

**California's Capacity Development Program:
Report to the Governor**

**In fulfillment of the requirements of
United States Codes Section 1420(c)(3)**

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Executive Summary

In August 2000, the United States Environmental Protection Agency (USEPA) granted approval of the implementation plan for California's Capacity Development strategy. As required by the reauthorization of the federal Safe Drinking Water Act (SDWA) of 1996, each state is required to adopt an overall capacity development strategy in order to access all federal matching funds available through the Safe Drinking Water State Revolving Fund (SDWSRF). Capacity can be defined as those factors in the operation of a public water system that serve to improve the systems ability to operate in compliance with the SDWA on a sustained basis. USEPA has identified three general areas of a water system's operation - those being a water system's Technical, Managerial and Financial capacity (TMF) – that constitute a water system having adequate capacity.

In developing an acceptable plan, USEPA required that a state must address the following areas of concern in their Capacity Development (CD) strategy:

1. The strategy must serve as a control point to assist in preventing the formation of new nonviable community water systems (CWS) and nontransient noncommunity water systems (NTNCWS).
2. The strategy must ensure that systems being provided SDWSRF funds will achieve TMF capacity.
3. The strategy must address how the state intends to identify and assist existing water systems with TMF capacity deficiencies.

The approved California CD strategy meets the guidelines set by USEPA. The California strategy places controls on the issuance of Water Supply Permits to public water systems (PWSs) that ensure all new systems and systems undergoing changes in ownership demonstrate adequate TMF capacity in accordance with Senate Bill (SB) 1307 (Chapter 734, Statutes of 1998) and Health and Safety (H&S) Code Section 116540(a). The State's strategy ensures through the SDWSRF process that only projects meeting California's TMF capacity guidelines are funded. The strategy also includes mechanisms to assist all systems in assessing and improving their TMF capacity.

California is well into implementing key elements of its CD strategy. Legislation has been passed and signed into law, which provides the control point necessary to prevent the formation of new, nonviable systems or change in ownership that may result in a system having inadequate TMF capacity. SDWSRF applicants are completing, and the Drinking Water Program (DWP) is reviewing, the TMF capacity documentation submitted for proposed projects with application packages from PWSs. Through a combination of funded staff positions and contracts with third-party assistance providers, assistance is being provided to existing PWS to improve their TMF capacity.

As part of its strategy, the DWP in the State is actively assessing and monitoring its overall CD strategy to insure that it is meeting the goals set by USEPA. As necessary, elements of the California program will be updated to ensure that they remain effective, are measurable, and result in overall improvements in the ability of a PWS to operate in compliance with the SDWA.

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I. Introduction

Under provisions of United States Codes (USC), Section 1420 (c) (3), each state receiving Safe Drinking Water State Revolving Fund (SDWSRF) monies is required to submit a triennial report to the Governor, detailing their states Capacity Development (CD) program, and that program's accomplishments. The first Governor's Report must be completed by September 30, 2002, with subsequent reports due every three years thereafter. Failure to complete the required Governor's Report can result in USEPA's withholding of up to 20 percent of each year's SDWSRF Capitalization Grant. In California, the State's SDWSRF program resides within the Department of Health Services (DHS), Division of Drinking Water and Environmental Management (DDWEM). DHS is also delegated State Primacy by USEPA for enforcement of provisions of the federal Safe Drinking Water Act (SDWA).

This document represents the first Governor's Report for the CD program in California. It is intended to: provide details of the Drinking Water Program (DWP) in California; detail the development of California's CD strategy; and document the progress that has been made in implementing this strategy.

II. Background

A. A Brief History of California's Drinking Water Regulatory Program

California's DWP has its roots in the early history of the state. The State Board of Health was created by the Legislature in April of 1870, in response to a number of major disease epidemics, including such waterborne diseases as typhoid fever and cholera. The creation of the State Board of Health represented only the second such official state health agency in the United States at that time. By 1913, in response to the continued impact of waterborne disease outbreaks on Californians, the Board of Health secured the services of Professor C. G. Hyde of the University of California at Berkeley, as its first sanitary engineer. Due to the success of this sanitary engineering program, the legislature established the Bureau of Sanitary Engineering, within the Board of Health, in 1915. In that same year, the legislature enacted its first water and sewage permit laws, and charged the Bureau of Sanitary Engineering with its enforcement.

Beginning in 1946, California adopted and began enforcing the Recommended Standards for Drinking Water - guidelines established by the United States Public Health Service (USPHS). These standards were updated again in 1962 to reflect revisions to

SDWA Definitions:

"Public water system" is a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

"Community water system" is a public water system that serves at least 15 service connections used by year-long residents or regularly serves at least 25 year long residents of the area served by the system.

"Nontransient Noncommunity water system" is a public water system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year.

"Transient Noncommunity water system" is a noncommunity water system that does not regularly serve at least 25 of the same persons over six months per year.

USPHS recommended standards. In 1974, Congress passed the original SDWA – that mandated national drinking water standards. By 1977, California had adopted the SDWA and had been granted primacy under rules adopted by the USEPA.

Historically, California has been a leader in addressing drinking water issues and has frequently led the way nationally. Under the original interim primary drinking water standards adopted by USEPA, water systems using groundwater monitored their sources for a small number of inorganic chemicals (i.e. heavy metals, nitrates, and fluoride). Systems using surface water were monitored for the same inorganic chemical contaminants and a short list of herbicides and pesticides that were of concern. By 1979, with the discovery of the pesticide dibromochloropropane (DBCP) in public water wells, DHS recognized that California's public water supplies might be at risk to a wider realm of pesticides, herbicides, and other synthetic organic chemicals than were covered under the federal SDWA. In response, Assembly Bill (AB) 2407 (Chapter 1015, Statutes of 1980) was adopted mandating that the DWP study the impact of these chemicals on drinking water supplies, as a result, DHS adopted 40 action levels for chemical contaminants between 1980 and 1983. In 1983, the legislature funded, under the provision of AB 1803 (Chapter 881, Statutes of 1983), an extensive groundwater monitoring program to determine the occurrence of synthetic organic contaminants in drinking water supplied by the public water systems (PWSs) of the state. In response to what had been learned from AB 2407 and with the results obtained from AB 1803 monitoring, California adopted its first, state-based, Maximum Contaminant Level (MCL) standards for drinking water in 1985. It was not until the first few years following the reauthorization of the federal SDWA in 1986, that USEPA began adopting MCLs for many of the contaminants already addressed by California laws and regulations.

DHS continues to actively protect the health of Californians who rely on PWSs for their source of water by responding to new contaminants. In recent years, DHS has taken steps to protect California's drinking water supplies from newly recognized contaminants such as Methyl-Tertiary-Butyl-Ether (MTBE), Perchlorate, N-nitrosodimethylamine (NDMA), Uranium, and 1,2,3-Trichloropropane.

In 1989, the Legislature passed and the Governor signed AB 21 (Chapter 823, Statutes of 1989), which established requirements for the setting of Public Health Goals (PHGs) and required that DHS complete a comprehensive report to the Legislature on the status of the DWP. The final report, "**Safe Drinking Water Plan for California,**" outlined a number of important issues that faced the DWP. California is a populous state, which receives rainfall that is unevenly distributed across the state. A majority of Californians – approximately 95 percent of the

Year	High	Low	Average	Median
1991	\$60.20	\$5.80	\$19.84	\$18.45
1993	\$51.80	\$6.00	\$21.92	\$21.24
1995	\$80.35	\$6.00	\$24.18	\$24.00
1997	\$80.35	\$6.00	\$24.18	\$24.00
1999	\$91.24	\$5.97	\$27.04	\$26.87

state's population – get their drinking water from PWSs. Of this, nearly 70 percent of the population served by PWSs rely on surface water supplies, which are often moved great distances from their point of origin (e.g., Hetch Hetchy, Feather River, Sacramento River, Colorado River, Owens Valley, etc.) to meet the needs of the state's major

population centers. One finding of the report was that considering the relative scarcity of water in California and the true costs of providing drinking water, drinking water is an undervalued commodity. Historically, monthly water rates across the state are frequently less than the typical household pays for cable TV service. It was observed that this has had a profound impact – particularly in the smallest utilities – on their ability to respond to contamination problems or even to replace their aging infrastructure. Such systems were not “viable” and were unable to provide safe drinking water to their customers on a sustained basis. While these nonviable PWSs serve less than two percent of the population, they represent a major regulatory cost due to their inability to continuously meet drinking water standards.

By the early 1990s, in recognition of the impacts of nonviable water systems on the regulatory program, the Legislature had instituted several changes as to who could be issued a “Water Supply Permit.” First, requirements were enacted that forbade the issuance of permits to certain Mutual Water Associations formed under provisions of Title 3 (commencing with Section 20000) of Division 3 of the Corporations Code. This class of systems had been found to present a major compliance problem in DHS’ existing inventory of PWSs and lacked sufficient organizational structure to insure their continued viability and compliance with drinking water requirements. Secondly, requirements were enacted that required DHS to review the financial and technical abilities of an applicant during the permit application review process.

B. History of Public Water System Infrastructure Improvement Programs in California

Similar to California’s history in protecting drinking water supplies is its history of financial assistance to PWSs in order to enable them to respond to contamination issues and to replace aging infrastructure. In 1976, only two years after the federal adoption of the SDWA and one year before DHS received primacy from USEPA, California passed its first State Drinking Water Bond Law (SDWBL). This bond act provided \$175 Million for improvements to California PWSs. Information on infrastructure bond acts is shown below:

Safe Drinking Water Bond Acts	
Bond Law	Amount Authorized
• SDWBL of 1976	\$ 175 Million
• SDWBL of 1984	\$ 75 Million
• SDWBL of 1986	\$ 100 Million
• SDWBL of 1988	\$ 75 Million

C. 1996 Reauthorization of the Federal Safe Drinking Water Act

In 1996, Congress completed its second, ten-year, reauthorization of the SDWA. Included in the 1996 amendments were provisions for the first program for drinking water infrastructure improvements adopted at the national level – the SDWSRF program. Federal monies from this program were provided to each state through an allocation formula based on a survey of each states’ infrastructure needs. States

receiving funds were required to provide a 20 percent match to the federal monies allocated. USEPA had many years of experience with Clean Water State Revolving Fund (CWSRF) programs (used to address wastewater infrastructure needs) and the SDWSRF program requirements include a number of refinements based on the lessons USEPA learned in that program.

The principal intended use for SDWSRF monies was to fund a loan program to finance PWS infrastructure improvements. In addition, Congress allowed states to take a number of set-asides

Federal Funding Year (A)	Capitalization Grant (B)	Set-Asides (C)	State Match (D)	Loan Fund (B-C+D)
1997	\$75,682,600	\$12,411,946	\$15,136,520	\$78,407,174
1998	\$77,108,200	\$4,934,925	\$15,421,640	\$87,594,915
1999	\$80,816,700	\$5,172,269	\$16,163,340	\$91,807,771
2000	\$83,993,100	\$5,375,558	\$16,798,620	\$95,416,162
2001	\$84,525,400	\$5,916,778	\$16,905,080	\$95,513,702

to fund various DWP activities that were intended to benefit PWSs in other ways. The states were encouraged to take some of these set-asides or to adopt other regulatory requirements in order to avoid the mandatory withholding of significant portions of the federal capitalization grant. In the case of the DWP, set-asides were taken to: 1) administer the SDWSRF program; 2) fund a Source Water Assessment and Protection (SWAP) Program; 3) fund the CD program; and, 4) fund the small water system technical assistance (SWS-TA) program.

The SWAP program set-aside funded the DWP in the development of the means to delineate protective zones around drinking water supplies and to assess the impact of potentially contaminating activities within those zones. In addition, the SWAP set-aside included monies that could be used to fund source water protection activities by PWS – in order to protect their sources from outside activities. The CD program was designed to develop criteria that could be used to assess a water system’s technical, managerial, and financial (TMF) capabilities – also known as TMF capacity and discussed in more detail below. The SWS-TA program was intended to provide direct assistance to small PWS (SWS), serving less than 10,000 people in addressing TMF capacity deficiencies in their systems. The DWP also expanded its existing operator certification program (i.e., Certified Water Treatment Plant Operators) to include a new class of Certified Distribution System Operators, so that all Community Water Systems (CWS) and Nontransit Noncommunity Water Systems (NTNCWS) had a certified operator. This was required to avoid USEPA’s withholding 20 percent of the DWSRF capitalization grant. This USEPA requirement was intended to increase the technical capacity of all water systems in meeting drinking water standards.

D. Background and History of Capacity Development in California

Since mid-1980, there have been dynamic changes that have placed strains on water systems of all sizes – but, in particular smaller utilities. First, many of the laboratory analytical techniques were undergoing a major technological revolution, as more

contaminants were detected at much lower levels (i.e., trihalomethanes (THMs) and volatile organic chemicals (VOCs)). Secondly, the work of epidemiologists and toxicologists was resulting in a greater appreciation of the public health impacts of many more drinking water contaminants. Many of the long-held beliefs regarding the vulnerability of groundwater to contamination or the mechanisms for the transport of organic chemical contaminants through soil were re-examined or abandoned, as contaminants could be better identified and their concentrations determined. All these issues have resulted in increases in the monitoring required of all PWSs, and where contaminants have been found, the additional burden to treat their water. As mentioned, California's climate is such that clean water is a precious and sometimes scarce commodity. Unfortunately, population growth has occurred in areas of the state where water supply is inadequate. The water often falls as rain far from where it is needed or is impacted by the activities of man. Due to the mild climate and historically good economy, California has attracted a large population influx over the last 75 years. The climate, soils, and water have also made it an agribusiness powerhouse. Due to an abundance of raw materials and available labor, California is also a major manufacturing and business center. Overall, California has the fifth largest economy in the world. Increasingly, the incremental impacts of these activities are affecting the quality of the drinking water supplies of the State. The availability of what were once termed "pristine" water supplies has been replaced with the recognition that an ever increasing number of water systems now utilize some degree of treatment in order to be considered safe.

Analysis of California PWSs by type and size:	
Type and Size of PWS	Number of PWS
Community, serving greater than 3,300 customer connections (greater than ~ 10,000 people)	391
Community, serving 1,000 – 3,300 customer connections (~3,300 to 10,000 people)	286
Community, serving 200 – 999 customer connections (~700 to 10,000 people)	438
Community, serving under 200 customer connections (less than ~ 700 people)	2,136
Nontransient, Noncommunity (serving schools, places of employment, etc.)	1,493
Transient, Noncommunity (serving rest-stops, campgrounds, gas stations, etc.)	3,243
Total PWSs	7,987

The costs of increased water quality surveillance and/or the costs of treatment impacts all PWSs. In the case of larger utilities, these are somewhat mitigated by the economies of scale they achieve through their customer base and the ability to take advantage of cost effective treatment solutions. On the other hand, smaller utilities have a smaller customer base and passing

along monitoring costs can have significant impacts. In addition, smaller utilities often face high capital operations, maintenance, and process monitoring costs. In treating their water, they often cannot achieve economies of scale due to the fixed minimum capital cost to purchase a given technology, the inability to take advantage of bulk purchases of treatment chemicals, and labor cost to provide adequate process oversight.

Smaller utilities simply do not produce the amounts of water necessary to achieve the efficiencies that the best available treatment technologies can afford a larger system with economies of scale. The majority of PWSs in California serve 200, or fewer, customer service connections (generally populations that are less than 700 persons).

Many of these systems lack professional management and operations staff for their water systems. Instead, they rely on homeowners and volunteers to handle management, operations and maintenance issues that arise in their water systems. In many cases, paying the electric bill for the well can be a matter of “passing the hat” among the homeowners. Where a system has set a water rate (usually a flat monthly charge), the charges are usually inadequate to cover the true costs of providing drinking water. Most rates do not factor in monies for financial reserves, capital improvements, or planned replacement of critical infrastructure (pipes, pumps, storage tanks, wells, etc.) or emergencies. SWSs often have inefficient pumps, which result in higher electric costs. Other SWSs are not diligent in collecting monies owed from customers for the water.

Coupled with deferred preventative maintenance on critical infrastructure, many smaller utilities are unable to respond when the inevitable infrastructure failures occur. Systems may develop significant leaks in distribution pipes or storage tanks because the system is unable to either identify and repair locations where water is being lost or cannot afford the cost for replacement or repair. This results in higher costs to the utility to pump additional water that never reaches a customer. With most customers on a flat rate, there is little incentive for users to conserve water and no mechanism where the water system can account for their water loss.

As mentioned before, California first embarked on addressing these “viability” issues in the early 1990s. At that time, the major emphases were statutory and regulatory requirements intended to prevent the formation of new, nonviable PWSs. As defined at that time, “viability” was considered to be achieved when a new PWS was able to adequately demonstrate that they had the financial and technical means – or “capacity” – to operate a water system in compliance with drinking water standards. The laws and regulations were not intended to directly address systems already in existence.

With the 1996 reauthorization of the federal-SDWA amendments, an additional element was added to the concept of system viability – that of managerial capacity. The original concepts of technical and financial viability as practiced in California, were also expanded, enhanced, and renamed.

Definition:

A public water system is deemed to have capacity when it has the technical, managerial, and financial capabilities to operate its water system on a sustained basis, in compliance with the Safe Drinking Water Act and providing water to its customers which is safe, wholesome, and potable at all times.

The new overall concept was termed TMF capacity. The process by which PWSs meet TMF capacity, in turn was called CD. Under provision of 1996 amendments, states taking SDWSRF capitalization grants were required to develop a comprehensive CD plan. USEPA developed minimum program guidelines and required that each state’s plan be approved. States were allowed take a number of approaches in how they developed their CD programs, based on programs they already had in place and on their specific legal and political environment. However, as a minimum, USEPA required states to address the following core issues:

1. The state's plan must ensure that no new, nonviable community or nontransient noncommunity water systems (i.e., systems lacking TMF capacity), were created.
2. The state's plan must ensure that systems receiving SDWSRF funds would be able to meet TMF capacity requirements when they completed their projects.
3. The state's plan must address the needs of existing PWS in achieving capacity.

In particular, the second goal listed above requires some explanation. USEPA, through its prior experience in the CWSRF program for wastewater projects, had seen a number of instances where communities had projects funded to correct wastewater discharge violations. These communities then returned for additional monies. In examining these cases, USEPA discovered that many of these communities lacked the TMF capacity to operate wastewater systems on a sustained basis. In some cases the problems were due to the installation of a technology that was beyond the technical expertise of the community to operate. In others, it was due to allowing infrastructure to deteriorate or to the deferral of routine maintenance, which caused problems to reappear as equipment aged. Learning from this experience, USEPA stressed that PWSs participating in the SDWSRF loan program must be adequately prepared, through addressing TMF capacity deficiencies, to operate their system on a sustained basis - in other words to be able to operate and maintain infrastructure improvements from that point forward.

III. Developing California's Capacity Development Strategy

A CD strategy is a method for identifying PWSs most in need of TMF capacity improvement and the identification of those factors that encourage or impair CD. The 1996 amendments require a state in its CD strategy to 1) describe how it will assist PWSs to meet primary drinking water regulations, 2) how it will encourage partnerships, and 3) how it will assist in the training and certification of operators. A state must also establish a means to measure change in TMF capacity and to identify PWS needing to improve their TMF capacity.

DHS is responsible for the development of a program to encourage CD in the PWSs of California. The overall goal of the program is to increase the ability of PWS operators, managers and decision-makers to consistently operate, maintain and manage their PWSs in a manner that protects public health. The USC Section 1420, (c)(2)(A) requires states to develop methods and criteria to identify and prioritize PWSs in need of TMF capacity assistance. The DHS has identified five sources of information to achieve this requirement. The sources identified are 1) data on water system violations, 2) information developed through PWS compliance inspections, 3) PWSs on the State Revolving Fund Project Priority List, 4) referrals by DWP staff and Local Primacy Agency (LPA) staff familiar with the PWS (LPAs are local health jurisdictions delegated authority by DHS to operate small water systems (SWS) programs. SWS

Small System Interagency Outreach Committee (SSIOC) Background:

SSIOC was established by USEPA Region 9, as a means to coordinate training outreach to Small Water Systems. Membership consist of: USEPA Region 9; DHS-DDWEM; California-Nevada Section, American Water Works Association (AWWA)-Small Systems Committee; Rural Community Assistance Corporation; California Rural Water Association; Sacramento State University - Office of Water Programs; Water Solutions; and, USDA Rural Utilities Services.

programs regulate PWSs with less than 200 service connections), and 5) the size of the PWS. This information was used to develop an Assistance Referral List (ARL). DHS will use and periodically update the ARL in order to prioritize systems that are in need of technical assistance to achieve TMF capacity. The California CD strategy was required to be submitted to USEPA by August 5, 2000, to prevent withholding up to 10 percent of a states capitalization grant allotment. The purpose of the strategy is to outline how the state will effectively use the resources and legal authority of DHS to achieve the objectives of the SDWA and augment their existing public water system regulatory program.

By using SDWSRF set-aside funds authorized under the SDWA, the DHS intends to assist PWSs in acquiring and maintaining TMF capacity. The CD strategy describes how DHS will assist PWSs to meet this challenge and to guide them in integrating these new program elements with the existing PWS regulatory program.

In 1997, DHS assembled an Ad Hoc Capacity Development Committee to oversee the development of the CD strategy. The committee solicited input from industry, state and local regulators, and an existing Small Systems Interagency Outreach Committee (SSIOC). After receiving comments and direction, the strategy was placed in final draft and presented at an American Water Works Association (AWWA) California Nevada Section Conference and at the California Environmental Health Association (CEHA) Annual Educational Symposium. The comments from stakeholders, regulators and drinking water industry attendees were solicited and evaluated for incorporation into the California CD strategy.

DHS also sponsored public meetings throughout California on the CD strategy. Meetings were held in the cities of Santa Rosa (Northern California), Lodi (Central California) and San Marcos (Southern California) – with two meetings being held in each location. Comments and suggestions were gathered from these meetings and where appropriate, were incorporated into the strategy. The comments and responses received are included in the strategy.

The CD strategy focused on assisting PWSs in acquiring and maintaining TMF capacity. The strategy was submitted to USEPA Region 9 in August 2000 for review and was subsequently approved. The CD strategy was posted on the DHS website in August of 2000, along with information on how to submit comments. To date DHS has only received question on the TMF capacity forms and requests for assistance, but has not received any comments on the strategy. Throughout the implementation process, DHS continues to solicit input from the State's technical advisory committee, interested stakeholders, and the public.

DHS intends to use multiple tools to establish a means for measuring improvement. These tools will include compliance information (violations), number of systems with certified operators (i.e., Water Treatment Plant Operators and Distribution System Operators), the number of systems receiving technical assistance visits, the number of TMF capacity assessments completed, and systems with completed operations plans and emergency/disaster response plans. The technical assistance program maintains

records and information on this "Baseline" information. It is expected that it will take at least five years for meaningful trends of information, demonstrating the efficacy or failures of the current program, to become apparent. However, once this information is available, it will help guide the allocation of resources based on the areas where the greatest improvement is needed.

A. Preventing the formation of Nonviable Public Water Systems

The advent of the 1996 amendments introduced some changes to the existing requirements for PWS viability in California. The main impacts of these changes were to expand and make more specific the process that was already operating in California. In the years since adoption of California requirements for systems to be technically and financially viable, a good deal had been learned about why small PWSs fail. As mentioned previously in issuing guidance for use by the states in developing their CD plans, USEPA identified three core areas to be addressed - those of TMF Capacity. A specific concern expressed by USEPA was that states must prevent the formation of new CWSs and NTNCWSs lacking TMF capacity. Under existing state law, H&S Code Section 116540 (b)) California had already stopped the formation of new Mutual Water Associations – a type of water system previously found to have serious TMF capacity deficiencies. In coming up with a means to assess the TMF capacity of all PWSs, DHS identified a number of information items or key indicators of system capacity for use in the evaluation process. Evaluation of these individual elements could be used to help demonstrate the capacity of a system or to improve the PWSs ability to operate on a sustained basis.

In conforming to the 1996 SDWA amendments, the state continued the process of requiring PWSs to demonstrate technical and financial viability. The water supply permit was identified as the control point to prevent the creation of new, nonviable water systems. In continuing this process, the legislature included some requirements that went beyond the federal mandate. Included in California Law were requirements that all new PWS demonstrate TMF capacity (instead of only CWS and NTNCWS as required by USEPA) and that systems undergoing changes in ownership demonstrate that they could meet TMF capacity requirements (not required under USEPA's guidance). In implementing these state requirements, DHS took a tiered approach which made specific parts of the TMF capacity assessment mandatory, necessary, or recommended (see definitions in the box), depending on the type of system and whether it was new or existing. In addition, some elements were determined to have little or no relevance to the TMF capacity of specific types of systems – mainly for noncommunity water

H&S Code §166540 (b)

No permit under this chapter shall be issued to an association organized under Title 3 (commencing with Section 20000) of Division 3 of the Corporations Code. This section shall not apply to unincorporated associations that as of December 31, 1990, are holders of a permit issued under this chapter

Definitions:

Mandatory: Must be done prior to issuance of permit.

Necessary: To be done in a specified time frame (compliance schedule), or can be a permit condition.

Recommended: Compliance with element is considered "good practice" and encouraged, but not required.

systems- and were thus not required. Reflecting the basic mandate contained in the federal requirement to prevent the formation of new nonviable CWSs and NTNCWSs, most of the specific TMF capacity elements have been made “Mandatory” for CWS and must be fully documented at the time the application for permit is made. Since the existing California laws governing the issuance of water supply permits give DHS wide authority to set enforceable conditions, a number of TMF capacity elements have been identified as “Necessary” and PWS are able to complete these on a schedule mutually agreed to by the PWS and DHS. The “Necessary” items typically include various plans to address the long term needs of the PWS. Most commonly, these requirements are included as a condition of the operating permit, although other legal mechanisms can be used (e.g. compliance orders). By either of these processes, the new PWS has additional time to develop these TMF capacity elements, which are intended to assist in their long term viability. At the same time, DHS can be assured that the PWS will complete these items through the ability to enforce the schedule contained in the order or permit condition.

The following table details the required TMF elements for various types of systems and permit actions.

TMF Requirements:	Community		Noncommunity	
	New Systems	Changes of Ownership	New Systems	Changes of Ownership
Technical Capacity				
1. System description	Mandatory	Necessary	Mandatory	Mandatory
2. Source capacity assessment	Mandatory	Necessary	Mandatory	Recommended
3. Technical evaluation:				
Consolidation feasibility	Mandatory	Necessary	Mandatory	Mandatory
Water Works	Necessary	Necessary	Mandatory	Recommended
4. Operations plans	Necessary	Necessary	Necessary	Necessary
5. Certified/qualified operators	Necessary	Necessary	Necessary	Mandatory
6. Training plan	Necessary	Necessary	Optional*	Optional*
Managerial Capacity				
7. Ownership	Mandatory	Mandatory	Mandatory	Mandatory
8. Organization	Mandatory	Mandatory	Mandatory	Mandatory
9. Water Rights	Mandatory	Mandatory	Mandatory	Mandatory
10. Planning	Mandatory	Recommended	Optional*	Optional*
11. Emergency/Disaster Response Plan	Necessary	Necessary	Necessary	Necessary
12. Customer Service Policies	Recommended	Recommended	Optional*	Optional*
Financial Capacity				
13. Budget Projection	Mandatory	Mandatory	Mandatory	Mandatory
14. Reserves	Necessary	Recommended	Optional*	Optional*
15. Capital improvement plan	Mandatory	Necessary	Optional*	Optional*
16. Budget control.	Necessary	Necessary	Optional*	Optional*

Note: * Since most Noncommunity Water Systems are commercial facilities, there is not a compelling need to insure their long-term viability, as there is with CWS. The TMF criteria above reflect that difference and only make individual elements "Mandatory, Necessary, or Recommended", that may directly affect the water systems ability to provide safe drinking water.

Once the applicability of the individual TMF capacity elements to the permit process was established by the Capacity Development Committee, DHS convened an internal working group to update and revise its Public Water Supply Permit Policy and Procedure Manual. While this process was underway, PWSs applying for new permits or changes in ownership were required to complete the TMF capacity documentation and have it evaluated prior to issuance of a water supply permit. Work was completed and the updated Public Water Supply Permit Policy and Procures Manual was issued to DWP staff and LPAs in January 2002.

The DWP requires District Engineers and LPAs to submit TMF capacity assessments, and their staff evaluations of these documents to the DWP Headquarters (DWP-HQ) for review. The information submitted is reviewed and compiled by DWP-HQ's staff for internal use and for review by USEPA during their annual SDWSRF program evaluation. In addition, DWP-HQ staff in conjunction with the Capacity Development Committee, continue to review and closely monitor the overall TMF capacity process. As needed, changes are made to forms, evaluation sheets and guidance documents to ensure that the information provided is relevant, accurate, and easily understandable. On a long term basis, the DWP will be monitoring new PWSs to determine if there is measurably improved compliance or improvements in sustainability (i.e. the ability to better maintain system infrastructure and address system needs).

B. Assuring that Safe Drinking Water State Revolving Fund Projects Result in the Public Water Systems Demonstrating Technical, Managerial and Financial Capacity

TMF capacity assessment forms and instructions are provided when a PWS is invited to submit an application to the SDWSRF loan program. The PWS is instructed to fill out the form submit it with the application. The assessment form includes "mandatory" items and "necessary" items. The timeframes for the completion of "necessary" items are generally determined by a combination of factors including the complexity of the water system, the compliance history of the water system, DHS knowledge of the water system, and the water system's ability to provide complete information as requested to the department in a timely manner. The applicant must provide enough information for each of the TMF capacity elements to assure DHS that the water system has capacity in each TMF capacity element (if mandatory) or that the water system can obtain capacity within a given timeframe (if necessary) or that the project will allow the system to obtain the capacity for each of the TMF capacity elements.

On submission of the PWS loan application, DHS will review the application within thirty (30) days. This is a cursory review to determine if the application contains enough information to begin a detailed review. If there is sufficient information provided, a letter

is sent to the applicant stating the application is “complete.” If information is lacking, a letter is sent to the applicant that outlines deficiencies and the information that needs to be submitted. The applicant must provide this information in order for the application process to move forward.

Assistance can be requested by the water system to help prepare the application and/or any of the forms that are required to be submitted as part of the loan process. This assistance will be provided through DHS field staff, DWP-HQ technical staff or third party contractors. In all cases, the water system applicant must provide the information. In most cases, assistance to the PWS consists of placement of the information in the appropriate places in the application package in the proper format.

As part of the application process the applicant is asked to look at all of the alternatives that can potentially solve the PWS problems, including consolidation with other PWSs in close proximity. Each alternative is carefully looked at both financially and practically to determine the most cost effective, long-term solution based on water system and regulatory needs.

C. Developing a Technical Assistance Program to Improve the Technical, Managerial and Financial Capacity of Existing Systems

There are three categories for PWS that use the TMF capacity assessment forms, aside from the SDWSRF program. The first category would be an existing PWS that is undergoing a change of ownership. As mentioned in a previous section, state law requires PWSs that change ownership to demonstrate that they have adequate TMF capacity prior to being issued a new water supply permit. The second category would be as a result of an enforcement action or a request by DHS. If DHS has evidence that a PWSs violation was related to a lack of capacity in a particular area or the system did not respond appropriately because of a lack of capacity, DHS can request or order the PWS to demonstrate capacity in specific areas. The third category would be those PWSs that voluntarily conduct TMF capacity assessments. Although DHS would like to be able to provide individual assistance to all water systems, this is not possible due to limited resources.

The small water system technical assistance (SWS-TA) program prioritizes PWSs based on health risk, reason for assessment, and the size of the system. If any PWS needs assistance, they can request to be placed on the ARL by their local enforcement agency. The system will receive assistance based on its ranking on the ARL and the availability of DHS staff and third party contractors.

Additionally, DHS works with a number of nonprofit organizations that will provide assistance to PWSs that fall into those cases of voluntary or “required” TMF capacity assessments. One of the services provided by a third party contractor is to maintain a statewide training list on their website. They post training dates, locations and subjects from several organizations including TMF capacity trainings sponsored by DHS. These trainings are open to any water system that would like to attend (trainings are limited by the size of the facility). DHS has a third party contract for development of training

“modules” that will be made available to remote systems that are unable to attend these group trainings. There are also several Internet courses under development to help these systems.

As DHS receives feedback from the PWSs that have completed the TMF capacity process, DHS will revise and direct resources to those areas that have the greatest beneficial impact.

IV. Accomplishments of California’s Capacity Development Strategy

DHS has developed and is now implementing a strategy to assist PWSs in acquiring and maintaining TMF capacity. In the strategy DHS has (1) defined program goals and objectives, (2) defined a set of steps to be taken to achieve each objective, (3) defined an overall program implementation plan, and (4) defined a program evaluation and improvement plan which describes how the state will establish a baseline and measure improvement in capacity. In this strategy a number of goals and objectives were developed for the TMF Capacity program. The following contains a list of the identified tasks and their status:

Task No.	Description of task	Status of task
1.	Conduct a review and evaluation of TMF capacity assessments conducted on projects that have been funded under the SDWSRF program. Submit findings to USEPA.	Completed in Annual Report to USEPA
2.	Conduct an additional public participation workshop. This workshop will be conducted by the Rural Community Assistance Corporation in conjunction with Department staff.	Completed 6 workshops by August, 2000. (see section IV. Developing California’s Capacity Development Strategy)
3.	Perform an evaluation of TMF capacity assessments completed for new PWSs from October 1, 1999 to September 30, 2000. Submit findings to EPA.	Completed; Annual EPA Report
4.	Prepare a baseline report measuring program progress using the criteria identified in the strategy.	Ongoing (see additional information in this section)
5.	Complete revisions to Permit Policy and Procedures Manual. Distribute the Manual to all Districts and LPAs.	Completed in 2001. (see section IV (B))
6.	Provide training for staff of both Districts and LPAs on the Policy and Procedures Manual to help build consistency and thoroughness statewide.	Completed initial staff training: Ongoing. (see section IV (C))

Task No.	Description of task	Status of task
7.	Provide updated training for staff of both Districts and LPAs on the TMF capacity program to help build consistency and thoroughness statewide.	Completed: Ongoing. (see section IV (C))
8.	Complete an updated report on the status of the key findings from the AB 21 report.	Completed and undergoing Departmental review.
9.	Hold quarterly meetings with the DHS' Capacity Development Work Team to review program progress and make decisions on program implementation	Ongoing. (see section IV (C))
10.	Hold quarterly meetings with a technical advisory committee to discuss implementation of the strategy and any revisions to the strategy.	Ongoing

The CD strategy required DHS to develop TMF capacity criteria. Based on guidance provided by the USEPA, experience gained in DHS's regulatory program, input from LPAs, the experiences of other states and substantial input from a stakeholders group including a technical advisory committee comprised of representatives from a wide range of stakeholders, these criteria were developed. The performance criteria are used to help determine whether a system has adequate TMF capacity. Based on these criteria, DHS developed TMF capacity self assessment forms and staff evaluation forms to be used to assess and document the TMF capacity of PWSs. These forms are currently being used to carry out the program in California and are posted on the DHS website (<http://www.dhs.ca.gov/ps/ddwem/>).

DHS began implementation of elements of the TMF capacity development program on January 1, 1998, when state regulations became effective requiring that all PWSs changing ownership demonstrate adequate TMF capacity in order to obtain a water supply permit.

DHS has established a Technical Assistance program to help carry out the goals and objectives of the CD strategy. Set aside funds from the SDWSRF have been and will continue to be used to provide additional in-house technical staff assistance and to contract with third party contractors to provide services to SWSs. The primary goals of the SWS-TA program are 1) reducing the instances of noncompliance with drinking water standards and requirements, 2) establishing and assuring safe and dependable delivery of domestic water supplies, 3) improving the operational capability of the systems, and 4) establishing or improving the TMF capacity capability of the systems.

To further the implementation of the CD strategy, the Technical Assistance program intends to contract with third-party vendors. Currently DHS has executed three contracts with non-profit, drinking water issue groups to assist in the implementation of the strategy. They are Rural Community Assistance Corporation (RCAC), California Rural Water Association (CRWA) and California State University, Sacramento.

The first executed contract was to provide assistance in developing the TMF capacity of SWSs, which are pursuing funding through the SDWSRF program, or which have problems maintaining compliance with the SDWA. The SWS assistance will be provided through a series of trainings developed with input from DHS and industry. The training will be held at various locations throughout the state. In addition, training modules are also being developed for each of the 16 TMF capacity elements identified by DHS. These modules will be principally for SWS use. As part of the contract, the third party contractor participated with DHS in holding public meetings to discuss the CD strategy in three cities in southern, central and northern California.

A second contract was to provide direct or "hands-on" technical assistance to SWSs, which are pursuing funding through the SDWSRF. These systems were identified as having significant problems complying with the minimum water supply requirements or having other significant program problems as determined by DHS. California Rural Water Association circuit riders participated with DHS and LPAs in providing technical assistance to SWS by conducting system assessments, developing projects and completing funding applications. During the period between July 1, 2000, and June 30, 2002, 178 water systems were assisted.

The third contract DHS has entered into is to produce video courses and "on-line" courses for water system operators. Topics include 1) wellhead protection, 2) well maintenance, 3) troubleshooting wells, 4) troubleshooting well pumps, 5) hypochlorination, 6) factors influencing disinfection, 7) trouble shooting hypochlorite systems, 8) storage tank inspection and maintenance, and 9) distribution system operation and maintenance. Production of these videos is currently under way.

In 1999 DHS developed a Policy and Procedures Manual: A Staff Guide to Implementation of the SDWSRF Program. This was revised in April 2001 to reflect changes in policies, field experience, and federal and state law. DHS and LPA staff training on these revisions was coordinated with existing state training in 2001 and 2002. Continued training and revisions of the forms used, and in the policies and procedures that relate to the implementation of the SDWSRF program, will proceed in an effort to make it easier for SWSs to access SDWSRF resources.

Since the implementation of the TMF capacity strategy, a substantial number of systems have completed TMF capacity assessments of their water systems. The numbers and types of assessments and the state Fiscal Year (FY) completed are shown below:

System Type	Reason for Assessment	# of TMF Assessments FY 99/00	# of TMF Assessments FY 00/01	# of TMF Assessments FY 01/02	Total # of TMF Assessments
Community	New Systems	9	5	~3	17
	Change in Ownership	19	8	~4	31
	SDWSRF Projects	9	47	48	104
Nontransient Noncommunity	New Systems	23	8	~4	35
	Change in Ownership	14	32	~15	61
	SDWSRF Projects	1	2	1	4
Transient Noncommunity	New systems	5	4	6	15
	Change in Ownership		47	~20	67
Total TMFs by Fiscal Year		80	153	101	334
Note: Most figures for FY 01/02, just completed, will be approximate (~) until all information has been gathered.					