ALJ/GEW/sid

Decision 94-06-033 June 22, 1994

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Investigation on the Commission's own motion into the financial and operational risks of Commission regulated water utilities, and whether current ratemaking procedures and policies require revisions.	I.90-11-033 (Filed November 20, 1990) (Phase Two)

(See Appendix A for appearances.)

I N D E X

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O P I N I O N

1. Introduction

This decision closes Phase Two of the Water Risk Investigation, in which we focus on whether risks faced by large Class A water companies require changes in economic regulation. We conclude that no fundamental change in our ratemaking procedures is necessary at this time based on the risks of endemic water shortage and increased costs of water quality. We authorize interest on water utility Expense Balancing Accounts, and we permit water companies to apply to broaden the coverage of existing Water Quality Memorandum Accounts.

Summary and Conclusion

2. Procedural History

This Order Instituting Investigation (also called the Risk OII) was issued on November 20, 1990, to consider whether financial and operating risks faced by water utilities that are under Commission jurisdiction warrant changes in regulatory policies. The investigation was bifurcated, with Phase One to address issues important to smaller Class B, C, and D water companies.[1] Phase Two was devoted to issues concerning the larger Class A water companies, and hearings commenced following the Commission's completion of Phase One of the investigation.

The Commission consolidated into the Risk OII two companion proceedings, the Drought Investigation (I.89-03-005) and the Connection Charges Rulemaking (Order Instituting Rulemaking

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1 Class D water utilities have fewer than 500 connections; Class C, between 500 and 2,000; and Class B, between 2,000 and 10,000 connections. Class A water companies have more than 10,000 connections. (See Decision (D.) 85-04-076, 17 CPUC2d 553 (1985).)

90-07-004). The Connection Charges Rulemaking was closed on April 24, 1991, in D.91-04-068, 39 CPUC2d 594 (1991). The Drought Investigation was closed on February 16, 1994, with the issuance of D.94-02-043.

A decision in Phase One of the Risk OII, D.92-03-093, was issued on March 31, 1992, and Phase One was closed on November 23, 1993, when the Commission approved a settlement of remaining issues (D.93-11-066). A prehearing conference in Phase Two was conducted on March 13, 1992, and hearings followed in San Francisco and Los Angeles into early 1993. Because of a discovery dispute, the parties requested and were given additional time for briefing, and final briefs were filed on December 20, 1993.

3. Issues Raised in This Proceeding

The record in Phase Two of the Risk OII is voluminous. The Commission conducted 20 days of hearings, heard testimony from 21 witnesses, and received 54 exhibits into evidence. While our Order Instituting Investigation made it clear that we were particularly concerned with regulation of smaller water utilities,[2] we also listed 13 issues and a number of regulatory alternatives to be considered in our hearings on Class A water utilities. The utilities, represented by the California Water Association, chose to concentrate on four of these issues, specifically:

* Should and/or does the Commission consider water utilities' reliance on purchased water, the state's semi-arid environment and the distance between water supply sources when determining risks for water

2 We stated: "Smaller water utilities account for almost all the service problems affecting customers. Often the problems are serious. We are concerned that the financial and operational problems that have tended to plague these companies are worsening. The greatest public benefit can result, we believe, from assessing alternatives and fresh approaches to ameliorate the problems facing smaller utilities." (I.90-11-033, slip op. at 2.)

utilities? If so, what impact, if any, should this have on rate of return? If these factors are found to directly contribute to the utilities' risks, what, if anything should the Commission do about it?

* Should current and/or future water quality problems be considered when determining authorized returns? If so, what impact, if any, should they have on rate of return? Are there other ways to fund the correction of water quality problems?

* Should the Commission establish a program of complete revenue requirement protection for the utility through interest-bearing balancing accounts for all revenue requirements? If so, how should the Commission determine the appropriate rate of return?

* Do California water utilities encounter greater or lesser operational or financial risks than those experienced by the energy and telecommunication utilities in California? Should these differences be considered when setting returns for water utilities? If so, how? What impact, if any, should these risks have on rate of return?

Through the testimony of consultants and utility executives, Class A water companies presented evidence intended to show that their risks have increased because of population growth and the instability of California's sources of water supply. In addition, larger utilities state that they face millions of dollars in capital expenses in order to comply with new federal and state water quality standards.

To respond to what it believes is an increased sales risk brought on by water shortage and new treatment expenses, the industry urges the Commission to authorize a water revenue adjustment mechanism similar to the ERAM (Energy Revenue Adjustment Mechanism) now available to electric utilities. Other solutions it

proposes are greater recovery of fixed costs in the service charge (now limited to 50% of fixed costs) and an increase in rate of return. Utilities also favor broad balancing account authority to track and collect the costs of compliance with federal and state water quality requirements.

While the Commission's Water Utilities Branch participated actively in Phase One of this proceeding, Branch did not take part in the Phase Two proceeding. Instead, because of a staff reorganization in 1992 that transferred most Class A water company matters from Branch to the Division of Ratepayer Advocates (DRA), it was DRA that responded to the Phase Two inquiry. DRA presented its own consultants and other evidence to show that Class A water companies have fared well under current regulatory procedures, that the risk of systemic water shortage and unmanageable water quality costs is overstated, and that only minor changes in Commission regulation of the Class A companies are required in the near term.

As part of its investigation, DRA surveyed other public utility agencies throughout the country and compiled a report responding to the specific issues posed by the Commission in promulgating this investigation. A summary of DRA's report, edited to note the comments of utilities, is set forth in Appendix B of this decision.

3.1 Status of Class A Water Companies

Water utilities regulated by this Commission provide water to about 18% of California's residents. They supply about 4% of all the water used in the state.[3] Tax-supported regional, county and municipal water agencies supply the majority of water to

3 These estimates are provided by the Water Utilities Branch, based on data produced by the California Department of Water Resources and the National Association of Regulatory Utility Commissioners.

the state's urban and agricultural users. The Commission regulates 14 Class A water companies (10,000 connections or more), which are divided into 60 water districts.[4] The largest of the Class A companies is California Water Service Company, with 21 water districts and 360,000 connections. The smallest is Valencia Water Company, with one district and 14,440 connections.

Class A water companies are financially sound and, with few exceptions, are earning at or near the rate of return authorized in their general rate cases.[5] Annual reports filed with the Commission show that all Class A water companies were profitable in 1992, with the exception of Valencia.[6] Authorized return on equity granted in recent rate cases to Class A water

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4 The Commission also regulates more than 200 smaller Class B, C and D water utilities in the state. Financial and operational risks of the smaller regulated utilities were considered in Phase One of this proceeding.

5 California Water Service Company, for example, has shown actual rate of return of 14.2% in 1987; 11.85% in 1988; 11.38% in 1989; 11.18% in 1990, and 10.71% in 1991, all either above or within 50 basis points of authorized rates. Park Water Company, on the other hand, has had actual earned returns of 4.99% in 1987; 7.54% in 1988; 3.73% in 1989; 7.67% in 1990, and 10.56% in 1991, all substantially below authorized returns. (Ex. 42A.)

6 Valencia's annual report for 1992 showed a net loss of $510,536. Annual reports on file with the Commission show net profits in 1992 for other Class A water companies as follows: San Jose Water, $10,133,509; California-American Water, $4,430,672; San Gabriel Water, $3,381,954; Suburban Water, $2,296,324; Citizens Water, $37,715,692; Dominguez Water, $1,617,693; Park Water, $1,031,329; Great Oaks Water, $605,082; Santa Clarita, $1,484,774; Del Este Water, $149,833; California Water Service, $12,529,213; Southern California Water, $12,141,326.

companies ranges from 11% to 11.5% for test year 1994, and authorized rate of return for the same test year ranges from 9.8% to 11.3%.[7]

4. Conclusion

Parties in this proceeding focused, as we had asked them to do, on whether the Commission's economic regulation of Class A water companies should be changed to recognize increased risk. We conclude today that the showing of risk on this record is not sufficient to justify the changes proposed by the parties. Our order does authorize interest on the utilities' balancing and memorandum accounts, and we establish a procedure by which a water utility may broaden the coverage of its existing Water Quality Memorandum Account to recover new environmental costs. For the most part, however, we conclude that the existing method of economic regulation of investor-owned Class A water companies is sufficient to deal with the risks of fluctuating water sales and water quality costs. We find also that Class A utilities operating under existing regulations produce clean water, at rates deemed reasonable in general rate cases, and that these utilities earn sufficient revenue to meet utility costs and debt, and to provide an adequate return on investment. In short, we choose not to fix what isn't broken -- at least not through the methods developed in this record.

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7 Rate of return and return on equity, respectively, authorized for 1994 for Class A water companies are: Suburban (Whittier), 9.59% and 11% (D.93-01-0060); Citizens (Sacramento), 9.8% and 11.25% (D.93-01-026); Apple Valley, 11.31% and 11.35% (D.93-02-012); Cal Water, 10.19% and 11.5% (D.93-04-026); Great Oaks, 10.56% and 11.5% (D.93-04-061); San Gabriel (L.A.), 10.32% and 11.10% (D.93-09-036); SoCal Water, 9.42% and 10.65% (D.93-09-074); Cal-Am (Monterey), 9.42% and 10.65% (D.93-10-038); Park (Central Basin), 10.31% and 10.5% (D.93-12-001).

Prior Decisions

5. Further Proceedings

We recognize that there are significant issues facing water providers that have not been examined in this proceeding. California faces water supply shortfalls projected in the range of 1 to 3 million acre-feet by the year 2020, even after considering all reasonable water supply actions. In his appearance before the full panel of the Commission on April 8, 1994, Director David N. Kennedy of the Department of Water Resources expressed the view that public and investor-owned water utilities throughout California must implement demand management programs in order to meet their customers' current and future water needs with reliability. We agree.

At our direction, the Commission's Water Utilities Branch in April 1994 published the first draft of a report addressing the question of whether existing rate design -- that is, rates tied to forecasted sales, as determined in general rate cases -- best serves the needs of the public. Among other things, Branch reviewed marginal cost rate design as a means of encouraging water conservation.[8] It also considered water reclamation as a means of preserving supply, and the need for assistance for low-income families as water rates increase. Branch's report is one of the ways in which the Commission is responding to Assembly Bill 2815,

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8 DRA witness Lee-Whei Tan testified during the Risk OII on potential benefits of marginal cost-based rates (that is, rates based on actual costs of producing and delivering water) and multi-tiered rate design (that is, increased charges with increased use). Both DRA and a utility witness testified, however, that calculating marginal costs for water companies is a complex task, since sources of water vary widely, and the subject requires more study before firm recommendations can be made to the Commission. (Ex. 45A, p. 5.)

the legislative mandate passed in 1993 and now codified as Public Utilities (PU) Code §§ 701.10, 727.5, and 739.8. Since Assembly Bill 2815 did not become effective until late in this investigation, many of the issues raised by this legislation have not been adequately explored in this proceeding.

During the panel hearing before the Commission, water utilities compared their current situation to that faced by California's electric utilities during the late 1970s. Assuming for the moment that this argument has merit, then it is appropriate for the Commission to examine whether any of our current regulatory approaches to electric utilities may not also be applicable to California's water utilities. These would include the use of marginal cost pricing, ERAM balancing accounts, and the potential use of performance-based ratemaking, or PBR.

Since the early 1980s we have almost completely adopted the use of marginal cost-based rates for our electric utilities in order that customers can know the true cost of the energy services that they receive. This allows customers to make better choices in deciding to invest and/or utilitize conservation and demand-side management activities. We have also begun to rely on the use of performance-based ratemaking. Under PBR proposals currently pending before the Commission, we would replace general rate case review with the use of broad-based performance indicators. In the electric industry, this has generally resulted in proposals to index rates to changes in the rate of inflation adjusted downward to reflect improved productivity.

There is no reason why the Commission shouldn't consider the use of appropriately designed marginal cost and PBR mechanisms

for our water utilities.[9] Although we reject in this decision the water utilities' request to create their own ERAM-type of balancing account (the W-RAM), we will not rule out the possibility of developing some limited form of W-RAM mechanism that ensures that water utilities have the proper incentives to engage in water conservation activities. As with the electric utilities, however, we are concerned over the disincentives to operate efficiently that a broad-based W-RAM account could provide.

These are subjects that were not addressed substantively in the Risk OII, because the focus in the Risk OII has been on risk and revenue protection for small and large water companies. In addition to addressing those matters, our order today provides for a new proceeding -- either a rulemaking or an investigation, or a combination of the two -- that will deal with water rate design, conservation, performance-based ratemaking, and the requirements of Assembly Bill 2815. Specifically, we direct the Water Utilities Branch, within 60 days, to conduct a workshop for water utilities, ratepayers, and other interested parties to devise recommendations that consider the following subjects:

* Should marginal cost and/or a tiered rate design replace rate design tied to forecasted sales in order to encourage economic efficiency and water conservation?

* Should performance-based ratemaking be developed for water companies in order to reduce regulatory lag and provide incentives for improved utility performance?

* What further incentives, if any, should the Commission consider to encourage development of water conservation?

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9 See Comments of Commissioner P. Gregory Conlon before the Spring Meeting of the California Water Association, Sacramento, California, May 2, 1994.

* What incentives, if any, should the Commission consider to further encourage water reclamation?

* What form of assistance should the Commission consider to assist low-income families when water rates increase?

* What further steps should the Commission implement to carry out the directives of Assembly Bill 2815?

* Should the Commission consider the establishment of customer charges based on the sizing of the water system to meet fire flow safety standards?

Our order directs the Water Utilities Branch to develop for our consideration a draft Order Instituting Rulemaking or a draft Order Instituting Investigation, or a combination of the two, addressing these and other related issues. We want to move promptly on this matter. We direct that the workshop or workshops be conducted within 60 days of the effective date of this order, and the draft OIR/OII be before us within 90 days so that we may implement rulemaking or begin an investigation of new ratemaking policies.

5.1 Connection Fee Rulemaking

In the Connection Fee Rulemaking,[10] we determined that water company districts with 2,000 or fewer connections should be authorized to collect a connection fee covering the actual cost of installing a new connection. This shifts the cost of a new connection from ratepayers in general to the party requesting the new service.

10 Order Instituting Rulemaking 90-07-004 on the Commission's own motion to revise General Order 103 and Water Tariff Rules 15 and 16. The order was filed on July 6, 1990.

We also authorized small water companies and districts to accept "facilities fees" from individuals to offset the cost of plant and facilities required by new connections. In Phase One of the Risk OII, we set up the procedure by which facilities fees are to be calculated and approved,[11] and we directed that such funds be kept in a segregated bank account and used for additional plant without an increase in rate base. Risk OII (Phase One), D.93-11-066.

Authorization to assess these fees applies to water utilities designated as Class D (fewer than 500 connections) and Class C (500-2,000 connections) and to those Class A and Class B districts with 2,000 or fewer connections. Our hearings determined that the cost of providing new service was especially burdensome for these smaller utilities.

5.2 Risk OII (Phase One)

We conducted eight days of hearings in Phase One of the Risk OII, taking testimony from 21 witnesses, including operators of 10 small water companies. Based on evidence presented by Branch and by the California Water Association, we concluded that many of the more than 200 investor-owned small water utilities in California face an economic crisis that threatens their ability to continue providing service. We stated:

> "(T)raditional ratemaking policies that are satisfactory for large water utilities are only sporadically successful in coping with the problems of Class D...and Class C water companies....Most of these companies, often

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11 Under the procedure, a water company seeking a facilities fee submits a request to the Water Utilities Branch, supporting it with a showing of the additional operating facilities needed for actual or projected growth. Once approved by Branch and by the Commission (through an advice letter filing), the facilities fee collected by a utility is to be kept in a segregated bank account and credited to contributions in aid of construction at the time the fees are spent for additional plant. (D.93-11-066, slip op. at 7.)

> one- or two-person operations serving a few dozen neighbors in remote areas, rarely file for regulatory review and rate adjustments.... As a result, on average, Class D companies have a negative rate of return, and Class C companies are earning less than half the rate deemed necessary for them to stay in business in the long term. Many of these companies already require plant improvements such as wells and chlorinators. New federal and state water quality regulations will impose additional capital requirements within the next three to five years." (D.92-03-093, slip op. at 2.)

We directed broad relief to ameliorate these problems. We adopted a measure to permit Class D and Class C water companies earning less than their authorized return to obtain rate relief based on a consumer price index. We implemented procedures to encourage small water companies to file with the Commission for periodic regulatory review. We simplified rate filings for Class B utilities. Specifically, D.92-03-093 and D.93-11-066 adopted the following recommendations:

1. All Class C and Class D water companies not earning allowed rate of return and not already entitled to rate case increases were authorized to file by advice letter for a step increase based on the most recent increase in the Consumer Price Index for All Urban Consumers. Such increases will be permitted annually so long as projected revenue does not exceed a utility's last allowed rate of return.

2. All Class C and Class D water companies were authorized to establish extraordinary event memorandum accounts to track unanticipated repair costs necessary for service to customers. Utilities were authorized to file for recovery of such costs following reasonableness review.

3. The guideline rate of return for water utilities serving fewer than 500 customers was increased from a range of 10.50-11.00% to 13.35-13.85%, while the range for

utilities serving between 500 and 2,000 customers was increased to a range of 11.05-11.55%.

4. Class D water companies were authorized to file rates designed to recover up to 100% of fixed costs in the service charge portion of their rates. Class C water companies were authorized to file to recover up to 65% of fixed costs in the service charge. (Larger water utilities are limited to recovering 50% of fixed costs in the service charge.)

5. As part of the advice letter filing procedure for Class B, Class C and Class D water utilities, we established an informal mediation procedure (dubbed the Judge Wapner procedure) before an administrative law judge to resolve disputes between a utility and the Commission staff.[12]

6. To improve the ability of small water companies to obtain loans for capital improvements, we authorized a procedure by which the utilities may include repayment amounts in rates at the time of construction of new facilities.

7. We approved an agreement by staff and utilities to simplify the data package that small utilities must complete when seeking rate review, and we approved a standard procedure for payroll review.

These changes in Phase One of this proceeding were designed in part to provide alternatives for operators who might otherwise simply abandon small water systems. However, we continue to adhere to our policy (Resolution M-4708, dated August 28, 1979)

12 The procedure has been requested by a small utility only once in the past two years. In proposing a procedure of this type, the Water Branch predicted that it would not be used frequently, but its availability would give small water companies a greater sense of fair play in negotiating with staff on advice letter rate filings.

encouraging acquisition of troubled small water companies by healthy larger companies or by public water utilities.

5.3 Drought Investigation

The Commission instituted the Drought Investigation on March 8, 1989, to mitigate effects of what was to become a six-year drought. While consolidated with this Risk OII for administrative efficiency, the Drought Investigation proceeded in independent hearings. Final comments were received on September 17, 1993. In four years of hearings, workshops and consultations, the Commission in a series of decisions adopted policies to deal with the effects of drought. Among the actions taken:

* In D.90-07-067, 37 CPUC2d 124 (1990), we authorized all water utilities to establish memorandum accounts to track expenses and revenue losses caused both by mandatory rationing and by voluntary conservation programs. We reasoned that without some form of revenue protection, utilities could not be expected to launch aggressive water conservation programs.

* As a condition for recovering lost revenue tracked in the memorandum accounts, we required that each Class A water utility develop and file a water management program addressing long-term strategies for managing water resources. Water management programs now have been filed for 60 water districts. We require that each program be reviewed and updated during general rate cases after January 1, 1994.

* In D.91-10-042, 41 CPUC2d 521 (1991), we adopted procedures (including an across-the-board reduction of 20 basis points to reflect reduced risk) by which water companies may recover through surcharge the costs and sales losses booked to the memorandum accounts. No surcharge may be imposed until our staff has reviewed memorandum account entries for reasonableness.

* On December 11, 1992, the Commission joined with other state agencies and with utilities in signing a Memorandum of Understanding Regarding Urban Water Conservation in California. The memorandum endorses water conservation practices, called Best Management Practices, that in the case of Commission-regulated utilities are deemed prima facie reasonable when included in a utility's water conservation program.

* The California drought ended with winter rains in 1992-1993, and we closed the Drought Investigation in D.94-02-043 (February 16, 1994) after examination of whether any drought remedies should be retained in anticipation of the next drought. We declined to adopt permanent drought remedies, but we directed that Class A water companies continue to develop their water management programs and review the programs as part of their general rate cases.

Phase Two Hearings

6. Defining Class A Water Company Risks

Utilities presented three consultants to describe the unreliability of wholesale water supplies in California, the increased costs of federal and state water quality regulations, and the resulting increase in sales risk facing Class A water utilities. The witnesses were Dr. William W. Wade, a principal in the consulting firm of Spectrum Economics, Inc.; John M. Gaston, senior consultant for water quality and treatment for the CH2M Hill Consulting Engineers; and Dr. Roger A. Morin, professor of finance at Georgia State University. DRA presented two consultants to comment on the utilities' presentations. They were John E. Cromwell and David Miller, both vice presidents, of Wade Miller Associates, Inc., an Arlington, Virginia, consulting firm.

6.1 Risk of Endemic Water Shortage

California's 14 Class A water companies have 60 utility districts, most of them in the Los Angeles and San Francisco Bay areas. (Ex. 1A, Fig. 5.) Customers of these utilities are 71% residential, 23% commercial and 6% industrial. About 46% of the water produced by Class A utilities is purchased wholesale through California's major water supply projects. About 73% of the purchased water comes from three major wholesalers, the Metropolitan Water District of Southern California (49%), Santa Clara Valley Water District (15%) and the San Francisco Water Department (9%). The wholesalers, in turn, depend on four major water projects. These are the Colorado River Aqueduct, which supplies Metropolitan; the State Water Project, which supplies Metropolitan and Santa Clara; the Central Valley Project, which supplies Santa Clara; and the Hetch Hetchy system, which supplies Santa Clara and San Francisco.

Wade testified that there have been no additions to the state's backbone water supply since the State Water Project was begun 30 years ago. Since that time, however, the state's population has grown from 17.5 million to 30.5 million, and 7.5 million jobs were added in urban areas. (Ex. 41A, p. 11.) Meanwhile, each of the state's water supply projects has been compelled to reduce supply. Based on various court decisions,[13] Arizona is taking Colorado River water that otherwise might go to California. Increased demand for water for environmental protection has reduced the supply of the State Water Project.[14]

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13 See, e.g., Arizona v. California (1963) 373 U.S. 546.

14 A concern of both federal and state agencies is the process of diverting water to restore the San Francisco Bay/San Joaquin-Sacramento Delta. A Bay/Delta water rights decision by the State

(Footnote continues on next page)

Recently, the winter-run chinook salmon and the Delta smelt, because of substantial population declines, were listed under the state and federal Endangered Species Acts, imposing restrictions on Delta exports. The Central Valley Project Improvement Act (P.L. 102-575), passed in 1992, reallocates more than 1 million acre-feet of Central Valley supplies for fish and wildlife.[15] The Hetch-Hetchy system is constrained by lack of storage facilities, which limits the amount of water available to the San Francisco Water Department.

About 51% of water sold by Class A water utilities comes from groundwater pumping. Wade testified that increased use of groundwater is not an answer to the supply problem for two reasons. First, as pumping increases in areas like Greater Los Angeles, so does the requirement for imported water to help recharge the underground aquifers.[16] Second, many groundwater basins are adjudicated and pumping rates are limited by law. Pumping rates in the San Gabriel Basin, for example, are limited so that aquifer

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(Footnote continued from previous page)
Water Resources Control Board was issued late in 1992 but was later withdrawn by Gov. Wilson. See also, National Audubon Society v. Superior Court (1983) 33 Cal.3d 419; California Trout v. State Water Resources Control Board (1989) 207 Cal.App.3d 585.

15 (Ex. 1A, App. A, pp. A-2 to A-3.) See also Draft Bulletin 160-93, California Water Plan Update (November 1993) of the California Department of Water Resources.

16 Wade testified that basins in Greater Los Angeles use imported supplies for between 10 and 50% of the aquifer recharge, depending on hydrologic conditions. If imported water supplies are curtailed, groundwater recharge is interrupted and water levels in these basins drop.

levels do not drop to a level that would encourage seawater intrusion or other contamination.

Assuming no increase in water supply, and assuming continued growth in the demand for water, Wade concludes that wholesalers within the next decade will have to restrict delivery of water to retail water companies, and retail water companies will have to restrict water use by consumers. He further concludes that this will mean reduced revenue for Class A water companies. Wade states:

> "Historically, the CPUC has set water rates based on a normal distribution of weather-induced demand side changes assuming 100 percent supply reliability in all years. The Commission has believed that although a utility might undercollect revenue in wet years because of a decrease in outside water use, this would be offset by increased sales and revenues in dry years....
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> "This was a reasonable analytic assumption in the past, when supply was in all cases sufficient to account for the cyclical variability of demand....The decreased water [supply] reliability has destroyed the symmetry in the distribution of expected sales....Although demand/sales continue to decline under wet weather conditions, future sales will be constrained under dry weather conditions. This is not drought induced; rather, it reflects the fact that urban water agencies are outgrowing their normal supplies." (Ex. 1A, p. 26.)

DRA's witnesses agree that there is a less reliable supply of water for California's growing population. However, DRA witness Miller criticizes Wade's analysis on the basis that, first, it fails to address alternative supply sources or the possibility of political allocations that could increase supply, and second, it does not consider effects of conservation or pricing strategies in reducing demand for water. Miller said:

> "Such an analysis is necessary to assess the true risk impact associated with unreliable

> water supplies. Otherwise, it is assumed that retail utilities are unable to counteract any of the risk introduced by decreasing wholesale supplies, which is an incorrect assumption." (Ex. 8A, p. 2-1.)

Moreover, according to Miller, the utilities imply that the economic effects of an endemic water shortage cannot be dealt with in a general rate case. On the contrary, Miller said,

> "[E]xpected future reductions in supplies can be estimated with at least some degree of certainty. Therefore, a large portion of the impact of chronic reduced supplies on average expected revenues is predictable and can be incorporated into utilities' sales forecasts, and into the Commission's review and setting of rates....[T]here is no reason to compensate utilities simply on the basis that water supplies are reduced. Instead, the regulatory mechanism should be used to pursuade utilities to improve their revenue forecasting to take into account supply-constrained conditions." (Ex. 8A, p. 2-3 (emphasis in original).)

6.2 Risk of Water Quality Costs

In Phase One of the Risk OII, the Water Utilities Branch termed the subject of water quality the most important and potentially the most costly issue facing the industry. In the Phase Two proceeding, Class A utilities introduced evidence showing that their costs for additional plant and facilities to comply with the regulations now in effect will range from a low of $51 million to a high of $200 million, depending on level of contaminants. (Ex. 9A, Table 4.) What is not certain is when these costs will be incurred, and over what period of time.

John Gaston, a consulting engineer on water quality and treatment, testified that federal regulations will have the greatest impact on large water utilities. The 1986 Safe Drinking Water Act amendments (Public Law 99-339, June 19, 1986) require the Environmental Protection Agency (EPA) to establish regulations applying to potable water that would test and limit lead and

copper, radionuclides, surface water filtration, volatile organic chemicals, coliform bacteria and disinfection by-products. Gaston testified that, among other things, this means that:

* Utilities must monitor supply for lead and copper and install required treatment units by January 1997. For a typical well, treatment units cost $19,000, with annual operating costs of $8,500. The major cost impact will be on utilities with multiple wells that cannot be interconnected to a single corrosion control unit.

* The coliform rule, requiring disinfection through chlorination, became effective in California in 1992. The rule is two to five times more stringent than the previous version. The primary cost impact will be on utilities using groundwater. Capital cost for disinfecting equipment is $30,000 to $75,000 per well,[17] with annual operating costs of $16,200. Gaston estimates that minimum capital costs for treatment units will be as much as $900,000 for California Water Service Company and $500,000 for San Jose Water Company. At least seven Class A water companies are not affected.

* Compliance with the surface water treatment rule was required in June 1993, but extensions may be granted for up to three years. Water utilities that already have surface water treatment plants will be required to improve filtration and disinfection; new facilities are required for utilities without treatment plants. Gaston states that at least five Class A water companies are affected, and likely costs are $5 million for Southern California Water Company; $1.5 million for San Jose Water Company; $1 million for

17 The cost estimate for a disinfection unit using chlorine and a containment system is $30,000; if gaseous chlorine is used, with necessary safety features, the capital cost estimate is $75,000 per 1,000-gpm well.

California Water Service Company; $800,000 for California-American Water Company; and $300,000 for San Gabriel Valley Water Company.

* The disinfection and disinfection by-products rule is to become final in 1995 and requires more stringent disinfection of surface water. According to Gaston, a worst-case scenario would require capital expenditures of $72 million by Class A water companies for changes in surface water treatment facilities. Hardest hit in this estimate would be California Water Service Company, $23 million; San Jose Water Company, $19 million; and San Gabriel Valley Water Company, $10 million.

* The radionuclide rule, proposed recently by EPA, will affect systems with wells that exceed a proposed maximum contaminant level of radon. Treatment of choice is air stripping, which requires an air stripping tower with fan, treated water reservoir, distribution system pump station, and disinfection. Capital cost estimates for a typical 1,000-gpm well are $94,000.

State-mandated water quality requirements will add additional costs. The California Safe Drinking Water Act of 1989 requires large water companies to pay a fee to support development of a state-wide Water Quality Control Plan. Utilities also are required to conduct water quality testing on at least an annual basis, prepare if necessary a Water Quality Improvement Plan, and pay a fee of from $6,000 to $27,000 to the Department of Health Services. Assembly Bill 2158 (Costa 1990) requires water utilities to pay an annual fee of from $7,000 to $24,000 for water quality inspections by the state.

Park Water Company's director of water quality testified that compliance costs for his company are likely to be even higher than Gaston's estimates. The proposed EPA standards for radon, with compliance now scheduled for 1997, could cost Park as much as

$7.2 million for its Apple Valley Ranchos subsidiary and as much as $3.2 million for its Santa Paula subsidiary. (Ex. 19A.) These are capital costs. They do not include operating costs or the cost of buying real estate on which to place new facilities. Costs of a new sulfate rule, with compliance also scheduled for 1997, could run between $1.2 million and $4.3 million. On information then available, Park estimated potential capital costs for water quality compliance of as much as $24.8 million before the turn of the century.

Park's testimony, however, came before the Commission's recent decision in Re Jess Ranch Water Company, D.94-01-041 (January 19, 1994), where Park Water's acquisition of a new source of water was approved as part of an asset purchase agreement. Testimony in that case suggests that the ability of Park to mix existing and the newly acquired sources of water could mean a reduction of as much as $7 million in capital costs of EPA compliance. (D.94-01-040, slip op. at 6.)

DRA's consultants state that Gaston's estimate of potential Safe Drinking Water Act costs and dates of compliance "represent...as reasonable an assessment...as possible at a generic level." (Ex. 8A, p. 1-1.) They contend, however, that as applied to specific Class A utilities, the data is misleading and overstated. Based on responses to a discovery request dealing with four current EPA standards, DRA calculates that actual costs for both capital investment and annual operating expense are below the Gaston estimates in all but two categories. It presents a summary of the results (in millions of dollars) as follows:

	Coliform Rule	Surface Water Treatment	Lead & Copper	Organic Chemicals
Capital Costs				
Gaston Estimates	$2-$43	$ 9	$2-$18	$37
Actual Cost to Date	$2	$13	$.4	$ 8
O&M Costs				
Gaston Estimates	$1-$9	No estimate	$.9-$8	$ 2.6
Actual Cost to Date	$.8	$.7	$.3	$ 1.2

Utilities for the most part already are in compliance with new lead and copper standards. In the case of other standards, including the radionuclide and disinfection by-products rules, utilities have obtained extensions of time or revision of compliance dates. The EPA and the California Department of Health Services consider extensions or other relief when a utility is able to show that costs significantly exceed benefits of strict compliance with a particular rule. (Ex. 10A, pp. 5-6.)

Utilities state that DRA's criticism goes essentially to when compliance costs will be incurred, not to the fact that these costs will in fact be incurred eventually -- thus increasing revenue risk. Moreover, utilities note that the Gaston estimates do not include related costs such as acquisition of land for new plant or renovation costs related to new facilities. DRA's consultant agreed that these "infrastructure" costs can double the estimates for EPA compliance. (Tr., pp. 1840-41.)

6.3 Assessment of Increased Risk

All parties agree that Class A water companies face increased financial risk because many of them will be required to make large capital investments in equipment required to comply with federal and state water quality requirements. While these capital investments will increase rate base (and therefore increase return on rate base), they will not produce increased sales.

Utilities sought to quantify this risk through a computer model developed by financial witness Roger Morin. Morin concluded

that the new regulations will increase utility fixed costs (operating leverage) and debt financing (financial leverage). Increased fixed costs and increased debt financing mean increased risk, which in turn justify a higher return on equity. Morin estimates that Class A utilities will require increased equity return of 120 to 190 basis points (that is, 1.2 to 1.9 additional percentage points) to retain financial strength. In other words, a Class A water utility now earning an 11% return on equity would require a 12.2 to 12.9% return in order to attract funds necessary for increased capital investment.

To reach this conclusion, Morin conducted a three-step analysis. First, he examined "risk indicators," comparing trends in the water industry with those in the electric industry. He concluded that water utilities because of their size have less market visibility than the larger electric utilities. Water utilities face relatively higher capital investments than electric utilities. And while electric utilities can generate most of their capital funding internally, Morin found that water utilities can generate only about half their funding internally, and must borrow the rest. Morin testified that water utilities have an increasing rate base but declining earnings, whereas electric utilities have a stable rate base and increasing earnings. (Ex. 5A, RAM-10.) According to Morin, these trends indicate that "(t)he risks of water utilities in absolute terms and relative to electrics are increasing...we are facing fundamental change in the [water] industry." (Tr., p. 1457.)

As the second step in his analysis, Morin sought to quantify increased risk through a capital asset pricing computer model. The CAPM model is well known in ratemaking analysis, but it has not been used frequently in Commission proceedings because of the number of judgment assumptions that it requires. The CAPM equation asserts that a utility's rate of return should be equal to a risk-free rate of return (the rate, say, for U.S. Treasury bonds)

plus a "risk premium" demanded by investors for that type of utility. The computer comes into play in measuring the risk premium, which is called the "beta risk," or simply "beta." The beta is measured by calculating variability in stock price for a utility resulting from increased operating leverage and financial leverage, and comparing that to the variability of the overall market.[18]

Morin initially used higher EPA costs from an early estimate prepared by Gaston. As a result, the CAPM model showed an increase in beta (assuming an 85% cost recovery and a two-year regulatory lag) justifying an additional 160 basis points in return on equity. (Ex. 5A, pp. 77-78.) Morin later revised his figures to reflect Gaston's final EPA cost estimates, concluding that the corresponding increase in returns on equity fell in a range of 120-130 basis points for some utilities and 180-190 basis points for others. (Ex. 6A, pp. 18-19; Tr., p. 1517.)

Morin testified that the results of his CAPM model are corroborated by Standard & Poor's, the bond-rating agency. In

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18 Morin's capital asset pricing model is expressed as follows:

Expected rate of return = r = rf + B(rm - rf), where

rf = the risk-free rate
B = Beta
rm = the market rate.

The CAPM defines a stock's expected return as the risk-free rate, rf (that is, rate of return on long-term Treasury securities), plus a premium, computed as the risk of the security relative to the risk of a broad index of market stocks (beta), times the difference between the average market rate, rm, and the risk-free rate. The beta of a stock is calculated by a formula that compares the variability in a stock's return, relative to the variability in the return of the over-all market (usually represented by a broad market index such as the S&P 500).

1992, S&P revised its water utility benchmarks upward,[19] bringing them closer to those of energy utilities. S&P explained the revisions as follows:

> "The more stringent standards were implemented as a result of S&P's conclusion that credit risk has escalated in the water utility industry in recent years due to significant challenges related to developing future water supplies and assuring the quality of existing supplies...
>
> "[More stringent water quality standards] will result in significant capital additions on top of already escalating spending on distribution infrastructure. Financing these large rate-base additions - which are nonrevenue-producing assets - will be difficult. Internal cash generation is weak, with low depreciation rates (usually about 2% versus around 3% for electric utilities), and low authorized return on equity. As a result, dependence on external financing and rate relief requirements will intensify....Poor internal cash generation along with modest demand growth of under 1% will require state utility regulators to play an even more significant role in the future financial well-being of the industry." (Ex. 5A, pp. 22-23.)

DRA's consultants subjected the Morin model to 200 separate runs to test input assumptions. They maintain that the model is invalid in measuring the increased return that water utilities will require to compensate for increased risks brought on by EPA costs. According to DRA, the Morin model predicts the same

19 Under the S&P changes, more equity and less debt, and/or greater coverages, are required for water utilities for the same bond rating now than in the past. For example, the total debt to total capital benchmark for a single A rating has been revised from 52-60% to 48-56%. The pre-tax interest coverage for a single A rating has been revised from 2.0-3.5 to 2.25-3.75 times. (Ex. 5A, pp. 22-23.)

increase in return on equity regardless of the amount of water quality costs (even zero costs) assumed over a 10-year period. It follows, therefore, that EPA costs do not drive the model's results. According to DRA, the real driver in the model is an assumption that 15% of utilities' revenue requirements will be disallowed by the Commission for each year in the 10-year forecast period. According to DRA's consultants:

> "When [we] ran the Morin Model with the assumption of 100 percent allowance [of utility revenue requirements], holding all other assumptions constant, only 25 percent of the predicted increase in required [return on equity] remained. The other 75 percent vanished. This test proves...that the majority of the increased risk that Dr. Morin is modeling is actually the financial effects of costs being disallowed by the Commission." (Ex. 53A, p. 9 (emphasis in original).)

According to DRA, Morin also assumes steadily increasing costs of utility service unrelated to EPA, and these, in combination with other model assumptions, account for the remaining 25% of the model's estimate of the increase in required return. In summary, DRA's witnesses said:

> "The Morin Model contains an implicit assumption that no action is taken by the utility or the Commission to reduce the alleged increase in risk throughout the period of analysis. No rate relief is granted, the utility does not manage or control costs, and the Commission does not adjust the utility's ROE....Because interim ROE adjustments are not granted and the company takes no action to reduce costs, the financial condition of the utility deteriorates, and the magnitude of the require increase at the end of the period is significantly greater than it would have been if periodic adjustments were made. This...set of assumptions does not mimic reality [and] contributes to the unreliability in the outyear estimates of beta, further invalidating the claim that the difference between starting-year and ending-year values of beta is a measure of increased risk." (Ex. 53A, pp. 16-17.)

Utilities respond that the Morin model forecasts the return investors will require over time absent other risk-reduction mechanisms, and increased return should occur gradually over time.[20] Moreover, utilities say that DRA errs in its analysis by failing to recognize the regulatory lag assumption in the Morin model. The model assumes that the Commission on average will disallow 15% of a utility's claimed revenue requirements, and that there will be a two-year regulatory lag in recovery of costs. This assumption, according to utilities, mimics reality and reflects investors' recognition of "imperfect regulation." Had DRA properly recognized regulatory lag in its 200 computer runs, utilities argue, they would have found that the Morin model produces valid forecasts of increased risk brought on by EPA costs.

Proposed Changes in Regulation

7. Changes Proposed by Utilities

Utilities state that the Commission's method of regulating Class A water companies has worked satisfactorily in the past. Projected sales and expenses are forecast in a three-year rate case. Forecasted sales are sometimes high, sometimes low, depending in part on whether the utility experiences wet years or

20 However, the suggestion that Morin proposes a phased increase over time in rate of return appears in fact to have been an afterthought in his testimony. On cross-examination, Morin testified:

> "Ms. Jackson: And it would be true, would it not, that if we gave the 160 basis points and the schedule for compliance...lagged more than you anticipated in your model...that shareholders would then get a windfall?
>
> "Dr. Morin: Yes. In fact, you have given me an idea I hadn't thought about. Perhaps rate awards or increases in relative risk should be reflected on a relative basis in keeping with the developments on scheduling compliance." (Tr., pp. 1581-82 (emphasis added).)

dry years, but the assumption is that these forecasts even out over time. Utilities in the long run thus earn sufficient revenue to meet capital requirements and to provide a return sufficient to attract investors and satisfy lenders.

However, utilities believe that they are approaching a time in which sales forecasts consistently will fall short because of unavailability of water. At the same time, EPA and state water quality requirements may mean massive new capital expenses. The result, according to utilities, is increased sales risk; that is, the sales forecast in a utility's general rate case will not be met, and utilities will earn less revenue than they need to operate efficiently. To counter that, utilities recommend that the Commission consider one or more of the following regulatory reforms:

* Authorize a revenue adjustment mechanism similar to the ERAM available to electric utilities to compensate for under-collection or over-collection of revenue from forecasted sales levels.

* Alternatively, provide for up to 100% recovery of a water utility's fixed costs through service charges.

* Adopt increased rates of return on equity as a response to water quality risk problems of 130 basis points for low-risk companies, 160 basis points for medium-risk companies, and 190 basis points for high-risk companies on a lagged schedule in relation to each company's water quality compliance requirements.

* Alternatively, authorize all water utilities to establish broad water quality memorandum accounts to track and later recover compliance costs.

DRA opposes these changes and proposes its own alternatives (discussed below). A brief discussion of the utility proposals follows:

7.1 ERAM

The Commission adopted the Electric Revenue Adjustment Mechanism in a 1981 rate case decision for Pacific Gas and Electric Company (PG&E). (In re PG&E Co. (1981) 7 CPUC2d 349.) The decision dealt with a crisis in utility finances brought on by a shortage in oil and a near doubling of oil costs and interest rates. Environmental laws made it difficult to site new power plants. The ERAM was intended to encourage energy conservation and help provide financial stability. (Ex. 1A, p. 41; 7 CPUC2d at 392-94.)

An electric utility granted ERAM authority keeps track of the difference between actual revenues and the revenues forecast in its last rate case. At intervals, the over- or under-collection is divided by projected sales in the next period, and rates are either increased or reduced to meet forecasted levels. The result, according to a witness for the water utilities, is that

> "changes in sales do not affect earnings; net revenues and utility finances are stabilized. [Moreover, ERAM] impacts conservation by eliminating the utility's concerns over unpredictable decreases in sales. Without ERAM, utilities have no incentive to reduce sales. Once rates are set, reduced sales result in decreased earnings. With an ERAM, the level of sales forecast becomes less important since rates will recover revenue requirements regardless of the achieved level of sales." (Ex. 1A, pp. 42-3 (testimony of Dr. William W. Wade).)

With allowance for their smaller size, the water utilities equate the energy crisis of the 1970s and 1980s with the water shortages and sales risks they believe they are likely to face in the next decade. They argue that an ERAM is the "most effective mechanism to deal with this sales risk...." (California Water Association Brief, p. 41.)

DRA's consultants criticize an ERAM approach to sales risk. First, they said, much of any chronic water supply shortage in the state will be predictable and can be incorporated into utilities' sales forecasts during rate cases. Second, an automatic revenue adjustment can reduce management's incentive to operate efficiently, since any shortfall in revenue would be recovered in the next rate period. (Ex. 8A, p. 2-3.) A DRA witness who had participated in the energy hearings in the 1970s was more harsh in his criticism of ERAM, terming it a "Band-Aide approach" to crisis that has contributed to "some of the highest energy rates in the nation." The witness said:

> "There's no question that [an ERAM] will solve the problem of sales risk driven by supply problems. [But] it will solve [it] the same way that DDT solves the problem of doing away with insects; that is, it will create a lot of other problems that we don't intend. [I]t will eliminate the incentive that utility management has to do effective short-term and long-term supply planning...the last thing you'd want to do [when] you're confronted with supply problems." (Tr., p. 2860 (testimony of Project Manager William D. Thompson).)

DRA maintains that an ERAM eliminates sales risk whether predictable or not. In the division's view, the Commission should impose risk on regulated utilities in order to encourage efficiency and mitigate risk at that point where forecasts used in setting rates are unreliable and would cause material financial harm to the utility. (Ex. 21A, p. I-14.)

7.2 Recovery of Fixed Costs in Service Charge

In Re Water Rate Design Policy (1986) 21 CPUC2d 158, the Commission adopted a "flatter" rate design policy permitting water

utilities to recover up to 50% of their fixed costs[21] in service charges. Previously, the service charge was designed to recover 30% to 35% of fixed costs, with the remainder recovered in a water company's use charges. In Phase One of this Risk OII, we adopted the recommendation of the Water Utilities Branch to authorize up to 100% of fixed costs in the service charge for Class D water companies (fewer than 500 connections) and up to 65% for Class C water companies (500-2,000 connections). (D.92-03-093, slip op. at 30-31.)

DRA's witness testified that the Commission should consider increasing fixed cost recovery in the service charge for a specific utility on a showing of need, but that a generic increase for all Class A utilities would decrease incentives for efficiency and, without a corresponding decrease in rate of return, would provide a windfall for those utilities that do not face increased sales risk in the near future.

7.3 Increased Return on Equity

Utilities argue that if steps are not taken to reduce the increasing financial risk borne by Class A water companies, then that risk should be recognized by increasing rates and increasing return on equity. Otherwise, investors will look elsewhere and lenders will demand higher interest on their loans. Based on results of the Morin computer model, return on equity should be increased from 1.3 to 1.9 percentage points to recognize the substantial increased costs that large water companies will bear in complying with Safe Drinking Water Act requirements.

DRA contests the reliability of the Morin model. At best, its witnesses said, the model is highly sensitive to the

21 Fixed costs include maintenance expense; transmission and distribution expense; customer account expense, excluding uncollectibles; administration and general expense; rent; depreciation; property tax; and gross return on investment. (See 21 CPUC2d at 160.)

timing of water quality requirements, and the evidence shows that timing changes are frequent. DRA maintains that a generic increase in return on equity makes no sense for those utility districts not immediately affected by Safe Drinking Water Act costs.

7.4 Water Quality Memorandum Account

As another alternative, utilities propose establishment of a broad water quality memorandum account. Under this proposal, a Class A water company would still be obligated to include in its general rate case an estimate of all known costs of complying with water quality requirements. Those costs, as well as any unanticipated costs, would be tracked in the memorandum account. If rate case estimates were more than the amount actually spent, ratepayers would recover the difference. If costs for compliance exceeded the amount estimated in the rate case, a utility would recover the difference in rates in its next general rate case.

Under the proposal, capital costs would be tracked in order to measure an allowance for funds used during construction, or AFUDC, and this cost (an interest rate net of taxes) would be added to rate base at the time the capital asset was put into service. Alternatively, the more traditional CWIP (construction work in progress) measure could be used to estimate the amount of construction during a test year, with that amount then included in rate base. The utilities' witness testified that the memorandum account would simply track water quality costs, subject to later approval by the Commission, and it would not interfere with general rate case projections, adding:

> "[T]here is an incentive for the water company to include everything it can in the general rate case in order for it to start including [these costs] in rates....I would envision that the memorandum account could be established the same way as the Commission established the drought memorandum accounts....And before the utility can recover a dime out of the memorandum account, it will be required to put forth a full justification for the costs and prudency of the costs that are incurred."

(Tr., pp. 3718-19 (testimony of Francis S. Ferraro).)

DRA opposes broad memorandum account authority for water quality compliance costs. Its witness testified that normal lead time for Safe Drinking Water Act compliance is 6 to 13 years,[22] and this is more than sufficient for utilities to plan their expenses and include them in a general rate case. The risks of a utility incurring compliance costs that cannot be dealt with in a rate case are slight, according to DRA, and can be dealt with on a case-by-case basis. (Ex. 50A.)

8. Discussion

In implementing this investigation, the Commission set forth 13 specific areas of inquiry regarding Class A water utilities. See Attachment B. In broader terms, it stated:

> "[T]he Commission wishes to investigate the general question: Do any of the financial and operational risks faced by small and large water utilities that are under this Commission's jurisdiction warrant changes in regulatory policies and/or programs? The regulatory obligations of the Commission require it to periodically analyze its ratemaking policies and procedures and consider alternatives that will enable the state's water utilities to consistently deliver safe and dependable supplies of water to the public at reasonable rates." (I.90-11-033.)

Class A water utilities have shown that they face significant new challenges. First, the state's sources of water

22 DRA's estimate of lead time is based on the following six-step timetable in promulgation of a water quality standard: (1) EPA issues informal draft rule for comments, 1 to 2 years; (2) first draft of rule appears in Federal Register for comment, 1 to 2 years; (3) second draft of rule appears in Federal Register for comment, 1 to 2 years; (4) final rule appears in Federal Register requiring action in 1.5 to 2 years; (5) California adopts a controlling parallel rule, 1.5 to 5 years; (6) utility compliance required. (Ex. 50A, Attachment A.)

are not keeping pace with the population. Absent some new source of supply or new methods of allocation, there will be more water supply shortages in the future. The second new risk is posed by federal and state water quality standards that will require substantial investment in new facilities. Class A utilities say that these two risks, chronic water shortages and the need to invest significant amounts of capital, justify fundamental changes in the Commission's method of regulating Class A water utilities.

As the proponents of these changes, utilities have the burden of showing that regulatory change is necessary. As the first step in meeting that burden, utilities must show that existing ratemaking procedures are inadequate to deal with chronic water shortages and resulting loss of revenue (if those circumstances occur) and increased capital costs for water quality. Utilities have not met that burden.

As DRA notes on brief, "[w]ater is the last real monopoly under the jurisdiction of this Commission." (DRA Reply, p. 3.) Virtually all other utilities regulated by the Commission face some degree of competition. Absent competition, our task in balancing ratepayer and shareholder interests becomes more important. On behalf of ratepayers, we encourage the lowest rates practical. On behalf of utilities, we have been guided for more than 70 years by pronouncements of the United States Supreme Court. In Bluefield Water Works & Improvement Co. v. Public Serv. Commission (1923) 262 U.S., 679, 692-93, the Court said:

> "A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to

> assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties."[23]

Since 1979, with the adoption of the Regulatory Lag Plan,[24] the Commission has encouraged Class A water companies to file rate case applications every three years. In a typical rate case, expenses (including costs of complying with water quality regulations) are estimated for two test years, as are the forecasted sales for those periods. Net earnings required to produce a fair return to the utility are then calculated by applying to rate base a rate of return found to be fair. The difference between the required net earnings and those that the utility would realize under existing rates, after adjustment for taxes, gives the total increase in gross revenues to be allowed for the two test years. The Commission then authorizes a third attrition year for which the utility can request attrition-related rate adjustments through an advice letter.

The Regulatory Lag Plan was adopted in part to reduce rate delay, establishing a 240-day schedule for processing Class A water company applications. In 1990, the Commission replaced the plan with a formal Rate Case Plan[25] that sought more efficiency

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23 Similar statements appear also in Federal Power Commission v. Hope Natural Gas Co. (1944) 320 U.S. 591, 603; Los Angeles Gas and Elec. Corp. v. Railroad Commission (1933) 289 U.S. 287, 319; United R. and Elec. Co. v. West (1930) 280 U.S. 234, 251.

24 Resolution No. M-4705, dated April 24, 1979.

25 Re Schedule for Processing Rate Case Applications by Water Utilities (1990) 37 CPUC2d 175. The Rate Case Plan for Class A water utility general rate applications is set forth as Appendix A to this rulemaking decision.

(214 days for a single district; 259 days for a filing for seven or more districts) by scheduling the start of Class A water company rate cases both in January and July. Under the plan, Class A utilities with the consent of DRA may file their applications at times other than every three years. In August 1992, DRA issued guidelines encouraging large Class A water companies to combine several contiguous districts in a single filing in order to reduce the number of general rate cases.[26]

Class A water companies in California are provided special rate relief for certain expenses that are beyond their control. The most important of these expenses are purchased power (electricity or gas), purchased water, and "pump taxes," or groundwater extraction charges. Through Expense Balancing Accounts in place for every Class A water company, increases or decreases in these costs are tracked on a monthly basis, and the difference is either collected from or returned to ratepayers through a rate offset adjustment. Class A utilities purchase 46% of their water from wholesale suppliers. If the price of purchased water increases because of scarcity, Class A utilities already are authorized to record and later collect that increased cost from ratepayers. About 51% of Class A water comes from pumping. Class A utilities are protected from pump tax increases.[27]

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26 Under the guidelines, a Class A water company is invited to propose to DRA a combination of its districts to be included in an upcoming rate case application. (Ex. 33A, Guidelines for Combining of Water Utility Districts for Rate-Making and Public Utilities Commission Reporting Purposes, dated August 20, 1992.)

27 For example, Great Oaks Water Company elected not to file a general rate case for 32 years, primarily because of customer growth, economies in operation, and regular offset rate increases through its Expense Balancing Account for pump taxes, which are the company's major operating expense. Re Great Oaks Water Company, D.93-04-061 (April 21, 1993).

Following the 1989 Loma Prieta earthquake, the Commission authorized all utilities, including water companies, to establish a Catastrophic Event Memorandum Account to permit recovery of costs for repairs and restoration of service in the event of declared disasters.[28] In 1993, the Commission authorized a Water Quality Memorandum Account for recording and collecting costs for EPA-required testing for lead and copper and for new state fees assessed by the state's Department of Health Services.[29] From 1990 until early this year, all Class A water companies were authorized to establish drought memorandum accounts and conservation memorandum accounts to track and later recover lost sales and costs attributable to drought and conservation.[30]

With these regulatory tools available to them, the 14 Class A water utilities have shown stable earnings and healthy rates of return. Most Class A companies earned at or near their authorized returns in the years 1987 through 1991, and several earned more than authorized rates in some of those years. Southern California Water Company, for example, earned a 14.34% rate in 1991, as compared to an authorized rate of 10.77%. San Gabriel Valley Water Company had returns greater than authorized in three of the five years examined.

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28 Resolution No. E-3238, dated July 24, 1991.

29 Resolution No. W-3784, dated June 23, 1993.

30 See D.94-02-043 (February 16, 1994).

In contrast to the evidence in the small water company phase of this proceeding, where we found that most Class C and Class D water companies were not earning enough to pay interest rates on loans, the record here shows that larger Class A water companies are providing satisfactory service, with few complaints, at reasonable rates, and are posting earnings that would qualify for at least an "A" rating under S&P's revised benchmarks for water utilities. The utilities' final witness agreed that Class A water companies are financially sound, explaining that these companies generally are well managed and have the skills and resources to seek and obtain rate relief when it's needed.[31] He added that whether management can maintain that record in the face of supply shortages and EPA costs is another question.

31 Tr., pp. 3766-80 (testimony of Francis S. Ferraro).

But if there is no need for regulatory change to meet immediate needs, as the utilities acknowledge,[32] then the need for relief beyond that already available becomes less compelling. An ERAM would assuredly relieve sales risk. But most Class A water companies today are earning at or close to forecasted sales levels, and econometric forecasting (discussed later in this decision) holds the promise of even more accurate predictions, since it can include factors like residual conservation.[33] Under current ratemaking, there is incentive to hold the line on costs. By contrast, an ERAM carries with it an implied disincentive. Our experience suggests that efforts to reduce costs are less intense if a utility can simply raise rates to reach any shortfall in sales revenue.

Moreover, the anticipated shortage of water supply that drives the ERAM recommendation is speculative to the extent that it assumes that nothing will be done about California's chronic water

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32 During the final week of hearings, the following exchange took place between the administrative law judge (ALJ) and Francis S. Ferraro, a vice president of California Water Service Company:

> "ALJ Walker: Am I correct, then, in assuming that the industry is not asking the Commission to fix a very serious problem that right now confronts the industry, as it did the Class Cs and Class Ds, but is asking the Commission to make changes to minimize impacts that are most assuredly coming up the road? Would that be a correct analysis?
>
> "Mr. Ferraro: Yes, it would be. There are some things happening now as the drought ends that we're starting to face as we lose the revenue protection mechanisms that were in place from the drought. But, yes, you're correct." (Tr., p. 3768.)

33 Residual conservation refers to the permanent decrease in use of water brought about by low-flow showerheads, low-water gardens and other conservation practices encouraged by the utilities.

shortage, that no new sources of water will be developed, and that no political steps will be taken to adjust allocations between urban and agricultural users. In fact, as we know based on our own work with other state agencies, a number of proposals to alleviate water shortages are before the Governor and the Legislature.[34] This Commission requires water management plans by each of the Class A water company districts to examine long-range supply and propose district-specific conservation and other solutions (and revenue protection) during general rate cases. See, e.g., Re Measures to Mitigate Effects of Drought (1991) 41 CPUC2d 521, 526. There is much that this Commission can do, and much that it has done, to address the problem of endemic water shortage. At the same time, we must recognize that the water utilities we regulate supply only a fraction of California's water needs, and our actions, while important, will have only limited effect.

Utilities argue that chronic water shortage is a generic problem requiring a generic solution. In the sense that "generic" implies a condition equally affecting all members of a group, that has not been shown. Even if chronic water shortage requires cutbacks in sales at the retail level, our record shows that not all Class A water companies will be affected equally, and some will not be affected at all. Indeed, the recent six-year drought, while devastating in some areas, had little or no effect on many of the Class A water districts. We agree with DRA that if an ERAM or

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34 We take official notice of the California Water Plan Update issued in draft form by the Department of Water Resources in November 1993. Among other things, the report proposes conservation programs, including agricultural irrigation efficiencies; drought land fallowing through compensated reductions of agricultural water demands; increased water reclamation efforts; and construction of additional storage facilities, like the Los Banos Grandes and the Domenigoni Valley Reservoir. California Water Plan Update, Vol. 1, pp. 15-16 (summary of recommendations).

similar device is to be considered, it should be done on a utility-specific basis upon a showing of need, rather than on a generic basis without such a showing.

The same reasoning applies to utilities' proposal that increased sales risk be dealt with by authorizing up to 100% recovery of fixed costs in the service charge. Since fixed costs include a return on investment, this regulatory tool can all but eliminate financial risk. In Phase One of this proceeding, we found that many small Class D water companies were likely to simply go out of business without economic relief. That is not true for the Class A water companies. A chronic water shortage may one day present severe financial risk for one or more of the Class A companies, but that day has not arrived. If and when it does, an affected utility should seek -- and we will consider -- an appropriate increase in the fixed-cost component of the service charge. Because the subject was not addressed in this proceeding, we leave open the question of whether increasing recovery of fixed costs in the service charge should one day replace sales forecasts as the basis of rate design.[35]

Early in this proceeding, utilities sought a generic increase of about 1.6 percentage points in return on equity to recognize increased financial risk, and to bring water utility returns closer to those of energy utilities. The recommendation was based on a CAPM computer analysis of likely costs of Safe Drinking Water Act compliance. During the course of hearings, it was determined that the computer model produced varying results depending on timing of compliance and on assumptions of regulatory lag and cost allowance. The author of the computer model acknowledged that many of the compliance costs are predictable and

35 This question, among others, is being examined in a Water Branch study directed by the Commission. See, Section 4, supra.

can be included in existing ratemaking. Recognizing this, the California Water Association recommends "phasing in" higher equity returns on a utility-specific basis. This Commission already considers utility-specific risk in setting return on equity in general rate cases. Indeed, to the extent that Class A water utilities seek parity with energy utilities because of similar degrees of risk, we note that the water companies in 1993 rate cases achieved approximately the same authorized return on equity as most energy utilities.[36]

Finally, the record does not support the need for establishment of a broad new water quality memorandum account. It is clear that the majority of water quality costs can be forecast with reasonable accuracy and included in rate case applications. Availability of a memorandum account in which to post all such costs not included in a rate case would not encourage the careful planning that all parties urge in addressing water quality requirements. Furthermore, the utilities' request was made prior to this Commission's action in June 1993 authorizing a memorandum account for specific quality costs related to the EPA lead and copper rule and the state's increased testing fees. (Water Quality Memorandum Account, Resolution No. W-3784.) Rather than grant broad generic relief not supported by this record, it seems to us more sensible for each Class A utility at the time of a rate case to present evidence and seek authority to post to its existing

36 Compare D.93-12-022 (authorizing return on equity averaging about 11% for seven energy utilities) with D.93-06-035, D.93-09-036 and D.93-12-001 (authorizing return on equity of 11%, 11.10% and 10.5%, respectively, for three Class A water utilities).

Water Quality Memorandum Account any additional compliance costs that are likely to occur but cannot be forecast at the time of the rate case.

In summary, we find on this record that Class A water companies generally are well managed and provide good service at rates that have been found reasonable in general rate cases. The evidence further shows that, under existing regulation, virtually every Class A utility enjoys a financial return "reasonably sufficient to assure confidence in the financial soundness of the utility and...adequate...to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties." Bluefield Water Works, supra, 262 U.S. at 693. There is no question that Class A utilities face formidable financial challenges in the future, but we are not persuaded that these challenges cannot be met under the existing Rate Case Plan and through use of the other regulatory tools that the Commission has made available to these utilities.

9. Regulatory Changes Proposed by DRA

It is DRA's position that public policy is best served by maintaining or even increasing economic risk for Class A water companies. In DRA's view, sales risk and the risk of reduced revenue motivate utility management to cut expenses and pare down capital spending. If an ERAM or balancing account assure that revenue will always reach forecasted levels, then the motivation to cut costs is lessened. DRA also believes that the risk of endemic water shortage and the risk of major water quality expenses are predictable. That is, a utility will have many months or years to plan for water shortages that are not caused by drought, and it is likely to have even more time to plan for a new filtration plant or other major capital additions required by water quality standards adopted by EPA and the state.

It follows, according to DRA, that most of these costs can be dealt with in general rate cases, just as all other

anticipated costs are dealt with today in ratemaking. DRA proposes what it terms a "safety net" procedure to protect utilities from extraordinary water shortage costs and water quality expenses that could not have been included in a utility's last rate case. DRA would impose stringent conditions on such relief.

Utilities accuse DRA of taking a do-nothing "ostrich" approach to the sales risk problems descending upon them. Utilities allege that changes in regulation proposed by DRA are punitive in nature and will only exacerbate their problems. A brief discussion of major regulatory changes proposed by DRA follows:

9.1 SDWA Memorandum Account

DRA recommends that the Commission authorize utilities to file by advice letter to open a temporary Safe Drinking Water Act Memorandum Account to track both capital expenses and operating expenses brought on by a federal or state water quality requirement. To guard against abuse, however, it would attach a number of conditions, including the following:

* No memorandum account would be authorized if the utility knew or reasonably could have known of the required expenses in time to have included them in its last general rate case filing.

* No memorandum account would be authorized unless the utility had filed and updated annually a written strategic plan for dealing with EPA and state water quality requirements.

* DRA would be authorized to protest establishment of the memorandum account within 30 days or at any time prior to recovery of costs tracked in the account.

* The memorandum account would be limited to the specific event requiring rate relief. Any later event requiring rate relief would require a separate filing and separate memorandum account.

DRA's project manager testified that utilities also should follow their memorandum account filing with an application to temporarily increase recovery of up to 100% of their fixed costs in the service charge, thus eliminating sales risk until the financial crisis had eased. He noted that the Commission can take this action without any change in regulation. He stressed that increased recovery of fixed costs should be done on a utility-specific basis, since not all Class A utilities are likely to face unexpected water quality costs at the same time. If an increased service charge were authorized, then the memorandum account would be closed, and recovery of any costs tracked in the account could be sought at the utility's next general rate case.

DRA commented that it considered less restrictive memorandum account recovery for water quality costs, but it changed its position when testimony showed that most such costs have at least a six-year lead time. DRA's witness commented:

> "Given the planning horizons, SDWA compliance costs <u>can</u> be anticipated and planned for, and therefore should be included in base rates. To the extent that actual costs do not match base rates, the utility should not be made whole through a memo account simply because of poor planning or cost overruns. Bad management should not be rewarded. On the other hand, if a situation should arise that is clearly unforeseen and unforecastable, memo account recovery should be allowed." (Ex. 50A, p. 4 (testimony of William D. Thompson) (emphasis in original).)

Utilities respond that the conditions that DRA would attach to memorandum accounts are burdensome to the point of being punitive. The California Water Association commented:

> "DRA's proposal that separate memo accounts be established for each and every separate SDWA-related event or cost in each and every district is a total waste of the utilities' and the Commission's limited time and resources, especially in light of DRA's proposal that it be given the right to protest the establishment

> of such accounts at any time. DRA's advice letter requirements serve absolutely no purpose other than to permit it to continually second-guess and micro-manage utilities with respect to the management of SDWA compliance." (California Water Association brief, p. 38.)

9.2 Remedy for Water Shortage, Drought

DRA proposes a similar memorandum account remedy in the event of a shortage in water supply, whether the shortage is caused by limited supply or by drought. DRA describes this as a three-pronged approach, explaining:

> "First, to address sudden and unexpected supply interruptions, DRA is proposing that the utility be allowed a temporary memo account...provided that the utility make a showing that material financial harm would result on a company-wide basis.
>
> "For permanent supply reductions which are known...DRA is proposing that sales forecasts simply reflect the...reduction [through use of an econometric forecasting model]. [Where these two remedies are not applicable], the ratio of fixed cost recovery in the [service] charge should be increased...to restore revenue stability....
>
> "The major point DRA is making is that sales risk should not be erased across the board, but that the Commission should take a targeted approach at relaxing sales risk in those circumstances where it is appropriate to do so and only to the extent necessary." (DRA Brief, pp. 18-19.)

No memorandum account for a shortage in water supply would be authorized unless the utility could show that the required expenses would cause material financial hardship (described as the equivalent of risking a BB bond rating) on the company as a whole. In opposing DRA's proposal, a witness for San Jose Water testified

that to meet the Standard & Poor's benchmark tests for a BB bond rating, his company would have to show, for example, a drop in pre-tax interest coverage from the current 4.54 to 1.5, which in turn would require a drop in return on equity from 10.27% to 1.64%. He testified that other BB benchmarks would require near-bankruptcy status for the company. (Ex. 46A.)

9.3 Discussion

While we agree with DRA that financial risk encourages efficiency, the degree of risk that DRA would impose as a condition for memorandum account relief stretches close to the limit that this Commission can or should impose. As water companies note, Public Utilities Code § 701.10 requires, among other things, that the Commission authorize rates and charges for water service that:

> "Provide revenues and earnings sufficient to afford the utility an opportunity to earn a reasonable return on its used and useful investment, to attract capital for investment on reasonable terms and to ensure the financial integrity of the utility."[37]

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37 Section 701.10, effective January 1, 1993, states in its entirety:

> "The policy of the State of California is that rates and charges established by the commission for water service provided by water corporations shall do all of the following:
>
> (a) Provide revenues and earnings sufficient to afford the utility an opportunity to earn a reasonable return on its used and useful investment, to attract capital for investment on reasonable terms and to ensure the financial integrity of the utility.
>
> (b) Minimize the long-term cost of reliable water service to water customers.

(Footnote continues on next page)

As to water quality costs, DRA's requirement for strategic planning appears to duplicate requirements that water companies file water management plans with the state Department of Water Resources and with this Commission at the time of general rate cases. (See D.94-02-043, Ordering Paragraph 3.) The proviso that DRA could protest a water quality memorandum account well beyond a 30-day protest period would add uncertainty to the remedy and to a utility's financial planning.

Like the utilities, DRA fashioned its proposal prior to the time that the Commission authorized a Water Quality Memorandum Account for water utilities in Resolution No. W-3784. That memorandum account is limited to certain testing and treatment costs for EPA lead and copper rules,[38] and to costs assessed by

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(Footnote continued from previous page)

(c) Provide appropriate incentives to water utilities and customers for conservation of water resources.

(d) Provide for equity between present and future users of water service.

(e) Promote the long-term stabilization of rates in order to avoid steep increases in rates.

(f) Be based on the cost of providing the water service including, to the extent consistent with the above policies, appropriate coverage of fixed costs with fixed revenues."

38 The EPA on June 7, 1991, promulgated National Primary Drinking Water Regulations (NPDWRs) for lead and copper. (56 FR 26460.) NPDWRs established maximum contaminant level goals, action levels, monitoring and reporting requirements, and treatment requirements to be implemented when either lead or copper contaminants exceed their action levels.

the California Department of Health Services.[39] The tests for posting such costs to the memorandum account are, first, that the costs were unforeseen and therefore not included in the utility's last general rate case, and, second, that the costs are beyond the control of the utility. (Resolution No. W-3784, slip op. at 1.)

As we commented with respect to the memorandum account proposal of utilities, it seems sensible to make use of this established Water Quality Memorandum Account for dealing with other Safe Drinking Water Act expenses. Our order today provides that a Class A water utility may, as part of its general rate case, seek authority to add to its Water Quality Memorandum Account those expense items that it can show will occur prior to its next rate case, but the amount of which cannot be reasonably estimated for inclusion in its rate case request. Alternatively, a Class A water utility may file a separate application for authority to add water quality expenses to the account if it can show that such expenses were unforeseen and could not have been dealt with in the company's last scheduled rate case, that such expenses will be incurred prior to the utility's next scheduled rate case, and that the expenses are beyond the control of the utility.

We reject DRA's proposal that a memorandum account be made available on stringent terms to deal with costs attributable to unanticipated water shortages. The proposed requirement that a utility face the equivalent of a BB bond rating before seeking memorandum account relief for water supply shortages could make this remedy meaningless, since, as San Jose Water's witness implied, a utility would be likely to file an application for relief long before it approached BB credit status. The requirement

39 Health and Safety Code §§ 4020 and 4020.5 require that the DHS Office of Drinking Water develop and assess fees twice yearly on the basis of the actual cost of carrying out such activities as issuance of permits, inspections, enforcement actions, and contracts with local health officers.

that material financial distress be shown on a company-wide basis would preclude this relief for a multi-district company even if several of its districts faced supply costs.

In opposing similar relief sought by utilities, DRA has persuaded us that endemic water shortage costs are best dealt with on a utility-specific basis during a general rate case. We need not decide the merits of DRA's suggestion that utilities seek an increase in fixed cost recovery in the service charge to deal with supply uncertainties. As DRA's witnesses noted, nothing precludes a utility from seeking this remedy today at the time of a general rate case.

Closely Held Class A Water Companies

10. Equity Ratio and Imputed Capital Structure

Park Water Company and San Gabriel Valley Water Company presented evidence intended to show, first, that the Commission should authorize higher equity ratios for closely held Class A water companies that have no access to the stock market, and, second, that the Commission should discourage the use of imputed capital structure (as opposed to actual capital structure) in determining authorized returns for smaller Class A water companies.

San Gabriel's witnesses urge that the Commission as a matter of policy recognize the need for San Gabriel and other closely held water companies to maintain common stock equity ratios that are higher than those of publicly traded water companies. Common stock in San Gabriel's parent company is held by a small group of family members and is rarely transferred. Historically, common stock equity has grown by reinvestment of earnings and lower dividends. One witness explained:

> "This has been an efficient way of providing capital and maintaining and increasing the shareholders' equity....[S]hareholders have been willing to allow their earnings to be reinvested based on their expectations that the company will be given the opportunity to earn a

> return that will compensate them for the operational and financial risks of a public utility water company. The shareholders' expectations have been achieved to a great extent because the company has been successful in maintaining a reasonable capital structure and in the process has been able to place its long-term mortgage bonds at very favorable rates." (Ex. 18A, p. 5 (testimony of Robert H. Nicholson, Jr.).)

Because of a healthy capital structure, the company has obtained favorable interest rates and terms in its placement of long-term mortgage bonds. In 1991, the company issued some $14 million in bonds to finance new wells and wellhead treatment systems. The company's witnesses said that, without an equity ratio above 60% at that time, it would have been more difficult and more costly to arrange that financing.

Park Water, which seeks an equity ratio of about 80%, cited evidence in this record that water companies in general face increased financial risk and that smaller water companies (Park has 45,000 connections, as compared to 360,000 for the largest Class A water company) face even greater risks because of the difficulty of raising capital. Park Water's witness testified that the company may face Safe Drinking Water Act expenditures of up to $20 million before the end of this decade. Yet its mortgage bond indentures, authorized by this Commission, limit debt to no more than 50% of capitalization. (Ex. 34A, p. 9.) Park presented evidence showing that its borrowing capacity would be limited to $6.4 million at the 60% equity ratio recommended by DRA in the company's most recent general rate case. Borrowing capacity would be $17.9 million at a 78% equity ratio. (Ex. 34A, p. 11.)

Both San Gabriel and Park Water criticize DRA's use of an imputed, or hypothetical, capital structure in recommending return on equity. That is, DRA "imputes" what it deems a more desirable level of debt and bases its recommended return on that rather than on the company's actual capital structure. The aim, according to

DRA, is to encourage a more balanced amount of debt, which is less costly than equity. The practical result, however, is that actual authorized return on equity may be 1 or 2 percentage points less than the authorized return based on the imputed model. (See, e.g., Great Oaks Water Company, D.93-04-061 (1993), slip op. at 6-7.)

Park Water also criticizes DRA's use of a list of comparable water companies in recommending debt-equity ratios. These "comparable" companies, according to Park, are publicly traded and generally much larger than Park Water. The company's witness said:

> "Park does not operate in a financial environment similar to the average of these companies....It should be intuitively obvious that [Park's] smaller size begets greater risk, just as it is riskier to be out in the ocean in a dinghy than on a cruise ship....[I]t is well documented that investment risk increases as company size diminishes....It should be equally obvious that smaller Class A companies must offset some of their greater risk by increasing their equity ratio." (Ex. 34A, pp. 5-6.)

DRA's witness disputed the inference that lenders look primarily to a company's equity ratio, terming healthy cash flow the critical factor in a company's ability to service debt. Moreover, DRA maintains, since equity costs more than debt, ratepayers pay higher over-all rates as a utility's equity ratio climbs. (Ex. 23A, p. 3.) In its testimony, DRA also contested the notion that because a Class A water company is small, its equity ratio must be high. DRA's witness pointed to recent financial studies suggesting that higher returns are required not by small

firms per se but by firms that have recently become small because of economic distress.[40] DRA's project manager stated:

> "Park is not subject to any greater risk than the average California Class A water company. Other things being equal, Park's high equity ratio [would] equate to lower financial risk and therefore a lower authorized return on equity. Alternatively, it is appropriate to use an imputed capital structure to recognize the lower equity return required by firms with lower financial risk." (Ex. 21A, p. VI-7.)

Despite probing by the administrative law judge,[41] it was not clear at hearing precisely what San Gabriel or Park Water sought from the Commission in this Risk OII proceeding. As the utilities themselves acknowledged, the record was not sufficient for findings of fact or law stating that San Gabriel is entitled to a 60% equity ratio or that Park Water should have an 80% equity ratio. These are determinations best assigned to a general rate case, where a utility's costs, income and potential capital requirements can be examined in detail.

San Gabriel states that it seeks a policy statement that closely held water companies are entitled to a higher equity ratio than that of publicly held water companies. But its justification for that is premised largely on its need in 1990-91 to borrow $14 million in the bond market. The money was necessary because San Gabriel had to drill seven new wells because its water wholesaler had entered bankruptcy, and because certain wells in the Los Angeles area had become contaminated. These were non-recurring events. The utility's witness could not recall an earlier time when San Gabriel had required that degree of capital infusion, nor

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40 Ex. 21A, p. VI-4; Chan and Chen, "Structural and Return Characteristics of Small and Large Firms," Journal of Finance, September 1991, pp. 1467-1484; French and French, "The Cross-Section of Expected Stock Returns," Journal of Finance, June 1992, pp. 427-465.

41 Tr., pp. 2520-12; Tr., pp. 2954-56.

could he foresee a specific event in the future that would require capital expenses of this magnitude.

Park, on the other hand, seeks policy statements that small Class A water companies face greater financial risks than large ones, and that the use of an imputed capital structure is inappropriate except on a showing that actual capital structure is unreasonable. Park notes, correctly, that the Commission recognized in Phase One of this proceeding that very small Class D water companies (less than 500 connections) face greater risk and should have a larger return than larger companies. That finding, however, was based on substantial evidence that many if not most of these utilities that serve a handful of customers were losing money and were unable to borrow except by pledging owners' assets. The same reasoning hardly applies to a Class A water company that has 45,000 connections and is financially sound.

Park Water in this proceeding has presented the most complete assessment of its likely water quality compliance costs, and those costs are high. However, DRA showed that the company's actual costs of compliance have to date been lower than projected. Moreover, Park's acquisition of a new source of water early this year is likely to reduce the utility's water quality costs by as much as $7 million. In re Jess Ranch Water Company, D.94-01-041.

Park's attack on the use of an imputed capital structure for ratemaking purposes is articulate,[42] but unpersuasive. Ratemaking is not a precise science, and the tools and theories employed serve as means to an end, the setting of just and reasonable rates that balance ratepayer and shareholder interests. As the Supreme Court has stated, "(t)he fact that the method employed to reach that result may contain infirmities is not then important...." Federal Power Commission v. Hope Natural Gas Co.

42 Park Water's motion to late file its reply brief by one day is unopposed and is granted.

(1944) 320 U.S. 591, 602. We have recently affirmed the use of an imputed capital structure as one means of evaluating return on equity for a small Class A water company. Re Great Oaks Water Company, D.93-10-046 (October 6, 1993) (Order Modifying and Denying Rehearing).

In summary, we agree with DRA that the issues raised by San Gabriel Valley and Park Water are ones that are best dealt with in general rate cases. Determinations of debt-equity ratio, 56capital spending requirements and appropriate capital structure are intensely fact-driven, and results can and do vary depending on the facts before us. In a recent San Gabriel rate case, for example, the Commission set a return on equity higher than DRA recommended on the basis that the facts in that case showed that San Gabriel "faces a higher risk than other water companies with respect to its source of water." (Re San Gabriel Valley Water Company, D.92-04-032, Finding of Fact 21, p. 37.) The record does not support the policy pronouncements sought here by the utilities.

Other Proposed Changes

11. Disposition of Other Issues

Utilities and DRA proposed a number of other regulatory changes during the Risk OII proceedings. These are dealt with below.

11.1 Required General Rate Cases

DRA proposes that general rate cases every three years be mandatory, rather than permissive, for each of the 60 Class A water districts. DRA's evidence shows that, since 1982, 19 districts filed one or more years after they were eligible for general rate

cases.[43] DRA's witness suspects, but is not certain, that rate reductions would have been likely for these districts had they timely filed. The evidence shows, however, that a district's reason for not filing can be that either no rate increase would be warranted (that is, earnings are at or about the authorized rate) or the increase is too small to justify the time and expense of a general rate case. A California Water Service Company witness testified that his company's attorney fees for Commission cases are $130,000 per year, and that rate cases tie up key personnel for weeks at a time.

Utilities testified that financial statements for each Class A district are filed quarterly with the Commission Advisory and Compliance Division. These filings, called O-74 forms, are available to DRA, and DRA can initiate a hearing if it determines that a district's earnings are excessive. A utility witness testified that staff resources of both DRA and the utilities are already strained by the number of general rate cases filed, and mandatory filings would have increased general rate cases by 28% during the period 1982-1992.

The Commission would do ratepayers no favor by requiring a rate case and a small increase in rates for a district that otherwise would have sacrificed the increase and filed a year or two later. The General Rate Case plan that governs filings contemplates that water utilities will in some years earn more than forecasted revenue. This, in turn, is offset by years in which a

43 The evidence showed that during the period 1982-1992, 48 Class A water districts filed for general rate cases as scheduled; 13 filed a year later than scheduled; and 6 filed two or more years later than scheduled. (Ex. 43A, Part 3.)

utility earns less than forecasts.[44] DRA has presented no evidence of excessive earnings over a protracted period of time by any Class A water utility. In view of the ease with which the Commission's staff can review utility earnings each quarter and recommend action in the event of abuse, we see no justification for making general rate cases mandatory.

11.2 Elimination of Pro-Forma Earnings Test

Class A water companies urge elimination of the pro-forma earnings test as one step in recognizing the increased financial risk faced by water utilities. The test, which originated in a 1979 rate case[45] and has been developed jointly by staff and utilities,[46] puts a cap on rate increases when it is found that a

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44 In a decision involving energy utilities, the Commission stated:

"Excess earnings, as characterized by the staff, are earnings which exceed the rate of return on weighted average rate base adopted as reasonable for ratemaking purposes in the general rate case proceeding. Excess earnings, as such, are not unlawful in a ratemaking context provided such earnings are achieved by 'fair means' such as productivity gains and good management. In fact, in its recent decisions, the Commission has emphasized its policy to provide incentives for increased earnings through productivity gains and good management. Therefore, it is not Commission policy to order a give-back to the ratepayer simply because earnings are exceed[ing] the authorized rate of return." Re Pacific Gas and Electric Company (1985) 19 CPUC2d 426, 431.

45 See Re California Water Service Co. (1979) 1 CPUC2d 736 (permitting attrition year rate increase so that utility need not file general rate cases as frequently as in the past).

46 See Ex. 31A (Water Utilities Branch Memorandum dated October 31, 1985, setting pro-forma test to be used in step rate filings and offset filings for Class A, B and C water companies. The memorandum was adopted following workshops and discussions between staff and water utilities.)

utility in fact has earned more than its authorized return, or when the proposed increase would result in earnings above authorized return.

The pro-forma test measures actual income and expenses during a utility's three-year rate cycle. If a utility is authorized to increase rates during the second test year or the attrition third year, the pro-forma test postpones or reduces an authorized increase if in fact the utility already is earning more than its authorized return. A DRA witness explained that if a utility is earning more than its rate case authorization, the pro-forma test does not require a refund. It simply prevents a full step-rate increase when the pro-forma earnings test shows that the utility already is earning more than its authorized rate of return at the time the step-rate increase is to become effective. If at the time of the next authorized increase, the utility is not earning more than the rate case authorization, any accumulated increase can then go into effect.

A utility witness testified that the pro-forma test is biased because it prevents further earnings above authorized return but provides no relief when earnings are below authorized return. (Ex. 48A, p. 9.) In fact, the test originated as a way to balance authorized increases over a three-year period (a goal sought by utilities) against unwarranted increases when earnings in fact were higher than anticipated. As stated in Re California Water Service Co. (1979) 1 CPUC2d 736, 752:

> "If this [step rate] allowance is too conservative, applicant will be forced to either absorb the difference or accept the drawbacks and possible pitfalls of a premature rate case. If, on the other hand, this estimate is excessive...[t]he Commission will...be able to delay or reduce the amount of the third step rate increase to ensure that applicant's return on equity does not exceed

> that found reasonable here or in subsequent district proceedings. The staff is willing to accept the burden of reviewing and checking applicant's annual pre-step increase filings."

Utilities present no evidence to show why the tradeoff envisioned in 1979 (fewer rate cases in exchange for a cap on automatic increases in test and attrition years) does not continue to represent sound ratemaking policy. Utilities cite a telephone case (Re General Telephone (1985) 17 CPUC2d 246, 254) for the proposition that the Commission previously has declined to adopt a pro-forma test, but the issue in that case was whether to put a cap on all earnings in an attrition year. Here, the issue is whether to limit or postpone a scheduled increase that would come on top of test year or attrition year earnings. Utilities also argue that, while the pro-forma test postpones surcharges in the case of balancing accounts, it can eliminate surcharges for recovery of drought memorandum account balances. The drought memorandum account was intended to protect a utility's forecasted sales during rationing, not to provide windfall earnings. Re Measures to Mitigate Effects of Drought (1991) 41 CPUC2d 521, 533 (objective is to provide protection up to level of normalized sales).

Accordingly, we reject utilities' request that the pro-forma earnings test be eliminated.

11.3 Customer Banking Program During Drought

When mandatory rationing was imposed during the drought, some Class A water companies (most notably, San Jose Water Company) introduced "customer banking" programs. Under these programs, a customer could reduce the amount of any excess-use penalty in any one month by reducing water use below the drought allotment in other months. Testimony during the Drought Investigation hearings showed that the banking program was popular among consumers and that it encouraged water conservation. Re Measures to Mitigate Effects of Drought (1991) 41 CPUC2d 521, 535-36.

DRA in this proceeding contests those provisions of the banking programs that are alleged to put ratepayers, rather than shareholders, at risk if penalty refunds exceed an amount that a utility put aside for the banking program. This issue was decided by the Commission in Re Measures to Mitigate, supra, 41 CPUC2d at 535-36, in which the Commission directed utilities to change certain tariff provisions related to banking, but otherwise to leave these programs intact.

DRA's witness acknowledged that there has been no change in the banking program since the Commission's decision, and he indicated that DRA's recommendation now is aimed primarily at banking programs that could be implemented in a future drought. To the extent DRA in this proceeding seeks rehearing and reversal of a prior Commission decision, the request is improper;[47] to the extent DRA seeks a change in programs that may occur in the future, it is premature. The request is denied.

11.4 One-Way Memorandum Account; Supply Mix Changes

DRA proposes that if a conservation memorandum account is established, it be a one-way account providing only for refunds to ratepayers in the event conservation funds are not spent. DRA proposes that costs of water supply mix continue to be handled in general rate cases, rather than as part of a memorandum account. In view of our decision not to establish generic memorandum accounts or balancing accounts beyond those already in existence, these proposals are moot.

47 Under the Rules of Practice and Procedure, an application for rehearing of a Commission decision must be filed within 30 days of the decision (Rule 85); requested modifications are to be made by way of a petition for modification served on all other parties (Rule 43).

11.5 Econometric Forecasting

While no Commission action is required on this subject, DRA explained at hearing that it has introduced an econometric forecasting method in two recent water company rate cases, and it is encouraging all Class A water companies to use this method instead of the more traditional modified Bean forecasts.

The Commission and water utilities since the early 1980s have used the so-called "modified Bean method" in forecasting water sales. The Bean method measures three historic variables (temperature, rainfall, time trend) on an annual basis, with an observation period of from five to 13 years, in order to predict sales per customer in test years. The advantage of the Bean forecasts is that they are relatively simple. The disadvantage is that the estimates are rough and can be unreliable when an unmeasured variable (like drought) intrudes on normalized sales.

Econometric forecasting, which has been used by energy utilities since the 1970s, measures the Bean variables on a monthly, rather than an annual basis, and adds additional historic variables, such as seasonal variation, meter reading error and voluntary conservation. Observation periods can be shorter (from 4 to 9 years) because the method measures more historic data more frequently. Moreover, factors like residual conservation (for example, permanent reduced use because of low-flow showerheads) can be calculated and added as variables to predict future sales.

Because it produces more accurate estimates of future sales than the Bean method, the econometric model can reduce utilities' risk of underestimating (or overestimating) sales revenue. DRA's witness stated that the method has not been used previously in water company rate cases because water sales were relatively stable until the rationing and conservation efforts of recent years. Use of the model now, according to DRA, will help forecasters deal with the reality of conservation.

We are not asked to direct that Class A water companies use econometric forecasting in place of the modified Bean method. Nevertheless, DRA has announced its intention to use this method in Class A general rate cases, and we encourage Class A companies to work with staff forecasters in determining whether this method helps produce more reliable estimates of needed revenue.

Adopted Regulatory Changes

12. Changes Authorized in This Decision

Our order today adopts two changes proposed by DRA and unopposed by utilities. In addition, we authorize expansion of existing Water Quality Memorandum Accounts on a proper showing.

12.1 Interest on Balancing Accounts

DRA recommends that, effective as of the date of this order, all balancing accounts and memorandum accounts maintained by regulated water utilities (with the exception of drought and conservation memorandum accounts subject to the 20-basis point reduction) bear interest at the 90-day commercial paper rate. All other utilities regulated by the Commission are permitted to post interest on balancing accounts. A San Jose Water Company witness testified that interest on his company's Expense Balancing Account in 1992 would have avoided borrowing costs of $124,314 to pay for increases in purchased water and pump taxes. (Ex. 44A.)

DRA would exclude interest for any outstanding drought memorandum account and any conservation memorandum account subject to a 20-basis point reduction. (See D.91-10-042, 41 CPUC2d 521 (1991).) DRA's witness testified that if interest were added to these accounts, then arguably the risk calculation of the accounts could be affected. Exclusion of interest for these accounts is not opposed by utilities. Accordingly, we adopt DRA's recommendation in its entirety.

12.2 Postage and Property Tax Coverage

DRA recommends that postage and property tax be removed from the Expense Balancing Accounts. Analysis shows that adjustments for these two expense items are minor. Utilities do not oppose the recommendation. Our order today adopts this recommendation. Effective for each water utility district with its first general rate case following this decision, the Expense Balancing Accounts for water utilities will no longer cover changes in the cost of postage and property taxes.

12.3 Water Quality Memorandum Account

As discussed above (see Section 7.3), we will permit all regulated water utilities to seek authority during a general rate case or by way of application to add other specific water quality expenses to the Water Quality Memorandum Account that we authorized in Resolution No. W-3784. The memorandum account now is limited to certain testing and treatment costs to meet EPA lead and copper rules, and to an increase in costs assessed by the Department of Health Services. Other specific water quality costs may be posted to this account upon Commission approval if a water company shows that the additional costs were unforeseen and therefore were not included in the utility's last general rate case, that the costs will be incurred prior to the utility's next scheduled rate case (or otherwise cannot be estimated accurately for inclusion in a current rate case), and that the expenses are beyond the control of the utility.

13. Comments on ALJ's Proposed Decision

In accordance with Public Utilities Code § 311 and Rule 77.1 of the Rules of Practice and Procedure, the draft decision prepared by the assigned administrative law judge was sent to all parties on March 15, 1994. Oral argument was heard by the full panel of the Commission on April 8, 1994, and final comments were

filed on April 21, 1994. Comments were filed by the California Water Association, DRA, San Jose Water, Southern California Water, Park Water and San Gabriel Valley Water.

DRA generally supports the conclusions of the proposed decision. It notes misstatements in the text, and these have been corrected where appropriate. In particular, DRA states that its proposed water quality memorandum account, unlike its proposed water shortage memorandum account, did not require a utility showing of financial distress, as the proposed decision erroneously stated. That error has been corrected, but it does not change our conclusion that a new water quality memorandum account would duplicate an existing remedy and is not necessary.

San Jose Water proposes, and we agree, that elimination of postage and property taxes from the Expense Balancing Accounts should take place for each district at the time of its next general rate case, rather than upon the effective date of today's order. Otherwise, some utilities would be penalized by not having the opportunity to forecast increases in these costs in their rate cases. That change has been made in the final order. San Jose also urges that the decision deal with whether fixed costs include income tax. The record in this case is insufficient to deal with that issue, and we decline to do so in this proceeding.

Park Water correctly notes that the record does not support an inference (as contained in the proposed decision) that most Class A water companies would qualify for an "A" rating under S&P criteria. Parties at hearing performed a full S&P analysis for only four Class A companies. Conclusion of Law No. 1 has been revised to eliminate the reference to S&P ratings. We also have made minor changes in text to more accurately state Park's position at hearing. Park Water and San Gabriel suggest that we change conclusions of law dealing with equity ratios on the basis of the record as whole. We have reviewed the record, and we decline to make the changes.

The California Water Association claims that findings in the decision are not supported by the record, but the examples it gives do not withstand analysis. For example, the association states that there is no basis for an assertion that an ERAM carries with it an implied disincentive to control costs. DRA responds that the assertion is supported by a utility witness (Morin: "[An ERAM has] perverse disincentive effects on operational efficiency"; Ex. 6A, p. 20; Tr. 1612-13, 1644-46) and by the testimony of DRA's project manager (Ex. 8A, p. iv; Tr., 2860).

The association states that there is nothing in the record to support the statement that existing regulatory tools are at hand to help deal with endemic water shortage, forgetting that, among other things (Exhibits 8A, 21A and 22A), the Commission requires water management plan updates in every district rate case (D.94-02-043), permits balancing account recovery of increased costs of purchased water and groundwater extraction (App. B, p. 2), and examines supply as part of ratemaking (see San Gabriel Valley Water Company, D.92-04-032).

The association claims that, since this investigation deals with "generic" problems, it is "legal error" not to adopt generic solutions. DRA replies: "The record shows that...water supply and safe drinking water compliance are site specific....(L)egal error more likely would pertain if the CPUC authorized the broad brush 'generic' solutions sought by the industry." We agree. The association also states that it is factual error to conclude that the majority of water quality costs can be forecast with reasonable accuracy and included in rate cases. The assertion overlooks unrebutted testimony that normal lead time for EPA standards is 6 to 13 years. (Ex. 50A.)

Southern California Water in its comments argues that since water companies face increased financial risk, and since current rates are "minimum" rates, then sound ratemaking requires that minimum rates be supplemented to deal with the increased risk.

SoCalWater's comments are thoughtful, but unpersuasive. The decision finds that not all Class A districts face the same degree of financial risk because of water shortage/water quality, and it further finds that utilities have not shown why the financial impact of these differing risks cannot be dealt with in general rate cases.

Findings of Fact

1. The Commission regulates 14 Class A water companies, defined as those with 10,000 connections or more, and these water companies are comprised of 60 water districts.

2. Along with some 200 smaller Class B, C and D water companies, the regulated water companies supply about 9% of all water used in the state, and they provide water to about 18% of the state's population.

3. About 46% of the water produced by Class A utilities is purchased wholesale through major water supply projects.

4. About 73% of the purchased water comes from three major wholesalers, the Metropolitan Water District of Southern California, the Santa Clara Valley Water District, and the San Francisco Water Department.

5. Water provided to regulated companies from the three major wholesalers comes from four major water projects, the Colorado River Aqueduct, the State Water Project, the Central Valley Project, and the Hetch Hetchy system.

6. There has been little growth in state water projects in 30 years, but the state's population during that time has grown from 17.5 million to 30.5 million.

7. Environmental concerns have caused a reduction in the amount of water available from major water projects in the state.

8. About 51% of water sold by Class A water utilities comes from groundwater pumping.

9. Many groundwater basins are adjudicated, and pumping rates are limited by law.

10. Restrictions in delivery of water to Class A water utilities are likely to take place within the next decade unless there are increases in supply or changes in allocation.

11. A restriction in delivery of water to Class A water utilities could mean that utilities will be unable to reach sales forecasted in their general rate cases and, therefore, will have less revenue than deemed appropriate for financial health.

12. Federal and state water quality requirements will require Class A utilities to construct additional plant and facilities at a cost estimated at between $51 million and $200 million in the next several years.

13. Actual recorded costs of water quality compliance by Class A water companies are less than the utilities estimated in most categories of four existing environmental laws.

14. A consultant for Class A water utilities, using a capital asset pricing model, estimates that these utilities will require an increase in return on equity of from 120 to 190 basis points in order to maintain financial strength while meeting costs of water quality compliance.

15. A consultant for DRA conducted 200 runs of the utilities' capital asset pricing model and concluded that the model does not accurately predict increased risk caused by water quality compliance costs.

16. To meet what they believe is increased revenue risk, Class A utilities recommend a revenue adjustment mechanism similar to the ERAM available to electric utilities to compensate for under-collection or over-collection of revenue from forecasted sales levels.

17. Alternatively, Class A utilities recommend that up to 100% of their fixed costs be collected in service charges instead of the 50% now authorized to be included in service charges.

18. If collection of revenue cannot be better assured, Class A water utilities recommend a 130- to 190-basis point increase in return on equity to account for increased risk of lost sales.

19. Alternatively, Class A water utilities recommend establishment of a memorandum accounts to track and later recover all water compliance costs not otherwise recovered in rates.

20. DRA believes that the costs of endemic water shortages and the costs of water quality compliance can be forecast with reasonable accuracy and, therefore, should be included in rates at the time of a utility's general rate case.

21. DRA recommends authorization of a water quality memorandum account for a Class A water utility that can show costs that cannot be foreseen or forecasted.

22. Class A utilities today are financially sound and, with few exceptions, are earning at or near the rate of return authorized in their general rate cases.

23. Economic regulation of Class A utilities is conducted pursuant to a Rate Case Plan adopted in 1990 that provides for formal rate cases every three years for each of the 60 Class A water districts.

24. Class A water companies are provided balancing account rate relief to protect against increases in the cost of purchased power, purchased water and groundwater extraction charges.

25. Class A water companies are authorized to establish a Catastrophic Event Memorandum Account to recover costs in the event of declared disasters.

26. Class A water companies are authorized to establish a Water Quality Memorandum Account to track and recover water quality costs related to the EPA lead and copper rule and Department of Health Services fees.

27. Until early this year, all Class A water companies were authorized to track and recover certain drought and water conservation expenses through memorandum accounts.

28. At Commission direction, each Class A water district has established a water management program, to be updated at each general rate case, to encourage long-range planning and conservation, including recovery of costs.

29. Utilities recommend that higher equity ratios be authorized for Class A water companies that are closely held and that do not have access to equity markets.

30. Utilities recommend that the Commission direct its staff not to use an imputed capital structure as part of ratemaking unless actual capital structure is shown to be unreasonable.

31. DRA recommends that rate cases every three years be made mandatory, instead of permissive, for each of the 60 Class A water districts.

32. Utilities recommend elimination of the pro-forma earnings test in granting test year, attrition year and offset rate increases for Class A water companies.

33. DRA recommends without opposition that existing balancing accounts and memorandum accounts, with certain exceptions, be permitted to accumulate interest at the 90-day commercial paper rate.

34. DRA recommends without opposition that postage and property tax be removed from the Expense Balancing Accounts.

Conclusions of Law

1. In contrast to smaller regulated water companies, the larger Class A water companies for the most part are providing satisfactory service, with few complaints, at rates deemed reasonable in general rate cases, and are earning at or close to forecasted sales levels.

2. Class A water companies in this proceeding have the burden of showing that existing ratemaking procedures are inadequate to deal with challenges faced by the industry.

3. Class A water utilities have failed to show that fundamental changes in existing ratemaking procedures are necessary in order to deal with economic risks of endemic water shortages or of increased water quality costs.

4. DRA has failed to show that its proposed water quality memorandum account is necessary in view of the existence of a similar account already available to Class A water companies.

5. Park Water Company and San Gabriel Valley Water Company have failed to show the need in this proceeding for Commission policy statements on closely held water companies or on the use of an imputed capital structure in ratemaking.

6. DRA has failed to show that mandatory rate cases every three years for all Class A water districts will accomplish more than regular review of water district financial filings.

7. Class A water companies have failed to show that the pro-forma earnings test works unfairly against water utilities.

8. DRA's request in this proceeding for modification of a drought banking procedure should be denied.

9. DRA's recommendation that water utility balancing accounts and memorandum accounts, with some exceptions, should bear interest at the 90-day commercial paper rate should be approved.

10. DRA's recommendation that postage and property tax be removed from the Expense Balancing Accounts of water companies should be approved.

11. Utilities should be authorized to add specific water quality expense categories to their existing Water Quality Memorandum Account upon a proper showing during a general rate case or by way of application.

12. This proceeding should be closed.

13. Because the record in this Risk OII does not substantively address conservation and water rate design issues

that concern the Commission, a new proceeding should be implemented following workshop investigation by parties representing ratepayers and the industry.

O R D E R

IT IS ORDERED that:

1. All water companies subject to the jurisdiction of this Commission are authorized to add interest at the 90-day commercial paper rate to balancing account and memorandum account postings that occur on or after the effective date of this order; provided, however, that interest shall not accrue for drought memorandum accounts or conservation memorandum accounts that are subject to a 20-basis point reduction at time of recovery. Interest shall be calculated in the same manner as that in place for calculation of interest on energy utility balancing accounts.

2. No water company subject to the jurisdiction of this Commission shall track postage or property tax expenses in its Expense Balancing Accounts after its first general rate case order following the effective date of this order. For multi-district companies, this effective date will apply by district.

3. A water company subject to the jurisdiction of this Commission, by application or as part of a general rate case, may seek authorization to add to its Water Quality Memorandum Account (established pursuant to Resolution No. W-3784) those prospective water quality costs that are beyond the control of the company and (a) were not foreseeable and therefore were not included in the company's last general rate case, and will be incurred prior to the company's next general rate case, or (b) cannot be estimated accurately for inclusion in a current rate case.

4. All changes in regulatory procedure proposed by any party to this proceeding that are not set forth in Ordering Paragraphs 1, 2 and 3 are denied.

5. The Water Utilities Branch (Branch) of the Commission Advisory and Compliance Division shall, within 60 days of the effective date of this order, conduct one or more workshops with representatives of the water utilities, ratepayers and other interested parties to develop recommendations addressing, but not limited to, the following issues:

* Should marginal cost and/or a tiered rate design replace rate design tied to forecasted sales in order to encourage economic efficiency and water conservation?

* Should performance-based ratemaking be developed for water companies in order to reduce regulatory lag and provide incentives for improved utility performance?

* What further incentives, if any, should the Commission consider to encourage development of water conservation?

* What incentives, if any, should the Commission consider to further encourage water reclamation?

* What form of assistance should the Commission consider to assist low-income families when water rates increase?

* What further steps should the Commission implement to carry out the directives of Assembly Bill 2815?

* Should the Commission consider the establishment of customer charges based on the sizing of the water system to meet fire flow safety standards?

Following the workshop or workshops, Branch shall within 90 days of the effective date of this order prepare for Commission consideration a draft Order Instituting Rulemaking or a draft Order

Instituting Investigation, or a combination of the two, addressing these and other related issues.

6. This Order Instituting Investigation is closed.

This order becomes effective 30 days from today.

Dated June 22, 1994, at San Francisco, California.

DANIEL Wm. FESSLER
President
PATRICIA M. ECKERT
NORMAN D. SHUMWAY
P. GREGORY CONLON
JESSIE J. KNIGHT, JR.
Commissioners

APPENDIX A

List of Appearances

Respondents: Nossaman, Guthner, Knox & Elliott, by William T. Bagley and Jose E. Guzman, Jr., Attorneys at Law, and Sharon Carlson, for the California Water Association; Francis S. Ferraro, for California Water Service Company; Fred Meyer, for San Jose Water Company; Fulbright & Jaworski, by David A. Ebershoff, Attorney at Law, and Leigh K. Jordan, for Park Water Company; Timothy J. Ryan, Attorney at Law, for San Gabriel Valley Water Company; Joseph F. Young and Joel Dickson, for Southern California Water Company.

Division of Ratepayer Advocates: Izetta C. R. Jackson, Attorney at Law, and William D. Thompson.

(END OF APPENDIX A)

APPENDIX B
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SUMMARY OF DRA RESPONSE AND SURVEY RESULTS
DEALING WITH LARGE WATER UTILITY ISSUES--PHASE TWO

In instituting this investigation into the financial and operational risks of regulated water utilities, the Commission listed 13 issues to be considered in the analysis of Class A water companies. DRA sent questionnaires and received responses from public utility commissions in 14 states.[48] DRA also analyzed conclusions of a 45-state analysis by the National Regulatory Research Institute. Based on this and other information, DRA responded to each of the 13 issues listed by the Commission. The California Water Association responded to selected issues. The issues and a brief summary of responses follows:

Issue 1: Are there operational or financial risks which other water utilities nationwide encounter to a lesser or greater degree compared to California water utilities? If so, should and/or does the Commission consider these differences in setting rates?

Response: Risks reported by other commissions include bypass, condemnation and water quality. Illinois reports significant costs of replacing old lead lines. New Jersey and Arizona report mandatory use constraints. Pennsylvania and New Jersey report that contamination of water supply is a risk problem. The California Water Association states that the survey shows that California faces the most severe threat of systemic water shortage.

48 Commissions surveyed: Arizona Corporation Commission, Illinois Commerce Commission, Iowa Utilities Board, Kentucky Public Service Commission, Maine Public Utilities Commission, Maryland Public Service Commission, Massachusetts Department of Public Utilities, New Jersey Board of Public Utilities, New Mexico Public Service Commission, New York Public Service Commission, Ohio Public Utilities Commission, Pennsylvania Public Utilities Commission, Tennessee Public Service Commission, Virginia State Corporation Commission. (See Ex. 22A, Table A-1.)

According to DRA, California offers more risk-reduction options to water companies than does any other state. California water companies have balancing accounts and rate offsets for costs of purchased water, purchased power, and groundwater extraction. Arizona, New Jersey, Pennsylvania and Ohio are the only other states offering purchased water/power offsets and balancing accounts. California, New York and Virginia are the only states permitting attrition-year rate increases. (Ex. 22A, Table A-1.)

Issue 2: How do authorized returns on total capital for Class A water utilities compare with authorized returns for comparable utilities nationwide? Should and/or does the Commission adequately consider this comparison in setting returns?

Response: DRA compared average authorized rate of return, return on equity and common equity ratios for water companies in the years 1982-1991 in six states: California, Illinois, Massachusetts, New York, Pennsylvania and Virginia. Results show that authorized return on equity generally is from about 50 basis points to 1 percentage point above that granted in California; this is offset, however, by an equity ratio of about 51% to 55% maintained by California water companies, as compared to about 37% to 40% equity ratio maintained by water companies in other states. Rate of return authorized for California water companies has been on average about 30 basis points higher than that authorized by four of the five other states. (Ex. 32A, Table I-1 (revised).)

Issue 3: Have investors in California water utilities been fairly compensated in the past for their capital investment compared to investors in comparable water utilities nationwide? If not, what should the Commission do about it?

Response: Average rate of return for California Class A water companies was at or above the upper range of authorized rates of return for water utilities in six states in six of the 10 years analyzed between 1982 and 1991. It was in the lower range of rates of return in two of the 10 years. (Ex. 21A, Chart I-3.)

Issue 4: Should the Commission consider differences in financial risk for water utilities whose equity capitalization exceeds that of comparable utilities nationwide? If so, what impact, if any, should this have on rate of return?

Response: DRA states that it regularly assesses equity ratio during general rate cases through use of a comparable group of water utilities and use of a discounted cash flow analysis and a risk premium analysis. The California Water Association maintains that comparisons of large publicly owned water companies in the "comparable" group is inappropriate in assessing the special equity needs of smaller, closely held Class A water companies like Park Water Company and San Gabriel Valley Water Company.

Issue 5: Does the Commission fully consider operating expenses and the fluctuations in actual earnings in determining authorized returns?

Response: DRA states that the use of market-based financial models during general rate cases captures all risks perceived by the investor.

Issue 6: Should the tax on contributions-in-aid-of construction be considered a risk to water utilities when there is several years' lag between tax payment and customer hook-up? If so, what impact, if any, should this risk have on rate of return?

Response: DRA states that there is no tax liability risk. It states that, once contributions have been made, the utility earns a return on its portion of the tax contribution.

Issue 7: Should the Commission consider reduced water use due to improvements in water fixtures, irrigation, drought and conservation when determining risks to water utilities? If these factors contribute to utilities' risks, what should the Commission do to mitigate the effect, or what impact, if any, should this risk have on rate of return?

Response: DRA states that industry-wide risks are perceived by investors and are reflected in market-based financial models used to quantify rate of return. DRA states that company-specific risks are considered in general rate cases. (See Re San Gabriel Valley Water Company), D.92-04-032 (1992). The California Water Association states that residual conservation (that is, permanently reduced sales because of low-flow showerheads and other measures) receives insufficient consideration by the Commission and its staff.

Issue 8: Should current and/or future water quality problems be considered when determining authorized returns? If so, what impact, if any, should they have on rate of return? Are there other ways to fund the correction of water quality problems?

Response: This issue was reviewed extensively by the parties in the Risk Investigation. See Section 6.2 of the accompanying decision.

Issue 9: Should and/or does the Commission consider water utilities' reliance on purchased water, the state's semi-arid environment and the distance between water supply sources when determining risks for water utilities? If so, what impact, if any, should this have on rate

of return? If these factors are found to directly contribute to the utilities' risks, what, if anything, should the Commission do about it?

Response: This issue was reviewed extensively by the parties in the Risk Investigation. See Section 6.1 and Section 7 of the accompanying decision.

Issue 10: Do water utilities face competition from any or all of the following: private wells, condemnation by public entities, bypass by large industrial users, incorporation of new territories and new customers into public entities' service areas? If there is meaningful competition, is the competition adverse or healthy (as an incentive to minimize cost of service) to the water industry or customers? If any competition is a problem, what should the Commission do about it? What impact, if any, should this competition have on rate of return?

Response: In responses to data requests, Class A water utilities reported only one instance of bypass in the past 10 years. Instances of condemnation were common for Class A water companies, as they were for all state utility commission surveyed. DRA notes that recent changes in California law (Senate Bill 1757) create a rebuttable presumption that public utility use of property has precedence over most other public uses.

Issue 11: Should the Commission reduce authorized rates of return when balancing accounts, memorandum accounts and other risk mitigating mechanisms are adopted? If so, by how much?

Response: DRA states that reduction in risk through permanent regulatory devices like the Expense Balancing Accounts is recognized by investors and reflected in market-based financial models. Accordingly, DRA states that no

reduction in rates of return (other than that suggested by the financial models) is necessary.

Issue 12: Should the Commission establish a program of complete revenue requirement protection for the utility through interest-bearing balancing accounts for all revenue requirements? If so, how should the Commission determine the appropriate rate of return?

Response: This issue was reviewed extensively by the parties in the Risk Investigation. See Section 6.3 and Section 7 of the accompanying decision.

Issue 13: Do California water utilities encounter greater or lesser operational or financial risks than those experienced by the energy and telecommunication utilities in California? Should these differences be considered when setting returns for water utilities? If so, how? What impact, if any, should these risks have on rate of return?

Response: The California Water Association states that risks faced by Class A water utilities exceed the risks faced by California energy utilities. The Association states that the same revenue protection mechanisms available to energy utilities now should be made available to water utilities. DRA states that Standard & Poor's industry benchmarks, even after a May 1992 tightening of water utility data, continue to rank water companies as less risky than energy and telecommunications utilities. DRA states that differences in risk between different utilities are irrelevant so long as water utility returns are measured by market-based financial models and comparable water utilities.

(END OF APPENDIX B)