater system and needed a grant that exceeded the State Water Board's \$15 million cap
Concerns about consolidation	• The LCSD board was concerned about the costs and expertise needed to manage a water system that would be 350% larger than their current system
Project Financing	• Integrated Regional Water Management Proposition 84 grant for \$558,000 for the water system intertie project • Later LCSD secured another Integrated Regional Water Management Proposition 1 Round 1 grant for just over \$1M and a Drinking Water State Revolving Fund grant just over \$6M to replace the system's distribution system
Rate impacts for consolidated customers	• <u>Pre-consolidation monthly rate</u>: Unknown. • <u>Current average monthly rate</u>: \$51.63 (approximately 1.2% of area MHI). • <u>Future changes</u>: Another rate study is in progress. Additional rate increases are expected.
Infrastructure Improvements	• The original consolidation project included the construction of a 3,585 foot 10-inch system intertie, flow metering, and valve station and two fire hydrants • Subsequently the distribution system of the consolidated water system was rebuilt including approximately 14,170 feet of water main and appurtenances, 7 new fire hydrants, new AMI water meters, and a new well