CALIFORNIA PUBLIC UTILITIES COMMISSION
Water Branch

STANDARD PRACTICE FOR

PREPARING RESULTS OF OPERATION REPORTS

FOR GENERAL RATE INCREASE REQUESTS

OF WATER UTILITIES

OTHER THAN MAJOR COMPANIES

Standard Practice U-3-SM

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STANDARD PRACTICE FOR PREPARING RESULTS OF OPERATION REPORTS FOR GENERAL RATE INCREASE REQUESTS OF WATER UTILITIES OTHER THAN MAJOR COMPANIES

A — PURPOSE AND SCOPE

1. The purpose of this standard practice is to provide guidance to staff engineers and analysts (analysts) in the preparation of certain reports or resolutions, called, generically "Staff Reports." These reports or resolutions comprise the Results of Operation (RO) for General Rate Cases (GRCs) for Class B, C and D water companies or sewer companies.[1] This standard practice also applies to Class A water utilities when authorized by the Commission (see Resolution No. 4556-W, August 25, 2005). A Staff Report may also be used for certification or investigation reports, such as rates for mobilehome parks required by Public Utilities Code §2705.6. Staff Reports constitute the principal showing of the basis for determining reasonable rate levels by the Commission and either an RO report or a draft resolution, if the rate case is simple enough to forego the RO report, must be completed prior to entering into negotiations with the utility.

2. While this standard practice contains the detailed policy and procedural steps necessary to develop the Staff Report, many policies and procedures will not apply in every case. The Project Manager has great freedom to determine the level of detail needed for a particular assignment.

3. This standard practice provides the basic information needed to prepare a simple GRC analysis as required by Standard Practice U-9-SM. As with all Commission work the aspects of analysis described in this document are subject to change, may not be appropriate in a particular instance or may be too simple to adequately answer the questions the Commission is addressing.

4. Standard of Review: If the water utility is providing good service, with no customer complaints; the utility has no Commission or DHS compliance order; the utility's infrastructure is in a good condition; the water supply is reliable; and the utility has provided annual reports in the last three years prior to the filing, the Project Manager can propose approval of the increase by resolution, without an RO Report. Similarly, a rate increase request that approximates the compounded Consumer Price Index since the last GRC can be recommended for approval without further review. During the review, any expense items that contribute little to the revenue requirement can be ignored and the utility's estimates authorized. The level of review should balance the level of importance,

[1] Class B utilities have 2,001 through 10,000 service connections, Class C have 501 through 2,000 service connections and Class D have less than 500 service connections. Class A companies (greater than 10,000 service connections) must file general rate cases by application. Class B, C and D may use the informal advice letter process.

both in terms of the impact on the customers and to the amount of analyst's time spent. The analyst is responsible for taking whatever action is necessary to prepare as sophisticated a report as is required to meet the assignment. The analyst is also responsible for taking into account all available and relevant information in preparing all staff reports. This is best done by maintaining an active dialog with the Project Manager and Supervisor. In all instances where their advice and guidance differ from this Standard Practice, that advice and guidance shall govern.

5. This document will be revised and updated as necessary and those updates will be available in Document Management and on the Website.

B — GENERAL PROCEDURE

6. Each staff member working on a GRC is responsible for doing a suitable study of the utility's operations, reliability, investment, financing arrangements, low-income program, plans for the future including conservation efforts, and relations with its customers, as assigned. All of these factors are a part of the Staff Report.

7. In dealing with water company personnel, staff should always approach them in a friendly, helpful manner, avoiding any unnecessarily burdensome requests or directives where it is possible to do so and still properly exercise the Commission's jurisdiction.

8. Preparation of the report begins when the utility submits acceptable workpapers or, for outreach GRCs, when the staff member completes the workpapers. See U-9-W, Standard Practice for Processing Informal General Rate Cases of Water Utilities for the steps in processing a GRC. Of the five to six months allotted for a GRC, the analyst should need no more than three months to complete the Staff Report itself. If you need additional time to prepare the Staff Report, inform your Senior and Supervisor of the reasons and the expected delay. The Project Manager should inform the Branch Chief and the company of the new due date for completion of the Report and the reason for delay.

9. Information for writing the report comes from the utility's filing, historical information about the utility, the staff visit, the public meeting and written comments, and from data requests. Data requests can be made by telephone, by electronic mail or in writing to the contact person shown on the first page of the utility's workpapers. If data requests are made over the telephone, record that information in your workpapers. Keep a copy of each data request and all responses in your workpapers.

10. The objective of a Staff Report is to present information for the Commission and interested parties that summarizes the operations and earnings of the utility, that explains the evaluation done by the staff, and that formalizes the recommended actions for the Commission. Often the Staff Report will be the only record of the facts and methods used to determine reasonable rates. Thus the report should be as complete and professional as possible. Additionally, the report should investigate the condition of the utility's infrastructure and its reliability, both operational and in the event of an emergency or

natural disaster. A copy of the report and all workpapers must be filed by company name in the "Work Files" file cabinets in the storeroom, and an electronic version of the Staff Report must be made available to other staff by saving it as a read-only Document Management document.

11. Each staff member shall keep his or her workpapers in reasonable order, properly identified and indexed, in an appropriate binder or folder and reasonably available to the Senior or Supervisor. The workpapers should include copies of information from prior rate cases when applicable. Please keep your workpapers binder available in your workspace in case someone needs to refer to it when you are absent. Don't lock it up in your file drawer.

C — REPORT CONTENTS

12. Staff reports will follow the eight-part format shown below. The report must include the name(s) of the staff member(s) who wrote the report and the sections each person was responsible for, if applicable. Paragraphs shall be numbered sequentially throughout the report. Tables should be embedded in the report as much as possible. Charts and maps, however, may be at the end.

(A) Section I, Introduction, includes a brief summary of the application and any history that is necessary to allow the reader to understand the company and the evaluations made in the report.

(B) Section II, System Description, is a description of the system itself, its physical condition, a discussion of when infrastructure needs to be replaced, the personnel who operate the system, other business interests of the owner and any other situations that exist today that bear upon the elements of the Staff Report.

(C) Section III, Summary of Earnings, is the section in which the allowable revenues are calculated. The Summary of Earnings table calculates the revenue requirement and thus determines the just and reasonable rates that the water company may charge. The revenues are calculated for a <u>future</u> test year under the <u>anticipated</u> operating conditions. Consequently the components that make up the rates are estimates. The purpose of a rate case is not to "make the utility whole" for incurred expenses, except for memorandum account and balancing account protection that was provided prospectively. The report should contain sufficient information and explanation to enable the Commission to set rates that will be reasonable in the near future to both the utility and its customers.

(D) Section IV, Water Quality, Water Conservation and Low Income issues. This section summarizes the utility's water quality record as provided by the California Department of Health Services (DHS), its efforts to improve water conservation and its low income program, if any.

(E) Section V, Rate Design, contains the details about how the rates were designed, including any deviations from the Commission's adopted design as described in Standard Practice U-7-W.

(F) Section VI, Service, Field Visit, Notice and Public Response, describes these items.

(G) Section VII, Compliance, reviews any outstanding compliance orders of the Commission or DHS.
(H) Section VIII, Recommendations contains boilerplate recommendations and any specific recommendations that apply in this case.

D — CALCULATING REVENUE REQUIREMENT

13. The analyst must estimate the test year expenses for each category of expense applicable to the utility's operations or accept the utility's estimate. The Uniform System of Accounts (D.85-04-076, April 17, 1985, "Rulemaking on the Commission's own motion to revise the Uniform System of Accounts for Class B, C and D Water Utilities" memorialized as U-39-W, "Uniform System of Accounts (Class B, C, and D) Rulemaking") specifies what expense items should be included in each account.

14. Initially, consider the expenses booked by the utility and shown on its annual reports. (If the utility hasn't filed an annual report for the year prior to the test year, you should halt the processing of the GRC until the report has been filed. Both State Law and the PUC rules require annual reports be filed.[2] We cannot authorize a rate increase when the utility is in breach of the law.) These expenses should be verified by audit during the site visit. Generally the staff should adopt the utility's estimate of expenses if the amounts are within 5% of the staff's estimate. If the booked expenses seem too high or too low, you may start your estimate of reasonable expenses based on what was adopted in the last GRC or recently for similar systems.

13. There are many ways of estimating expenses. The analyst or engineer is free to use the most appropriate, in coordination with the Project Manager.

14. If the operations of the utility have changed (more people have been hired, some employees have been promoted, work has shifted from contract to in-house) then you must modify the estimates in each account accordingly. Since these estimates must be forward-looking, take into account any changes in expenses that will occur in the test year (if new DHS requirements are expected, include enough in rates to cover them, etc.)

15. The following methods are all valid approaches to estimating expenses:

(A) <u>Constant dollar averaging</u>: Using the audited figures for the accounting category being estimated, escalate all amounts to test year dollars. Use the escalation rates provided by ORA and use the labor or non-labor figures as appropriate. Take the average of these amounts. The calculation is as follows:

Acct. 650 Contract Work

Year	Amount	Esc 90-91	Esc 91-92	Esc 92-93	Total

[2] Public Utilities Code Section 581, General Order 104, July 14, 1967

2000	5,243	1.0375	1.0450	1.03	5,855
2001	7,045		1.0450	1.03	7,583
2002	17,012			1.03	17,552

Total					30,960
Test Year 04 (average)				10,320	

(B) Trending: Looking at the example above, the analyst might be concerned that $10,320 wouldn't be enough for contract work, since the utility spent over $17,000 in 2002. If the analyst felt sure that the increase in contract work would continue, the proper procedure might be to trend, rather than average. The disadvantage of trending is that while averaging will make the utility whole in the long run, trending may overshoot or undershoot the correct figure. Nevertheless trending is also a valid way of estimation. The correct approach to trending is to do a least-squares estimate for the test year. The procedure for trending is as follows:

Method: Using a spreadsheet program or regression program, become familiar with the "Regression Analysis" section. For trending, regress the amounts being trended (dependent variable) against year, number of customers or water delivered (independent variable) as appropriate. Using the example numbers given above the table will look something like this:

	A	B	C	D	E	F
1	5,855	1	Regression Output			
2	7,583	2	Constant		-1367	
3	17,552	3	Std. Err of Y Est.	3364.374		
4			R Squared	0.858031		
5			No. of Observations	3		
6			Degrees of Freedom	1		
7						
8			X Coefficient(s)	5848.5		
9			Std. Err of Coef.	2378.972		

The calculation for the fourth year (2003) is:
-1364 + 4 x 5848.5 = $22,030

(C) Regression against multiple variables: Sometimes an expense will logically depend on more than one thing. For example, office expense may depend on number of metered customers, amount of water delivered and time. If you feel comfortable with it, you may use regression against more than one variable to calculate estimates. Discuss this procedure with someone who is familiar with it first, however. The Water Branch in ORA uses E-Views to estimate water sales and can provide advice and assistance. We have a copy of E-Views that you can use. Using this method, you might identify customer- related costs, facilities-related costs and production-related costs and scale the allowable expenses

by the number of customers, total plant or water delivered.

(D) Budgeting: Do an actual budget based on historical expenses as modified by expected future conditions. One common example of this approach is the practice of taking the actual regulatory costs for the GRC you are working on and allowing the utility to recover an identical amount over the next three years as an estimate of future regulatory expenses. Again, you are not paying the utility back for the costs of the rate case you are working on, but rather you are using those costs to estimate future costs.

(E) Benchmarking: Compare the utility you are working on with other utilities that are similar. We do not do "comparative ratemaking", that is, we do not raise or lower rates just because a nearby utility has higher or lower rates, but your personal knowledge of small water companies and information gleaned from investigating similar recent GRCs can provide valuable insight for estimating reasonable expenses.

(F) Consistency: It is also important that the estimates you develop are consistent. For example, you will derive certain adopted quantities, such as projected sales. Since the purchased power expense will be proportional to expected sales, you shouldn't average or trend past purchased power costs, but rather, starting from expected sales, calculate, based on pump efficiency and existing electric rates, the expected purchased power costs. This makes these two figures consistent.

16. Adopted Sales. Adopted sales per customer is calculated using averaging or trending based on temperature and weather. We have information on recent “degree-day” measurements that can give you a measure of temperature. Rainfall information is also available in the storeroom. This is a good candidate for multi-variable regression.

17. Expenses. Refer to Standard Practice No. U-26, Adjusting and Estimating Operating Expenses of Water Utilities (Exclusive of Taxes and Depreciation) for information on operating expenses. Some items for consideration are given below.

18. Purchased power is calculated by taking adopted sales and the historical cost to pump that much water. The electric bills for the pumps should also be evaluated separately for pump efficiency. If the pump efficiencies are poor, staff should make an adjustment to the allowed purchased power expense. If the efficiency is fair no adjustment is required, but the utility should be directed to improve the efficiencies of poor or fair pumps to good or excellent[3].

Table One: Pump Efficiency Ranges—Percent Wire to Water (from Case No. 10114)

Motor HP	Poor	Fair	Good	Excellent
3-5	41.9 or less	42-49.9	50-54.9	55 or above
7.5-10	44.9 or less	45-52.9	53-57.9	58 or above
15-30	47.9 or less	48-55.9	56-60.9	61 or above

[3] Memorandum from John D. Reader to Anand V. Garde, June 13, 1980, Subject: Rate Making Adjustments for Pump Efficiency Ratings

40-60	52.9 or less	53.59.9	60-64.9	65 or above
75 and above	55.9 or less	56-62.9	63-68.9	69 or above

19. Employee Labor Employee labor was addressed in a series of workshops held after the Risk Phase I and II proceeding. The consensus was:

> "small water companies generally pay prevailing wages in their areas, and staff therefore will allow such expenses in the absence of circumstances (like employment of relatives) where staff concludes that closer scrutiny is required."[4]

20. Contract Work. One big problem in estimating expenses for small water companies occurs in the area of affiliate transactions. Some small water companies are affiliated with a well drilling company, or the owner may also run a development company or construction business. You must be extremely careful to make sure the ratepayers are paying only for work done for the utility and are paying only reasonable charges for supporting activities such as contract work, especially when the work is done by an affiliated company. By far the best protection is for the utility to get at least three competitive bids for all major contract work. If the utility doesn't, it should present some kind of proof that the charges were reasonable.

21. Rent. Normally we allow in rates any formal contract that the utility has signed such as a lease for rent unless the utility shares space or staff with the owner's other businesses. In that case determine comparable rates in the area and apply that.

22. Transportation. Transportation expense can be controversial if the owner is charging some or all of her (or the family's) automobiles to the utility. Often you will have to determine a "reasonable" expense base upon a similar utility's allowable expense to separate these costs out. If actual costs are not available, or if the employees use their own vehicles for company work, the allowable IRS cost per mile should be used to calculate that part of the expense.[5] Example calculations for purchase or lease option are given in Appendix A.

20. Management Expenses. Management Salaries are Account 671 and are described as "the portion of salaries of managers, owners, partners or principal stockholders of a utility chargeable to utility operations." This requires that the individuals whose salaries are being estimated must be owners or stockholders in the company, or designated as managers by their job title.

(A) The most important item here is to be sure that the time spent by the manager is really chargeable to the utility's operations. Especially with smaller water companies where the managers have other interests, you must separate

[4] Decision 93-11-066, November 23, 1993 at 8.
[5] Memorandum from Wesley M. Franklin to the Hydraulic Branch Technical Staff, April 17, 1985, Subject: Vehicle Expense – Standard Mileage Rate of 20.5 Cents

activities that assist the water company from those that promote the other interests of the owner. It is even possible for an owner to delegate so much of the water company management to others that a management salary of zero is reasonable. Also remember that some part of the manager's (or an employee's) salary may be classified as capitalized labor, because it related to construction of facilities, and should be capitalized and not used in calculating the management salary.

(B) Management Salaries is an Administrative and General Expense and as such is not directly allocable to either plant or operations, so you can't rely on any one parameter (such as number of customers or total plant) to use when scaling the management salary. Consequently management salaries are somewhat subjective, but even so they need to be factually based.

(C) Past experience shows that we actually have few confrontations over management salaries. Commonly, the owner asks for a reasonably low salary because he is aware that his customers have a limit on what they can pay.

(D) In order to evaluate the proper management salary, you should get as good an idea as you can about what the manager actually does. A manager who is planning the expansion of the company's service territory, negotiating with developers, arranging for low interest loans and interviewing prospective employees probably deserves a higher salary than a manager who is reading meters and writing out bills, although each activity can be a reasonable one for management.

(E) A good source of this kind of information are copies of the appointment book, daily log or diary of the owner or manager. You should identify the individuals named in the notebook or appointment pad and call some of them to ask about what went on at the meetings. This "audit" approach to verifying utility documents is a valid regulatory activity and not an intrusion into the owner’s personal life, and verifying data should be a standard part of your approach to regulation.

(F) You can also ask for copies of an owner's or manager's timecard or other internal salary tracking document. Remember, however, that the temptation when a person is working for both regulated and unregulated firms is to bill as much work as possible to the regulated firm. Since there is no real way of double-checking timesheets, this method of tracking work cannot be used in isolation.

(G) The Association of California Water Agencies (ACWA) publishes a book of salaries paid by various government water agencies in California. This document can be a valuable source of reasonable salary level information. We have one available for reference.

(H) Another source of information is recent Staff reports done by other water branch engineers and analysts. As mentioned above, generally you will find that management salaries as requested were found to be reasonable, but some reports will include the justification for the analysis that resulted in different levels.

(I) Naturally, everything else being equal, the larger the number of customers, the higher the management salary level, because the job requirements are probably more sophisticated and complex. Also, running a six employee utility is more complex than running a two employee utility, again, all other things being equal. However, most often, all other things aren't equal. A company that "farms out" much of its management work to consultants or contract employees might not justify as high a salary as the owner-manager who does much of the work herself.

(J) Customer satisfaction is also an important indicator of management capability. If the utility fixes leaks quickly, that indicates good management. Such indices as the location of the owner's home could have an impact, since absentee ownership is rarely as responsive as a concerned local owner who might even be providing water to his or her own household. The public meeting can give you an idea of the overall management quality. If customer complaints are being dealt with quickly and effectively, the manager is probably doing a better job than if problems languish for long periods. Overall rates are a factor as well. Prudent management can lower rates. If you believe that management has worked hard to keep overall rates low, a higher management salary might be appropriate.

(K) Professionalism and certifications are also significant. If the owner has an operator's permit and has been active in professional organizations that relate to water service, his/her expertise and value to the customers probably exceeds that of the owner who has no particular qualifications or professional or regulatory knowledge. This information is available by conversation with the owner.

(L) The quality of the management will have an impact on the salary level (as explained above), and it will also have an additional impact in that it might justify a higher allowed rate of return. This "double whammy" might at first seem to be unfair, but it is not. Part of the Commission's job is to substitute for the free market. In a competitive market, a utility that was run poorly would likely be unprofitable, and should pay its manager less. Conversely you should have no qualms about a utility paying an excellent utility manager what he or she is worth, and allowing a return near the high point of the range as well, to recognize excellent service.

(M) Preparation of the management expense estimate begins with an evaluation of the amount requested in the filing. If the owner has not requested a

management salary, you should encourage him or her to do so. Conversely, you may find that the owner is requesting what you may consider an exorbitant amount for management salary. This claim actually may make sense if the owner is making a profit and taking the profit out in salary, for tax purposes, instead of as dividends, since dividends are taxed twice[6]. For our purposes though, you should separate the owners' management salary estimate from the return on ratebase estimate and use a reasonable salary in the Summary of Earnings.

(N) Most owners will be very happy to describe their system, the changes they have made and planned, and the troubles they have had. Listen carefully, both for the information you will get and for the evaluation you can do of the owner's knowledge and ability.

(O) Talk also, during the site visit, to as many employees as possible about the quality of utility management. Even though most employees are very loyal, they will still have opinions and desires that they have not satisfied. As with all verbal evidence, you should *never* rely on just one item or assertion. Some factual or corroborating evidence must verify claims and opinions before they are ever used in determining rates.

21. Regulatory Expenses. In accordance with usual practice we allow the utility to recover actual regulatory expenses for processing a GRC over three years as an estimate of the next GRC cost[7]. Because the small water GRC procedure was created to try to minimize costs, you should avoid including in regulatory expenses any consultant costs for arguments and appeals that the utility makes in an attempt to increase its rates over what the staff finds reasonable. However if the utility "wins" the appeal, then the expense is reasonable. This rule gives the utility the proper incentive to look closely at the areas with which it disagrees and to see whether it is worth appealing them. If we didn't have this limitation, the utility or consultant would have the incentive to automatically appeal everything, since those extra costs would become part of the revenue requirement.

22. All other regulatory expenses should be included in rates, including postage and advertising expense for notices, rent for public meetings, etc. All costs of notice and compliance with Department of Public Health (DPH) requirements should also be allowed. Generally, anything DPH or we impose on the utility should be funded in rates. Only if these expenses are impossible to estimate should they be recovered using memorandum accounts.

23. DPH Water Quality Testing. These costs can vary greatly from year to year, so care

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[6.] Corporate profits are taxed at the corporate tax rate. If any of the remaining profits (retained earnings) are distributed as dividends, those dividends are taxable to the recipient as personal income. Alternate corporate structures, such as Subchapter S, can get around this problem.

[7.] Memorandum from Bruno A. Davis to Tony Irving, Advisor to Commissioner Grimes, December 8, 1982, Subject: Ratemaking Treatment Accorded Utilities' Regulatory Commission Expense

should be taken to estimate them prospectively. Some testing is required on an irregular basis and DPH occasionally requires systems to test for chemicals that are not yet regulated. For these reasons, recorded costs may not reflect the testing that will actually be required. The utility should be able to provide a sampling schedule for several years into the future as most companies are routinely provided this by DHS or their County Health Agency. However, a test being scheduled does not mean that the utility will be required to carry it out. Waivers can be granted, allowing utilities to avoid expensive tests like those for Synthetic Organic Compounds (SOCs) for up to nine years. The District Engineer or County Health Agent can be of help in determining if waivers are likely. If doubt remains, these tests can be excluded from rates and the utility can seek memorandum account recovery.

24. Dues. Small water companies can be members of various professional organizations: California Water Association, American Water Works Association, National Association of Water Companies, etc. To the extent that participation helps the ratepayer, by making the owner or employees more knowledgeable, these costs should be allowed. For Class B companies you should disallow the percentage of the association's budget that is used for lobbying or other non-educational activities, just as we do for Class A companies. For class C and D water companies probably no part of CWA or AWWA dues are really used for lobbying for the small companies. For those companies you should include 100% of CWA dues and dues for other associations if the amount isn't too high and if the utility employees are actively involved so that the ratepayers get something for their investment.

25. Fees. All franchise fees that the utility has to pay as a normal business expense should be included in rates, but they may require special treatment. If a municipality imposes a fee as a utility tax, the Commission has held that this should be listed separately on the bill, not hidden in rates, and should be paid by only those ratepayers that live within the municipality.[8] This requirement for separate listing continues until surrounding municipalities or counties have raised similar fees to approximately the same level. This may be applicable to small companies if their billing system is sophisticated enough to do it, but is not required.

26. Charity. Charitable contributions are not allowed in rates. The Commission has held that if ratepayers want to contribute to a charity they can do so themselves.[9] Any charitable contributions the utility makes should come out of return on rate base.

27. Advertising and Public Relations. These expenses can be allowed to the extent that they benefit customers. This would include safety messages, essential customer service messages and conservation messages.

28. General Office. A General Office or headquarters of a Class B or C company provides administrative and general functions to its districts/regions. Its expenses need to be charged to the individual companies or districts. This can be done by the “four factor”

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[8] D.04-12.055, December 16, 2004, Appendix A

[9] D.67369, June 11, 1964, Pacific Telephone and Telegraph Company

method that the Class A utilities use or, more commonly, by allocating based on the number or customers in the district compared to the number of total customers the utility serves.[10]

The three major expense items of a GO report are O&M, A&G, and Rate base.

(1) O&M Examples: Payroll, Transportation, Purchased Services and Stores
(2) A&G Payroll, Pensions and Benefits (P&B), Transportation, Office Supplies, Property Insurance, Franchise Requirements, Regulatory Commission Expense, Outside Services, Miscellaneous General Expenses, Maintenance of General Plant, Amortization, and Dues and Donations Adjustment. Payroll and P&B are the two biggest expenses.
(3) Rate base = plant – depreciation reserve – deductions + additions

For example: Plant Additions could be furniture, tools, equipment, automobiles, computers, software, etc. Depreciation reserve is the accrued depreciation on plant. Deductions are items such as deferred taxes, and unamortized investment tax credits. Additions are usually working capital and materials and supplies.

26. Depreciation. Calculating depreciation can be a profession all its own. The Commission uses the straight-line remaining life method of calculating depreciation. This means that an item which cost $100 and is initially thought to have a 10 year life would undergo depreciation of $10 per year. If after 5 years ($50 remaining value) the Commission determined that the item had 8 years of remaining life instead of five, the depreciation over the last eight years would be $50/8 or $6.25 per year. The actual depreciation is included in rates as depreciation expense. The accumulated depreciation is subtracted from the original cost of the item to get the amount that is included in rate base. Standard Practice U-4-W describes the steps you should use to figure the allowable depreciation. Land and water rights are not depreciable.

27. For small water companies we use a flat 2.5% depreciation rate on total plant in service. This means that we believe that the average life of all of the facilities is 40 years. Some utilities may be able to justify a faster depreciation (greater than 2.5% per year). If the Commission has adopted a higher or lower depreciation figure in a previous rate case, that percentage should apply unless a new depreciation study is done. Obviously the depreciation used by the Commission and the depreciation used for income tax are not the same. You may have to explain this difference to the utility or the utility's accountant. For the larger utilities the difference between the taxes paid using tax (accelerated) depreciation and the Commission's straight-line depreciation can be significant. For these large companies the Commission "normalizes" this difference. This means that the utility books the difference between the taxes used for ratemaking and the taxes actually paid to an account (called the Deferred Tax Reserve Due to Depreciation account). The amount in this account is subtracted from working cash and results in a reduction in rate base. In this

[10] For the Four-Factor method see Subject Reference H32, Subject: Allocation of Administrative and General Expenses and Common Utility Plant, July 26, 1956

way the ratepayers get something back for the timing difference between ratemaking income taxes and income taxes actually paid. We normally do not bother normalizing taxes for Class C and D utilities, because additions to plant, hence new depreciation expense, are not usually uniform throughout a 12 month period, or even over two to three years, but it should be done for class B companies.

28. Note that with new water systems the costs of operating and maintaining the whole system may be higher than reasonable due to there being a small number of customers for the built-out facilities. In this situation a "saturation adjustment" (see Appendix B) should be made to plant in service to include only plant that is used and useful[11].[12] For an older system, inventory the plant to make sure retired plant has been removed.

29. Retirements are booked by decreasing Plant-In-Service by the original cost of the facilities being retired and decreasing Accumulated Depreciation by the same amount.

30. Rate base is the net dollar investment of the utility. Determine Utility Plant in Service (UPIS) by determining the original cost of the property to the person or entity first devoting it to public utility service. If the utility's records do not properly represent such original cost, it will be necessary to adjust the booked costs or to request that the utility have an original cost appraisal made. In the case of Class C and D utilities the engineer or analyst may make such an appraisal and reserve study if approved by the Supervisor. Where an earlier appraisal has been made, that appraisal should form the starting point for the inclusion of subsequent plant improvements, additions and retirements. Plant Held for Future Use may be included in Utility Plant if there is a specific plan for the plant (usually land). If there is not specific plan, exclude it. Note: the USOA does not require a time limit on the plan. Once you have the Plant in Service, subtract the accrued depreciation (depreciation reserve), deferred tax reserve (if any), contributions and advances, and add working cash and materials and supplies (M&S) and any other adjustments. Accrued depreciation is the sum of the depreciation expense booked each year at that year's depreciation rate. Working cash is calculated using the method in Standard Practice U-4-SM. For flat rate systems or metered systems that impose an annual charge at the beginning of the year for rates or service charges the working cash is likely to be negative because the leads outweigh the lags, but staff may restate a negative working cash to zero.[13] M&S is estimated by the engineer or analyst based upon the utility's actual operating needs. Rate Base ordinarily contains the following items, with appropriate adjustments or estimates:

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[11] D.62183, June 27, 1961, Hesperia Water Company Finding of Fact 5:
"5. That the estimates of operating revenues, operating expenses, including depreciation takes other than income taxes, and adjusted depreciated rate base… submitted by the staff engineer… after applying a 10% saturation factor, are reasonable. They are hereby adopted for this proceeding."
12 Decision No. 73243, October 24, 1967 "It is ususal Commission practice to place an applicant for a certificate to construct a water system in a new area on notice that operating losses may be expected until the area develops and to require, as a condition precedent to certification a commitment from stockholders to provide additional funds until income covers all out-of-pocket operating expenditures of the utility."
[13] See Decision 83-10-002, October 5, 1983 at 24 for a situation in which a Class A water company had negative working cash.

Original Cost of Organization, Franchises, Water Rights and other Intangibles
Original Cost of Land that is used and useful for utility service
Original Cost of Depreciable Properties that are used and useful for utility service
Construction Work in Progress
Reasonable Allowance for Materials and Supplies
Allowance for Working Cash

Less: Contributions in Aid of Construction (CIAC)
Less: Unrefunded Advances
Less: Depreciation Reserve[14]
Less: Deferred Tax Reserve (if any)
Less: Plant that is being financed by a conventional loan on which the ratepayers are paying a principal and interest surcharge.

31. If facilities have been acquired by purchasing an existing investor-owned, mutual or municipal utility, the law requires that the Commission use purchase price for rate base.[15]

32. Income Taxes. Income taxes are calculated on a pro-forma basis by applying the applicable tax rates to the utility's net revenue based on straight-line depreciation. When doing this calculation the prior year's state income tax is used as a deduction from the current year federal income tax for the test year.[16] If more than one test year, use the state tax calculated for prior test year as a deduction from the federal taxable income.

33. Determining Rate of Return. The Utility Audit, Finance and Compliance Branch of the Division of Water and Audits will provide you with the latest values of allowable Return on Equity (ROE) for each class of water company (Class C and D utilities are considered to be 100% equity.) For Class C and D utilities this value will have a range of 50 basis points (one basis point is .01%) such as 13.8% to 14.3%. You should choose a value from this range based upon your best determination of the quality of service the utility is providing. If the utility is doing a good job of meeting the needs of its customers, it should receive a return near the high end of the range. If the utility responds poorly to customer complaints and is not meeting its public utility obligations, it should receive the minimum allowable return. Most utilities will deserve a return near the average. For Class B utilities the Utility Audit and Compliance Branch will determine a utility specific reasonable ROE.

34. If the utility is financed in part by long-term debt, you need to determine the capital

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[14] The accounting entry for Water's CIAC plant in relation to depreciation is as follows:

Dr. Accumulated amortization on CIAC
Cr. Accumulated Depreciation

Water industry's CIAC plant does not get depreciation expense; therefore, there is no above- or below-the line treatment. The above journal entry will eventually offset the water plant in service balance and also the CIAC amount as the plant serves out its useful life.

[15] Public Utilities Code Sections 2718, 2719 and 2720
[16] D.89-11-058, December 22, 1989

structure, which considers the percentage of equity that is financing the company and the percentage of debt that the Commission has approved and that has been used to build plant. For large utilities the capital structure normally ranges from 40% investment and 60% debt to about 60% investment and 40% debt. After you have determined the capital structure, you multiply the percentage of debt by the actual average cost of debt and the percentage of capital by the reasonable return on equity provided by UA&C Branch and add these two quantities to get the rate of return on rate base. For example, assume a 70% equity, 30% debt Class B utility is paying an average of 9% on its debt. Finance Branch informs you that the return on equity should be 11%. The rate of return is:

weighted cost of equity	.70 x .11	= .077
+ weighted cost of debt	.30 x .09	= .027
rate of return		.104 = 10.4%

If the utility capital structure were 100% equity the ROR would equal the ROE and be 11%.

35. Determining a reasonable return for Class C and D Water Utilities: Commission Decision 92-03-093 states in ordering paragraph 8:

> "8. Branch is directed to calculate rates using both return-on-ratebase and operating ratio methods of ratemaking for Class C and Class D water companies requesting new rates and to recommend to the Commission that rate method that produces the higher result."

36. Rate of Margin: This ratemaking method develops a revenue requirement where little or no rate base exists. The method used to determine an average Rate of Margin is discussed below. The average is then applied to Operating Expenses to determine the estimated dollar return that is then compared with the average dollar return on rate base. The Rate of Margin is determined as follows: Starting in 2005, the UA&C Branch of the Water Division will issue a memo in March of each year (at the same time it issues the rate of return memo) that provides recommended average Rates of Margin for Class C and D water utilities to be used by staff. The method UA&C will use to calculate the rate of margin is contained in Appendix C.

37. Determining the recommended return using the Authorized Rate of Return: The calculation is based on the individual Class C or Class D Company's rate base. The company specific Rate Base is multiplied times the Authorized Rate of Return. The pre-tax rate of return on rate base is then grossed up to provide an after-tax rate of return on rate base.

38. Determining the recommended return using the Authorized Rate of Margin[17]: The

[17] It should be noted that in D.92-03-093, the term "Operating Ratio" was used to describe a particular methodology, when, in fact, the method the Commission described and ordered the use of is more properly

calculation is based on the individual Class C or Class D Company's operating expenses. Operating expenses shall include operations and maintenance expenses, annual depreciation on non-contributed facilities, amortization of multi-year expenses and applicable taxes (income taxes are excluded from the calculation). Applicable taxes include property taxes, taxes other than income and payroll taxes. Total operating expenses are then multiplied by the Authorized Rate of Margin to determine the recommended pre-tax return under the Rate of Margin method. The pre-tax rate of margin is then grossed up using the net-to-gross multiplier, see below to determine the after tax Rate of Margin..

39. Determining the recommended return after comparing the results from the Rate of Return and Rate of Margin calculations: The grossed up dollar amount returns based on the average Rates of Return on Rate Base for Class C and Class D companies and the average dollar amount returns based on the Rates of Margin for Class C and Class D companies are then compared, choosing the higher one (per D.92-03-093). In the resulting Commission resolution there shall be a summary of earnings that shows both the rate of margin and the rate of return on rate base, and the equivalent rate of return for the rate of margin if the rate of margin provides a higher revenue.

40. Calculating the Net-to-Gross Multiplier. The net-to-gross multiplier is calculated as follows:[18]

1.	Gross Operating Revenues		1.000000000
2.	Less: Uncollectables	0.00752%	_____%
3.	1 – uncollectables (100% - line 2)	99.92480%	_____%
4.	Less: Local franchise 0.77412% (.77470 x line 3)	0.77470%	_____%
5.	Less: Business license 0.10208% (.10216 x line 3)	0.10216%	_____%
6.	Subtotal 0.95140% (line 2 + line 4 + line 5)		_____%
7.	1 – subtotal 99.04860%		_____%

called the "Rate of Margin" method. The Rate of Margin being "1 – Operating Ratio"

[18] Letter from Han L. Ong to All Class A Water Utilities, May 10, 1990, Subject: Deductibility of State income tax on federal tax

Remaining amount subject to California Corporation Franchise Tax (CCFT) and Federal Income Tax (FIT)

8.	CCFT 8.75589624% (line 7 x 9.3%)	9.30%	_____%
9.	FIT 33.676524% (line 7 x 34.12%)	34.12%	_____%
10.	Total taxes paid 43.3838202% (line 6 + line 8 + line 9)		_____%
11.	Net after taxes 56.6161798% (1 – line 10)		_____%
12.	Net-to-Gross multiplier 1.7662795 (1 / line 11)		_____%

41. Revenues. Once you have the reasonable expenses, depreciation and all taxes, calculate the return by multiplying ROR by the rate base. Multiply the return by the Net to Gross multiplier to calculate additional revenue requirement. Add the expenses, including depreciation and non income taxes to the grossed-up return to calculate the revenue requirement. If the utility has contracts to provide water, assume that the utility can renegotiate the same percentage increase for those contracts as for tariffed service[19]. Contracts lower the revenue requirement because only the revenues from tariffed customers need to be included in rates.

42. Documentation: The Staff Report will include a detailed discussion of the process the analyst went through in determining a reasonable profit for the company, including but not limited to a discussion of the calculations performed, the results of each these calculations, as well as a discussion of all the subjective items that were considered in the final recommendation. See Appendix D for an example R/O Report.

43. Subjective Issues: In addition to the numerical calculations, staff shall also consider all applicable subjective items in their final recommendation, such as:

a. Service Quality,

b. Whether the company's Class has or is expected to become lower or higher since the last GRC or in the near future,

c. The level of the company's rate base as compared to its operating expenses,

[19] D.62656, October 10, 1961, Dominguez Water Corporation

d. Whether the company is a subsidiary of a larger company,
e. Net Income per customer,
f. Inflation rate, and
g. Current and Forecast Interest Rate.

E —RATE DESIGN

44. A percentage of the fixed costs (costs that don't vary with water use) is used to calculate the service charge. For Class D companies the percentage is 100%, for class C companies it is 65% and for Class B companies it is 50%.[20] The rest of the fixed costs and all variable costs are included in the quantity charge. Service charges are scaled by the capacity equivalent of the service connection. All adjustments should be rounded to the nearest cent.

45. The detailed procedures for classifying and calculating rates are discussed in Standard Practice U-7, "Rate Design." Any change in the utility's current rate structure should be tempered by considering the impact on the customers at various usage levels. One desired attribute of rate design is rate stability so new rate designs are usually phased-in. The standards for this are that no customer should receive over 200% of the system average rate increase and that the rate increase is usually held to not more than a 50% increase in the first test year, with the rest being made up in a second test year. Small systems with low existing rates are generally exempt from this requirement.

46. Normally, Class C and D utilities request increases for the second and third year by using the CPI process (see Standard Practice U-27-W), but Class B, C and D utilities are also eligible to file for a second test year and an attrition year.[21] If there is justification for a "larger than CPI" increase for the subsequent years, staff can recommend the utility be allowed to file for those higher increases in those years.[22] Of course, the resolution can authorize a Class B utility to file for CPI increases in lieu of a second test year and attrition year also.

F — SERVICE, FIELD VISIT, NOTICE AND PUBLIC RESPONSE

47. Branch policy supports a field investigation of the applicant's system and service area before the Staff report is finalized. This gives the staff a chance to review the operation of the water system, inspect the company's records and talk to the employees and customers. Branch also supports a public meeting. At the public meeting the utility should describe the need for the increase and staff should discuss the ratemaking process. Staff should not commit to any request made at the public meeting, except a request for a copy of the final staff report, but keep good notes and carefully review all requests and information. Discuss

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[20] D.92-03-093, March 31 1992, Ordering Paragraph 6.
[21] D.82-12-073, Gibbs Ranch Water Company
[22] John D. Reader, Memorandum to: All Hydraulic Branch Engineers, May 20, 1983, Subject: Policy Re Attrition Allowances – Advice Letter General Rate Increases

any service problems with the utility and, if necessary, require a follow-up report on the resolution of these problems. Experienced analytical staff should be able to attend and run a Public Meeting themselves. If staff is not experienced, bot staff and the Project manager should attend. The analysis writes a summary of the meeting includint questions and issues of interest.

48. The Branch requires compliance with Standard Practice U-9-W with respect to Notice. When the utility's filing is complete, staff provides a notice of the rate increase to the utility and the utility mails and the time, date and place of the public meeting to each customer. Send a copy of the final notice to the Public Advisor. A subsequent notice is required when the rate case is completed and the new rates go into effect.

49. Check with the Consumer Affairs Branch of the Public Affairs Division on complaints. Check the correspondence file of the utility for letters we have received. Discuss in the Staff report the number and types of letters Branch received after the notice was published and how you dealt with them.

50. Check out a pressure meter before you make your field trip and compare the tested pressures to G.O. 103. Discuss any pressure or other service problems with the utility.

G — COMPLIANCE

51. Check the Compliance Report to see if there are any outstanding compliance items. All items must be cleared, or an acceptable plan must be proposed, before any rate increase can be allowed.

52. As mentioned before, the utility must file annual reports. If any annual reports haven't been filed, the utility must file them prior to receiving a rate increase.

H — RECOMMENDATIONS

53. The recommendations may be just standard boilerplate, (see Attachment A) but if there are any special requirements, they should be spelled out clearly. Examples include:

Filing of up-to-date rules, current service area maps, and sample forms.
Installation of metering devices on sources of supply.
Refunding of any overcharges or billings at non-tariffed levels.
The rate increase may be made contingent on the utility completing repair or replacement of deficient facilities.[23]

54. Once you have completed all sections, provide the draft report to the Project Manager for review. After the report has been approved, forward it to the Branch Chief, change your Document Management security on the document to All, Read Only, and put a hard copy version in the files.

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[23] D.61609, March 7, 19611, and D.63907, July 10, 1962, A. T. Smith Water Company

Appendix A

Passenger Car/Pickup

Lease Option

The estimates below are based on a 2-year lease agreement for a small passenger car/pickup. Other items taken into consideration are as follows:

1) Total cost	$7,000
2) Leasing cost per month	200
3) Allowed mileage per year	15,000 miles
4) Gasoline cost per gallon	$1.20
5) Estimated mileage per gallon	25
6) Insurance is part of the lease	
7) Maintenance is part of the lease except dealership offers 2 year or 24,000 mile warranty.	

	Annual Cost
Annual cost of lease	$2,400
Insurance	300
Maintenance (miscellaneous items)	150
Fuel cost ($1.20/25 miles per gal. X 15,000)	720
Total cost	$3,570 per year

Ownership Option

1) Cost	$6,200
2) 6.5% Sales Tax	400
3) License	250
Total cost	$6,850
4) Principal and interest (7.5% for 8 yrs)	490
5) Assume 8 year life for vehicle	
6) Allowed mileage per year	10,000

	Annual Cost
Annual principal and interest	$5,880
Insurance (annual)	300
Fuel cost $1.20/25 mi per gal x 1000	480
Maintenance	
2 tune-up @ $50	100
3 lube/oil @ $25	75
Tires (4 tires every 3 years at $300)	75
Battery (one in 8 years @ $80)	10
Brakes (one in 8 years at $400)	50
Transmission and misc.	150

55. Total cost $7,120

Appendix B

Saturation Adjustment Procedure

If the utility is new, often there will be installed facilities that are not yet used and useful. The facilities are removed from rates by use of a "saturation adjustment"[24]. A saturation adjustment is a procedure whereby excess or overbuilt utility plant, financed or installed with equity capital, is excluded from rate base in determining the rates a utility is authorized to charge for service. Water Division procedures and Commission policy are based on precedent set in Decisions No. 50971 (1/10/55) and No. 56261 (2/18/58) in Application No. 34541 by Big Bear Pines Water Company. The Commission reasoned that an adjustment was proper to protect the interests of rate payers in those situations where an extensive water system has been constructed but with a significant portion of the lots to be served remaining undeveloped for an extended period following initial construction of the water system. This adjustment, in time, became known as a saturation adjustment and has been used by the Water Division and adopted in numerous proceedings. Uses of this adjustment occurred in Decision No. 92796 (3/17/81) in Application No. 59530 by Freshwater Valley Estates Water Company and in Resolution No. W-3004 (7/21/82) for Bear Trap Ridge Water Company.

Over-Built Utility Plant (Saturation Adjustment) The first unit of a new development when a water system is certificated by the Commission has customarily been financed with equity capital. Most of these developments are soon fully developed with homes; and additional tracts are added with the extension of the water system being financed under the water main extension rule. When this occurs, there is no basis for a saturation adjustment. However, in some cases, water systems have been initially installed in large tracts with equity capital; and have not subsequently been fully developed, resulting in a large rate base per customer. Even if the developer has left the scene, it is reasonable to assume that most developers would attempt to recover development costs including the water system in the sale of the lots. The fact that there is an extensive water system with a resulting large capital investment per customer should not be allowed to result in excessive rate base and rates. Usually, such developers transfer these water systems to some local individuals. Except under extreme hardship conditions, (operating losses), the new owners should not expect the water customers to bear all the costs of operating such a water system until the tract is almost fully developed. Almost fully developed is defined as a tract which is 85% developed, with the remaining 15% to be developed within the next five (5) years.

During the 1960s, Boise Cascade and a few others developed very extensive lot-type land subdivisions. They were largely located in the Sierra foothills with clubhouses and recreational facilities. While the lots were soon sold by very extensive sales promotion activities, construction of homes was at a slow rate in many of these areas. Most lot purchasers spent many years making the monthly payments on their lots before deciding to build a home. Since the water systems for most of these developments were installed with equity capital and many were less than 50 percent developed, the required saturation adjustment had a major effect upon the recommended rate increase.

Application of Saturation Adjustments The assigned Analyst, in all general rate proceedings, should review the files on all previous rate proceedings to check if a saturation adjustment had

[24] D.51794, Aug 9, 1955, Malibu Water Company and D.63641, May 1, 1962 Pacific Water Company, Big Bear System

previously been used. The need for a saturation adjustment requires a through analysis in each individual situation where there is partial development in the utility's service area. The need for saturation adjustment should be based on a single, fixed percentage of development:

a. The requested rate increase is based upon revenues to cover operating expenses for the entire utility plant and full rate of return on the entire utility plant (rate base)
b. A distinct portion of the service area has plant facilities (mains, services, source of supply, treatment plant, and/or tanks) installed, but the vast majority of the lots in that portion are undeveloped.
c. The plant facilities (mains, services, source of supply, treatment plant, and/or tanks) are installed and in rate base; but less than one-half of the lots are developed.

A saturation adjustment should not be used in the following situations where there is a partial development (however the Analyst should make a rough estimate of the effect of a saturation adjustment on the requested rate increase):

a. The original tract (unit) may be only partially developed; but the utility is serving a considerably larger number of customers in other tracts financed under the water main extension rule. For example, if the original tract is only 70 percent developed, a 30 percent saturation adjustment on the water system necessary to serve that tract, while technically applicable, might have no practical effect on the rates.

b. The utility is requesting little or no return on its investment or simply a reduction in its operating losses, making it obvious that a saturation adjustment would not result in any rate adjustment. In such cases, the decision or resolution should state that the low rate of return or large operating loss at the requested or authorized rates would be subject to a saturation adjustment if the utility as requesting rates which might give the utility an excessive return on the adjusted rate base.

c. There is a solid indication that a substantial commercial or industrial facility will be developed in the community within one year of the pending rate increase. That is, there is reason to believe that the proposed new facility would increase the work force in the area and create a demand for additional housing in the utility's service area. In this circumstance, the application of a saturation adjustment might not be appropriate.

<u>Mechanics of Saturation Adjustment</u> As stated above, the saturation adjustment factor should not be based upon a rigid adherence to a single, fixed percentage of development, i.e: number of residences divided by total number of lots. This percentage is a good starting point, but the Analyst should analyze the apply good judgment to adjust the percentage in obtaining a reasonable adjustment factor.

<u>Case 1</u> -- Large portions (Tracts) of service area with no development.

a. Exclude all utility plant facilities (sources of supply, treatment plants, tank, and/or transmission mains) in those portions if none of the facilities are required to serve the developed portion of the service area.

b. If some of the utility plant facilities are required to serve the developed portion, the Engineer needs to analyze each of those individual plant facilities to determine the amount to be excluded from rate base. The way to accomplish this is to:

(1) Determine the required sizes of the transmission main (diameter), source of supply (gpm), treatment plant (gpm), and storage tank (gallons) to serve the developed portion.

(2) Determine the reasonable cost of those smaller sized plant facilities (using same time value of dollars as installed plant facilities); and

(3) Excluded plant is then total cost minus the reasonable cost form Item (2). In this analysis, the Engineer/Analyst should determine if it would be a prudent investment to have an oversized facility as compared to the cost to augment that facility at some later date.

Case 2 -- Scattered development throughout the service area.

a. There are situations where the undeveloped lots have been caused by the actions of the homeowners. In some subdivisions with small minimum width lots, some homeowners have purchased three adjoining lots and then built on the middle one. The total number of lots in the service area may then be artificially too high and unrealistic because the homes would be too densely packed for a rural type of living environment. The Engineer/Analyst should analyze the water supply demand requirements of the plant facilities for the lesser number of homes to determine if the plant facilities are indeed excessive or over-built for the existing type of development. The saturation adjustment if applicable, would then be based upon the realistic, existing type of development rather than the initially proposed development.

b. Where development follows the pattern that was initially proposed, a saturation adjustment based upon the number of homes to the number of total lots is satisfactory for most situations. However, the Analyst should analyze the development to determine if, for example, 50 percent of the plant facilities are necessary to provide service to a 40 percent development.

The table below shows a simple example of the mechanics of using a saturation adjustment factor in a rate proceeding. Since the Commission's water regulatory lag plan is predicated upon a general rate proceeding every three years, the Analyst should use a three year growth period. The Analyst should use the number of connections (completed homes) at the midpoint of the three year growth period. Once the Analyst determines the percentage of saturation of completed homes, the net investment in water facilities (original cost less depreciation) should be reduced by that percentage. Similarly, depreciation expense and ad valorem taxes related to these facilities should be reduced by this percentage for ratemaking purposes only. This type of adjustment does not result in any adjustment to the records of the utility.

Appendix B

SAMPLE SATURATION ADJUSTMENT CALCULATION

1. A 100-home tract was developed with equity capital in 1964.

2. Analysis indicates that 85% of the homes require 100% of the plant, therefore 85 homes (.85 x 100) is the number that reasonably should have been developed.

3. Only 31 homes have been constructed and connected to the water system.

4. Currently, about 2 customers are being added to the water system annually.

5. The growth at the midpoint of a three year period is 3 additional completed homes, ie. (3 x 2)/2.

6. For future test year, tract is (31 + 3)/85 or 40% saturated[25]

7. Net Investment = Initial Investment-Depreciation
   = $28,614 – 15,306
   = $13,308

8. Saturated Net Investment = $13,308 x 0.40
   = $ 5,323

9. <u>Rate Base</u>

Average Net Plant	$ 5,320
Contributions	(1,300)[26]
Working Cash	700
M & S	170
Rate Base	$ 4,890

Rate Base/customer = $4,890/34 = $144/customer

[25] In this example, the 40% saturation was obtained by simply dividing the number of lots developed by the total number of lots. In practice the Analyst may consider other factors such as lot size.

[26] In this example, it is assumed that these contributions are not related to the original investment, however, in general, the Analyst must examine the original investment for contributions and adjust it accordingly

Appendix C

Determining Rate of Margin

The following is the analysis that the UA&C Branch will perform:

A. Since the Rate of Margin for Class C and D water utilities is an unknown figure, Water Division must estimate it based on the method discussed below.

B. To determine the Rates of Margin for Class C and D water utilities, the A&C Branch assumes that there is a comparable relationship between Class B and C Authorized Rates of Return and Class B and C Authorized Rates of Margin (the same comparison is made between Class B and Class D figures) as follows:

$$\frac{\textbf{Avg Class C Rate of Margin}}{\text{Avg Class B Rate of Margin}} = \frac{\text{Avg Class C Rate of Return}}{\text{Avg Class B Rate of Return}}$$

C. The Class C and D Rates of Margin are determined based on a comparison with Class B data, rather than Class A data, because the Class B water operations and financial results are more similar to those of the Class C and D water companies than with the much larger Class A water utilities.

D. The most current average authorized figures are used for the known amounts, which include the average Class C and Class D Rates of Return recommended by Water A&C Branch. The authorized Class B Rates of Return are found in each company's most recent general rate case decision or resolution.

E. The A&C Branch will then calculate each Class B company's equivalent authorized Rate of Margin. The individual authorized Class B Rates of Margin are calculated based on the operating expense and revenue figures in each company's general rate decision or resolution. Operating expenses include operations and maintenance expenses, annual depreciation on non-contributed facilities, amortization of multiyear expenses and applicable taxes (income taxes, property taxes, taxes other than income, payroll taxes).

F. The formula shown below is then solved for the unknown component, in this example the average Class C Rate of Margin for the current year:

$$\frac{\textbf{Avg Class C Rate of Margin}}{\text{Avg Class B Rate of Margin}} = \frac{\text{Avg Class C Rate of Return}}{\text{Avg Class B Rate of Return}}$$

Solve for **Avg Class C Rate of Margin**, so

$$\textbf{Avg Class C Rate of Margin} = \frac{(\text{Avg Class C Rate of Return})}{(\text{Avg Class B Rate of Return})} * \text{Avg Class B Rate of Margin}$$

The same method is then used to determine the Class D Rates of Margin.

Appendix D

California Public Utilities Commission

Commission Advisory and Compliance Division

Water Utilities Branch

STAFF REPORT ON THE ADVICE LETTER
GENERAL RATE INCREASE OF
REGULATED WATER COMPANY

Report written by

I. M Goode
Utilities Engineer
October 200_

Appendix D

I. INTRODUCTION

Regulated Water Company (RWC), filed a Advice Letter 13-W with the Water Utilities Branch (Branch) on August 5, 200_. RWC requested authority under General Order 96 and Section 454 of the Public Utilities (PU) Code to increase rates for water service by $12,330, or 112.46%. The purpose of the rate increase is to recover mounting operating expenses and costs relating to plant improvements. RWC's request shows that 200_ gross revenues of $10,964 at present rates would increase to approximately $23,294 at proposed rates, allowing a rate of return on rate base of 4.76%. RWC serves approximately 62 flat rate, and 10 metered rate customers in its service area in and around the community of Any City, Sierra County.

The current rates were established on August 24, 1926 pursuant to Resolution No. W-____ which authorized an increase in revenue of $7,100 or a general rate increase of 121.7%.

II. SYSTEM DESCRIPTION

RWC is a corporation owned by John M. Smith serving approximately one square mile of territory located in the foothills of the Verygreen National Forest. The utility's administrative and operations staff consists of John M. Smith, Manager and Operator and June Smith, Office Secretary. Thirty-five of the seventy two customers in the service area are part-time residents, while the remaining customers are moderate to low income families who reside there year around. The system has lost four customers over the past three years but the Branch believes that this decline has stabilized. RWC may have an opportunity to connect two other systems to the current facilities. These systems are located on either side of the utilities service area, and, if inter-connection is made, the utility will have an additional 14 customers.

RWC's water source is a natural spring that flows out of the side of the mountain. The utility pipes the water about 400 feet down the hill to two filtration tanks. The first tank uses a ten micron rated filter bag to remove any impurities in the water. The second tank contains a five micron rated filter bag for further purification. The water then flows about thirty feet to a 5,000 gallon redwood storage tank. The utility is currently installing an additional 6,500 gallon steel tank to supplement the current storage and to more closely meet the Department of Health Services' (DHS) Waterworks Standards. There is no meter at the water source; however, through monitoring, RWC estimates the spring can deliver about eighty gallons per minute (gpm). Because there have been no apparent water outages in the system, it is assumed that the combination of source and storage capacity is adequate. RWC is seeking new water sources. The system does exhibit sub-standard pressure in homes near the storage facilities. The utility is placing additional storage to alleviate this problem. Most of the distribution system consists of two inch pipe installed in the early nineteen hundreds. RWC is working to update the system to meet current standards of design and construction as outlined in General Order 103. The system is not looped and contains three dead ends that Mr. Smith flushes twice a year.

About 2,000 feet of the distribution mains run underneath State Highway XX. Since this system is in a logging area, trucks running on the highway often cause breaks in the lines, due to their heavy loads. The cost of relocating these lines is about $22,000. Because this amount will increase RWC's rate base by more the twenty-five percent, Mr. Smith is seeking Commission authority to make the improvement. Mr. Smith has a unique opportunity to split the cost of the replacement with the area fire department. By using a dual trench both RWC and the fire department can

substantially reduce the cost of the project, thus easing the burden on ratepayers. Without the necessary replacement the system runs the risk of costly repairs and possible water outages for extended periods of time.

III. SUMMARY OF EARNINGS

The Branch made an independent analysis of RWC's summary of earnings for the test year 200_ as seen in appendix A. The appendix illustrates RWC's and the Branch's estimates for the 200_ test year operating revenues, operating expenses and rate base at both present and proposed rates.

The Branch analyzed each operating expense category listed in appendix A. The Branch's estimate differs with RWC's estimates in contract work, transportation, insurance, employee pensions and benefits, professional services, regulatory commission expense and taxes other than income.

RWC's system is entirely gravity operated, therefore the Branch agrees with the utility's estimate for purchased power.

The utility estimates test year materials expense by averaging the past two years' data. Due to inadvertent accounting discrepancies in this category the Branch was unable to compute a three year average. The Branch reviewed RWC's materials expense account for 200_ and discovered additional errors. The Branch notes that the account contains expenses that should either be included as a rate base item under material and supplies, or that are inappropriate expense items. The Branch believes its estimates are more reliable because it removes the utility's accounting errors and uses actual 200_ data.

RWC's and Branch's estimates for contract work differ. The utility hires an individual to clear snow blocking the access road to the storage and filter location during the winter months. The utility did not include this expense in any account. RWC also did not include water testing costs in its estimate. The Branch includes both these expenses in its contract work category and thus believes its estimate is more accurate.

The utility's estimate for the other plant maintenance category is inconsistent with the three year recorded average. The Branch has reviewed this estimate and believes it is accurate because existing accounts contain all other expenses for the test year.

The utility's bases its office supplies and expense category estimate on projected costs. The three year average is inappropriate due to inadvertent accounting errors. Specifically, the utility occasionally booked costs associated with organizational dues to this category. RWC correctly removed these costs for the test year estimate, therefore, the Branch believes the utility's estimate is reasonable.

RWC's estimate for office services and rentals is the costs for a room in the Smith's home dedicated for utility use. Furthermore, the basement of the Smith home serves as a storage area for RWC's inventory. The Branch believes this estimate is justifiable because it is based on actual square footage, and reasonable per square foot charges.

Office salary and Management salary estimates by RWC cover time spent operating and maintaining the utility. The Branch has reviewed the estimates and believes they are reasonable.

RWC's transportation expense estimate uses 200_ recorded and 200_ expected costs. The Branch's estimate differs in that the utility included the cost of insurance for the vehicle. Moreover, some estimated expenses are non-recurring, thus the Branch amortized these expenses over three years. The Branch feels its estimate is more accurate due to the utility's bookkeeping errors.

The utility's test year insurance estimate is the 200_ recorded cost for property and general liability. The Branch also used 200_ recorded costs but added the cost of vehicle insurance to its estimate. The Branch believes its estimate is more accurate because it adheres to the current Uniform System of Accounts (USOA) guidelines.

The utility used payroll taxes as an estimate for the employee pension and benefits expense category. The Branch removed this inadvertent bookkeeping error for its estimate and thus believes its estimate is reasonable.

RWC used the cost of accounting and bookkeeping and the cost associated with filing the rate increase request as its estimate of professional services. The utility also used 200_ recorded data. The Branch removed the costs of filing for the rate increase and used 200_ recorded data for the other expenses. The Branch feels its estimate is more plausible because of the utilities accounting error.

The Branch used the utilities recorded expense for filing this rate increase request as its estimate for the regulatory commission expense. The Branch spreads this cost over three years. Since the utility placed this expense in the professional services category the Branch believes its estimate is reasonable.

The utility's general expense estimate uses the cost of 200_ membership dues to various water organization. It is inconsistent with the three year average; however, the Branch has reviewed the estimate and considers it reasonable.

The Utility's estimate and the Branch's estimate for taxes other than income differ in that the utility included additional property tax on land purchased in 1989. After the investigation the Branch learned that the current county property tax bill includes tax on this property. The Branch used the current tax bill and the payroll tax calculation as its estimate for this expense and thus considers this estimate sound.

The Branch helped the utility determine an accurate estimate for depreciation expense and average depreciation reserve. The Branch's investigation and calculation is attached as Appendix E.

RWC's summary of earning submitted with its rate increase request shows a rate of return on rate base of 4.76%. The Branch's recommended revenue increase will produce a rate of return of 7.77%, below the 13.9% and 14.4% standard rate of return range recommended by the Finance Branch of the Commission Advisory and Compliance division for small, 100 percent equity financed water utilities. The utility requested the rate increase be limited to 100 percent for all classes of ratepayers. The utility realizes that the new rates will not generate the authorized return on rate base.

IV. WATER QUALITY, WATER CONSERVATION AND LOW INCOME ISSUES

RWC has no outstanding citations from DHS and has not had any for the past five years. DHS

reports that water samples have been properly taken and tested.

RWC has a surface water source and passive filtration, so no extraordinary water conservation efforts are likely to be cost-effective. The transient residents use very little water and the year-around residents to not waste it.

RWC has a high proportion of low income permanent residents. Because the transient residents pay the fixed cost of the system as though they were there year-around, they reduce the costs to the permanent customers. Rates are low due to there being no need to pump the water, and no special low-income provisions are necessary at this time.

V. RATE DESIGN

The utility's current rate structure consists of two schedules: Schedule No.1, General Metered Service, Schedule No. 2, Residential Flat Rate Service. The Metered Service Schedule contains one rate block for all water quantity sold.

The Branch helped the utility in the rate design process and thus no differences exist. The new rate schedules can be seen in Appendix B. The Branch applied a 100 percent increase to the flat rate schedule, the 3/4 inch readiness to service charge and the water quantity charge. The remainder of the metered rate service charges are adjusted using the current service charge allocation ratios as outlined in Standard Practice U-7. All adjustments are rounded to the nearest cent. Because almost all of RWC's operating expenses are fixed costs, and most of the customers use the flat rate schedule, the Branch did not apply the one hundred percent of fixed costs policy for metered service charges when designing rates. Additionally, the Branch discovered four flat rate customers being charged rates that are not in the flat rate schedule and corrected for this oversight.

VI. SERVICE, FIELD VISIT, NOTICE AND PUBLIC RESPONSE

Branch staff members A. Perfect and I. Goode conducted a field investigation of RWC's system and service area on August 28 and 29, 200_. Mr. Smith directed a tour of the service area and explained the operation of the water system. Ms. Smith made the company's records available for inspection and provided other assistance. Sally Jones, RWC's Accountant, provided additional expense information after the public meeting.

The utility mailed a notice of the proposed rate increase to each customer on August 9, 200_. Over the past three years, the Consumer Affairs Branch of the Public Affairs Division received no complaints regarding the RWC system. The Branch received four letters of complaint regarding the proposed rate increase. The complaints dealt mainly with the amount of the increase, citing a similar rate increase three years ago, but others claimed that part-time residents receive unfair treatment. All letters were responded to.

On August 28, 200_ the Branch held an informal public meeting in RWC's service area. A. Perfect, Senior Utilities Engineer, explained Commission rate setting procedures and Mr. Smith explained the need for the rate increase. Mr. Wrainey Storm, and Ms. Pat Hand of the State Office of Drinking Water (ODW), attended to answer any questions regarding water quality and service. They spoke about the new monitoring requirements imposed by the State and the impact these regulations would have on RWC.

Of the twenty one ratepayers present, ten spoke out during the meeting. All stated they are satisfied with the water quality and service, and commended Mr. Smith on the job he was doing. Most of those who spoke said they felt part time users should not pay the same rate as full time residents. Additionally, most customers thought rates are getting too high, or that Mr. Smith may be making unnecessary investments.

Pressure tested in the area ranged from 18 psi at the higher elevations of the system to 165 psi at the lowest end of the system. Mr. Smith has installed pressure reducers in those homes that exceed current standards.

RWC is violating two provisions of G.O. 103. Section II.3.a. states that the utility shall maintain normal operating pressures of not less than 40 p.s.i.g, and not less than 30 p.s.i.g at times of peak seasonal loads. Certain residents at the higher elevations receive only 18 to 20 psi. Section II.4.a of G.O. 103 states that the utility shall install a suitable measuring device, or otherwise determine the production at each source of supply. At this time RWC is unable to determine its water production. Mr. Smith is currently working on solving the low pressure problem by installing a supplemental storage tank at a higher elevation. The Branch recommends RWC install a meter or otherwise devise a method to measure the production capacity of the water source.

VII. COMPLIANCE

There are no outstanding Commission orders requiring system improvements.

The utility has been filing annual reports as required.

VIII. RECOMMENDATION

The Branch recommends that the Commission authorize an increase of $12,042 or 107.02%, which would increase estimated annual revenue from $11,252 at present rates to $23,294 at adopted rates. A residential flat rate customer would realize an increase on a monthly bill from $12.00 to $24.00, or 100%. This increase will produce a 7.77% return on rate base.

Proposed Findings:

After investigation by the Branch:

a. The Branch's recommended Summary of Earnings (Appendix A) is reasonable and should be adopted.

b. The rates recommended by the Branch (Appendix B) are reasonable and should be authorized.

c. The quantities (Appendix D) used to develop the Branch recommendations are reasonable and should be adopted.

d. The Branch recommends that a meter be installed at the water source or other means of measuring the production capacity as required be Section II.4.a of G.O. 103, and RWC be allowed to file for an offset rate increase to recover costs upon completion of the project.

e. RWC should be allowed to make the 2000' main replacement and file for an offset rate increase to cover costs and reflect the new rate base.

f. Any offset rate increase request should be analyzed using an 11.00% return on investment.

Appendix D

Regulated Water Company, Inc.
Water Division
Summary of Earnings
Test Year 2009

	Utility Estimated		Branch Estimated		
Item	**Present Rates**	**Requested Rates**	**Present Rates**	**Requested Rates**	**Recommended Rates**
Operating Revenue					
Metered	$ 61,856	$ 82,551	$ 68,017	$ 82,405	$ 61,400
Operating Expenses					
Purchased Power	$ 8,370	$ 8,370	$ 8,370	$ 8,370	$ 8,370
Employee Labor	9,428	9,428	-	-	-
Materials	5,195	5,195	5,025	5,025	5,025
Contract Work	1,596	1,596	1,596	1,596	1,596
Transportation	2,397	2,397	1,403	1,403	1,403
Other Plant Maintenance	172	172	172	172	172
Office Salaries	4,188	4,188	2,465	2,465	2,465
Management Salaries	12,570	12,570	11,975	11,975	11,975
Employee Pension & Health Benefits	2,633	2,633	1,793	1,793	1,793
Uncollectibles	354	354	170	206	154
Office Services & Rent	494	494	494	494	494
Office Supplies	1,930	1,930	1,930	1,930	1,930
Professional Services	1,417	1,417	1,294	1,294	1,294
Insurance	1,380	1,380	1,877	1,877	1,877
Regulatory Expenses	1,250	1,250	748	748	748
General Expenses	430	430	430	430	430
Subtotal	$ 53,804	$ 53,804	$ 39,743	$ 39,779	$ 39,727
Depreciation	6,984	6,984	4,440	4,440	4,440
Property Taxes	3,334	3,334	829	829	829
Payroll Taxes	2,232	2,232	1,392	1,392	1,392
Income Tax	267	3,647	4,866	8,097	3,380
Total Deductions	$ 66,621	$ 70,001	$ 51,270	$ 54,537	49,768
Net Revenue	$ (4,765)	$ 12,550	$ 16,747	$ 27,868	$ 11,632
Rate Base					
Average Plant	$177,538	$177,538	$ 167,238	$167,238	$ 167,238
Ave. Accumulated Depreciation	89,054	89,054	85,414	85,414	85,414
Net Plant	$ 88,484	$ 88,484	$ 81,824	$ 81,824	$ 81,824
Plus Working Cash	4,489	4,489	3,312	3,315	3311
Materials and Supplies	-	-	1,000	1,000	1,000
Rate Base:	$ 92,973	$ 92,973	$ 86,136	$ 86,139	$ 86,135
Rate of Return	-5.13%	13.50%	19.44%	32.35%	13.50%

Appendix D

Regulated Water Company, Inc.
Water Division
Schedule No. 1

GENERAL METERED SERVICE

APPLICABILITY

Applicable to all metered service.

TERRITORY

Green Terrace and vicinity, adjacent to Highway No. 1, located approximately one mile northwest of Delta, Gamma County.

RATES

	Per Meter Per Month	
Quantity Rates:		
All Water, per 100 cu. ft.	$ 0.20	(R)
Service Charge:		
		(D)
For 3/4-inch meter	$ 16.40	(I)
For 1-inch meter	27.15	(I)

The Service Charge is a readiness-to-serve charge which is applicable to all metered service and to which is to be added the monthly charge computed at the Quantity Rates.

SPECIAL CONDITIONS:

1. All bills are subject to the reimbursement fee set forth in Schedule No. UF.

Appendix D

Regulated Water Company, Inc.
Water Division
ADOPTED QUANTITIES
Test Year 2009

Expenses:	**Per Year**
1. Purchased Power:	
Southern California Edison Company	
Quantity	65,388 Kwh
Average Cost per Kwh	$ 0.1280
Total Purchased Power	$ 8,370
2. Purchased Water	None
3. Payroll:	
Labor	None
4. Ad Valorem Taxes:	
Tax Rate	1.001216%
Assessed Value	$82,824
Total Tax	$829
5. Service Connections:	
Meter Connections	251
Flat Rate Connections	None
6. Water Sales(ccf)	59,989

Appendix D

California Corporate Franchise
Rate : 8.84%

	Item	State Tax 2009	Federal Tax 2009
1	Operating Revenue	$	$
2	Operating Expenses	61,400 $	61,400 $
3	Property Taxes	39,727 $	39,727 $
4	Payroll Taxes	829 $	829 $
5	Depreciation	1,392 $	1,392 $
6	Taxable Income for CCFT	4,440 $	4,440
7	State Tax, $800 minimum	15,012 $	$
8	Taxable Income for FIT	1,327	1,327 $
9	Federal Income Tax		13,685 $
10	Total Tax	$	2,053 $
		1,327	2,053

Appendix E

Regulated Water Co., Inc.
Water Division
Escalation Factors

1. Office of Ratepayer Advocates: Estimate of Non-Labor and Wage Escalation Rates for 2008 through 2000 from the August 2008 DRI/McGraw-Hill Review of U.S. Economy, dated August 31, 2008

2. ORA August 2008 Summary of Compensation Per Hour, dated Aug 10, 2008

STATE OF CALIFORNIA

MEMORANDUM

Date: February 17, 2006

To: Mohsen Kazemzadeh

From: Adam Thaler

Subject: Cottage Springs Water Company – Streamlined GRC Process

On January 19, 2006, Cottage Springs Water Company (CSWC) filed a request to increase rates by $800, or 30%. CSWC provides water to 16 flat rate customers. The last general rate increase (GRC) became effective March 7, 1997 pursuant to Resolution W-4031 which authorized an increase of $1,570 or 154% in 1997.

Should CSWC meet the required conditions checklist (outlined below) this streamlined rate case procedure will eliminate the following:

1) Public Meeting

2) Field trip and site investigation

3) Results of Operations (Staff Report)

Required Conditions

CHECKLIST

___X__ Utility provided adequate service

__X__ Water Quality

The Calaveras County Health department indicates that everything within the water system is in compliance with few concerns. See email from Terry Mingo Attached.

__X__ Water Pressure

___X_ Other standards

__X__ No significant customer complaints

___X__ Utility has no CPUC, DHS/County Health compliance orders.

See email from Terry Mingo Attached dated month day, 2004

___X__ Utility's infrastructure is in good condition based on DHS or County Environmental Health Department's Report or email.

See email from Terry Mingo Attached dated month day, 2004

___X__ Utility has a reliable water supply (consult with DHS/County Health).

See email from Terry Mingo Attached dated month day, 2004

___X__ Utility has filed Annual Reports for the three years prior to the GRC filing.

___X__ Annual compounded CPI-U increases, since the last authorized Increase, are in line with requested increase.

Requested increase: 30.0%

CPU-U Compounded increase 24.2%

___X_ Average rates are reasonable.

___X__ Current rater for all flat rate customers is **$154.84** per year ($12.90/mnth). The proposed rate is $204.84 per year per service connection ($17.07 per month per service connection).

___X__ Utility has no SDWBA Loan or the utility has met payment obligations under SDWBA Loan Agreement.

Since CSWC meets all of the conditions outlined on the checklist, the Public Meeting, field trip, site investigation, and staff report are unnecessary.

Resolution

The draft resolution for CSWC should consist of the following:

1) Standardized text format, but not limited to, system description.

System Description

Cottage Springs Water Company (CSWC) is owned and operated by

Beatrice Miller.

CSWC serves 16 flat rate customers in the Cottage Springs Subdivision in Calaveras County. When the last GRC was filed in 1997, there were six additional lots located on Beatrice Drive which could be served water, but were vacant at the time. CSWC's service area covers roughly one street and is less than one square mile of territory. The majority of CSWC's customers are seasonal, with only a few full-time residents.

CSWC's water supply is taken from two wells. Water is pumped approximately 500 feet from the main well (located between Highway 4 and Beatrice Drive) into a 20,000 gallon redwood storage tank. The water is then gravity fed to the customers. Water is also occasionally pumped approximately 2,000 feet from the secondary well (located next to the ski area) to the storage tank.

There are no source supply measuring devices in place. There is a back-up power supply at the ski area.

Approximately 66% of CSWC's mains are four-inch welded steel (based upon a total of 2,752 feet of mains reported in the CSWC's 2004 annual report). The size and types are indicated below. The majority of the system was placed in service in the late 1950's, roughly 50 years ago. Because of the age of the system, CSWC's plant is almost, if not, fully depreciated.

Main Type	**Feet**
4-inch Welded Steel	1,820
PVC 40	552
6-inch Cement-asbestos	380
TOTAL	2,752

2) Summary of Earnings (SOE)

3) Rates

4) Appendixes