State of Florida

Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: JUNE 17, 1999

TO: DIRECTOR, DIVISION OF RECORDS AND REPORTING (BAYO)

FROM: DIVISION OF WATER AND WASTEWATER (CHU, CASEY, DAVIS, GOLDEN)
DIVISION OF LEGAL SERVICES (CLEMONS)

RE: DOCKET NO. 981663-WU - APPLICATION FOR STAFF-ASSISTED RATE CASE BY TANGERINE WATER COMPANY, INC.
COUNTY: ORANGE

AGENDA: 06/29/99 - REGULAR AGENDA - PROPOSED AGENCY ACTION, EXCEPT ISSUES NOS. 16 AND 18 - INTERESTED PERSONS MAY PARTICIPATE

CRITICAL DATES: 15-MONTH EFFECTIVE DATE: 04/18/00 (SARC)

SPECIAL INSTRUCTIONS: NONE

FILE NAME AND LOCATION: S:\PSC\WAW\WP\981663.RCM

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CASE BACKGROUND

Tangerine Water Company Inc. (Tangerine or utility) is a Class C utility in Orange County, which provided water service to an average 225 connections estimated to be 234 ERCs during the test year. By Order No. 5446, issued June 8, 1972, the Commission issued Certificate No. 96-W to Tangerine. Tangerine has had three previous staff assisted rate cases (Order No. 6529, issued February 21, 1975, in Docket No. 74645-WS; Order No. 8271, issued April 19, 1978, in Docket No. 770846-W; and Order No. 14376, issued May 16, 1985, in Docket No. 840377-WU) and no price index or pass-through rate adjustments.

On November 20, 1998, the utility submitted an application for this staff assisted rate case. In preparation for this report, staff audited the utility's records for compliance with Commission rules and orders and examined all components necessary for rate setting. The staff engineer has also conducted a field investigation, which included a visual inspection of the water plant and water distribution facilities along with the service area. The utility's operating expenses, maps, files and rate application were also reviewed to determine reasonableness of maintenance expenses, regulatory compliance, utility plant in service, and quality of service. Staff selected a historical test year ending December 31, 1998.

Based on the staff analysis, the utility's test year revenue is $38,340, and test year operating expense is $74,217. This results in an operating loss of $35,877 for the test year.

A customer meeting was conducted on May 5, 1999 at the Tangerine Improvement Society Building in Tangerine, Florida. Approximately 32 customers and 4 utility employees attended the meeting. Approximately twelve customers chose to give comments regarding the utility's quality of service, the proposed rate increase, and other issues related to the case. Quality of Service and Customer Service issues are discussed in Issue No. 1.

DISCUSSION OF ISSUES

ISSUE 1: Is the quality of service provided by Tangerine Water Company, Inc. satisfactory?

RECOMMENDATION: Yes, the quality of service is satisfactory. However, the docket should remain open and the utility should be given 180 days to complete the pro forma projects as discussed in the staff analysis and to loop the one inch main at one customer's residence to a larger main. (T.DAVIS)

STAFF ANALYSIS: Staff's recommendation on the overall quality of service provided by the utility is derived from the evaluation of three separate components of the water utility operations:

(1) Quality of Utility's Product (compliance with drinking water standards),
(2) Operational Conditions of Utility's Plant or Facility, and
(3) Customer Satisfaction of services rendered.

QUALITY OF UTILITY'S PRODUCT

In Orange County, the potable water program is regulated by the St. Johns River District of the Florida Department of Environmental Protection (DEP). According to the DEP, the utility is currently up-to-date with all chemical analysis and all test results are satisfactory. It appears that the utility serves water which meets or exceeds all standards for safe, potable water.

The utility did not have a Consumptive Use Permit (CUP) at the time of the engineering field investigation. However, the utility has subsequently applied to St. Johns Water Management District for a CUP, which is currently being processed. It has been determined that the utility is in a critical use area.

OPERATIONAL CONDITIONS AT THE PLANT

The quality of the utility's plant-in-service is in a state of transition. On January 28, 1998, the 23,000 gallon hydro-pneumatic tank at the Tangerine water treatment plant exploded. The tank ruptured with such a force that it shifted off its concrete foundation and damaged all directly connected pipes and valves. All broken pipes, valves and up-rooted controls had to be repaired before the temporary tank could be installed. The tank replacement project lasted almost a year before the plant plumbing could be

retrofitted for future use and the new tank could be installed. By permission of the DEP, the utility replaced the old 23,000 gallon tank with a new 10,000 gallon tank. Being recently renovated, plant plumbing should be considered satisfactory.

In 1987, the utility installed an auxiliary power generator in response to a DEP mandate. The power generator was installed without automatic start-up capability as allowed by Rule 62-555.320(6)(b)(3), Florida Administrative Code. The electrical wiring in the pump house is a complex, antiquated network of electrical wiring that needs to be completely restructured or eliminated. Wiring the generator for automatic start-up proved to be too extensive and costly a project for Tangerine. After proving to DEP that manual switch-over during a power outage would be reliable, the DEP allowed the utility to postpone the automatic switch-over portion of the requirement. Today, the generator must be engaged by manual controls during an emergency, which is done by one of several individuals living in the community.

The electrical wiring and maintenance of the building which houses the primary well and pump is in serious need of upgrading. The building itself is old and needs some structural repairs (door & window replacement, painting, etc.) The operator's work space inside the building is incumbered by the massive network of antiquated electric circuit and relay controls. The utility disinfects with gas chlorine that requires a chlorine alarm system, pursuant to Rule 62-555.320(5)(a)(1), Florida Administrative Code.

A pro forma allowance has been included in the rate calculation to rewire the pumphouse and to install a chlorine alarm system. The utility should be given 180 days from the effective date of the Order to complete these projects.

Despite obvious needs for upgrades to comply with DEP Rules, the deficiencies in question are plant-in-service issues. Plant-in-service issues of this nature have little impact on the quality of the product being served to the customers. Since the utility has been diligent in submitting its required test samples and the results of the water analysis are satisfactory, the DEP inspectors continue to give the utility satisfactory inspection reports.

All things considered, staff recommends that the quality of the water treatment plant-in-service should be considered satisfactory.

CUSTOMER SATISFACTION

The customer meeting was held on May 5, 1999, in Tangerine's service territory at the Tangerine Improvement Society. The general meeting for all customers took place at 6:00 pm. There were 32 customers from the service area and four utility representatives in attendance. Of the 32 customers at the meeting, 12 customers spoke of concerns they had with the rate case. Of the 12 customers that spoke, three customers expressed comments and concerns relating to the quality of service. Dissatisfaction with quality of service provided by the utility centered upon low water pressure and discolored water.

This utility has a core network of mains that are closely located within the community of Tangerine. These mains are six-inch PVC and are looped to provide adequate flow with sufficient pressure. Outside this core network of mains, the utility has accommodated those who have requested service by tapping into the larger mains and extending a smaller service main to meet the needs of the customer(s). Many of these service mains now serve more than one customer and are rarely looped back to a primary main. The customers' complaints --- low water pressure and discolored water --- are symptomatic of smaller mains that are not connected at both ends to a larger main. Staff has discussed this with the President, the Vice President, and the Treasurer of the utility. The Vice President, also the chief maintenance person, has agreed that a log book would be started immediately to track and to regulate the flushing program. This would reduce the sediment and discoloration common to dead end lines. Also, the utility has agreed to make a concentrated effort to begin looping the dead-end, smaller mains to the larger mains. This will increase flow, improve water pressure, and reduce the amount of needed flushing.

The DEP notes five complaints within the last year of low water pressure and/or sediment in the lines. One pressure complaint relates to a valve that was not opened completely when the new hydropneumatic tank was placed into service. Another complaint was due to a power outage during which there was confusion over the instructions for restoring power without the operator. Power was restored before the pressure in the system dropped below 20 pounds per square inch (psi), as required by Rule 6262-555.320(7), F.A.C.

The other complaints were from one customer (Ms. Ray), whose series of complaints began on May 18, 1998. Ms. Ray has had problems with both water pressure and sediment in the lines. The investigation and complaints continued for over a month, which included a detailed study of the pressure at Ms. Ray's home in comparison to the corresponding pressure at the plant. Ms. Ray's

home is serviced by a one-inch PVC line off of a two-inch main. The one-inch line dead ends after providing service to two other homes. In order to resolve Ms. Ray's problem, the utility adjusted the pumping cycles. Later, the utility discovered a leak in the two-inch line near Ms. Ray's home. According to DEP files, these complaints are considered resolved. However, Ms. Ray tells staff that her water pressure is very low at times and something needs to be done. It is staff's recommendation that the utility interconnect the one inch line servicing Ms. Ray's home, looping it to another larger main. This should be completed within 180 days of the effective date of the Order as a beginning to their program of looping system lines.

All things considered, staff recommends that the quality of service for the water system should be considered to be satisfactory. The docket should remain open and the utility should be given 180 days to complete the pro forma projects and to loop the service line to Ms. Ray's residence to a larger main.

ISSUE 2: What portions of water and wastewater plants-in-service are used and useful?

RECOMMENDATION: The water treatment plant should be considered 100% used and useful, and the water distribution system should be considered 76.32% used and useful with the exception of Account Number 334, which should be considered 100% used and useful. (T. DAVIS)

STAFF ANALYSIS: Water Treatment Plant - The water treatment plant is a closed system operation that relies on two wells to meet instantaneous fluctuations in flow demands. Since the utility serves more than 350 people, it is required by DEP to have a second water source. The total current capacity of the two wells is 575 gallons per minute (gpm). During the last two staff assisted rate cases, the used and useful percentage was evaluated to be 100%. This calculation was determined by a comparison study between the minimum standard of 1.1 gpm, in accordance with General Waterworks Design Criteria, and the number of customer connections. Two changes have occurred to the plant since the last rate case. First, as previously noted, the 23,000 gallon hydro tank exploded and was replaced with a smaller, 10,000 gallon tank. The other change to plant was the replacement of a 10 horsepower pump (hp), rated at 100 gpm, on one of the two wells with a 25 hp pump, rated at 325 gpm.

The General Waterworks Design Criteria of a minimum 1.1 gpm per customer is backed by the American Water Works Association (AWWA), and when properly calculated, is to be met by the lowest capacity well. Even with the recent upgraded capacity, it is obvious that the water production would risk complete exhaustion should the community need to fight a fire; however, Tangerine is located along the banks of three lakes, and they are good alternate resources for fire fighting. By the approved formula used as an indicator of useful plant, the water plant is still 100% used and useful. It is recommended that the water treatment plant be considered 100% used and useful (See Attachment "A".)

Water Distribution System - During the last rate case in 1985, the distribution system was also considered to be 100% used and useful. Since that time, the utility has added approximately 5,425 linear feet of distribution mains. It is estimated that the utility's potential customer base today, without construction of additional lines, is 300 connections, estimated to be 321 ERCs. During the test year, the utility provided service to an average of 225 connections, estimated to be 234 ERCs. Growth over the last five years was calculated, using the linear regression method, to

be 7 ERCs. By formula approach (See Attachment "B"), the engineering staff recommends the distribution system be considered 76.32% used and useful for this rate proceeding. There are two exceptions to this: meters and meter installations (Account No. 334). It is recommended that Account Number 334 be considered 100% used and useful, since meters are only installed when service is requested.

ISSUE 3: Should a margin reserve be included in the calculations of used and useful plant?

RECOMMENDATION: Yes. A 22 gallon per minute (gpm) margin reserve should be used for the water treatment plant and 11 ERCs should be used for the water distribution system. (T. DAVIS)

STAFF ANALYSIS: Margin Reserve is the concept whereby the Commission recognizes certain costs that the utility incurs in providing extra capacity sufficient to meet short term growth without impairing its ability to provide safe and adequate service to existing customers. Recognizing that plant facilities cannot be added on a day-to-day basis due to requirements for permits and easements, the Margin Reserve concept provides a reasonable avenue for the utility to serve new customers during the planning and construction period.

The construction period varies from utility to utility with Class C utilities typically requiring additional time to complete construction. It is recommended that an 18 month period be used in the calculation as an average construction period.

Staff calculations for Margin Reserve are based upon the average growth in ERCs over the last five years. Margin Reserve should not exceed 20% of the number of ERCs served at the end of the test year. Tangerine has shown an average yearly customer growth over the past five years of seven ERCs, which was calculated using the linear regression method. Based on this growth factor, staff recommends allowing a 22 gpm Margin Reserve for the water treatment plant and an 11 ERC Margin Reserve for the water distribution system as shown on Attachments A and B.

ISSUE 4: What is the appropriate average amount of test year rate base?

RECOMMENDATION: The appropriate average amount of test year rate base for Tangerine should be $85,408. (CHU, CASEY, T. DAVIS)

STAFF ANALYSIS: The appropriate components of Tangerine's rate base include depreciable plant in service, plant held for future use, contributions-in-aid-of-construction (CIAC), accumulated depreciation, accumulated amortization of CIAC, and working capital allowance. Utility plant, depreciation, CIAC, and amortization balances were last determined as of November 30, 1984 in the utility's last staff assisted rate case by Order No. 14376, issued May 16, 1985. Staff used the amounts set forth in that Order as a base for rate base components updated in this recommendation. Further adjustments are necessary to reflect test year changes. A discussion of each component follows.

Depreciable Plant in Service: The utility recorded utility plant in service balances of $167,963 at the end of the test year. Staff calculated utility plant by starting with Order No. 14376, which established utility plant of $78,163 as of November 30, 1984. Staff made adjustments of: $500 to capitalize labor for installation of a computer program; $602 to adjust utility plant to staff's recommended balance; $1,345 to include DEP required chlorine alarm; ($637) to retire the existing chlorine alarm; $2,405 to include a DEP required transfer switch; $14,159 to include DEP required electrical work; $4,650 for repair of the number one pump; $948 for a hand held computer for meter reading; and ($8,649) to reflect an averaging adjustment. Total adjustments amount to $15,323, which result in staff's recommended test year utility plant in service of $183,286.

Land: The utility has a long-term land lease with the property owner, Tangerine Improvement Society. The annual lease payment equals the annual charges for water service to the Tangerine Improvement Society buildings and park facilities, which for 1998 were $186.79. Staff verified that the utility included the $186.79 in test year revenues, and recorded the same amount in Account No. 640 in operation and maintenance expenses (See Issues Nos. 6 and 7.)

Non-Used and Useful Plant: As discussed in Issue No. 2 of this recommendation, the utility's water treatment plant should be considered 100% used and useful, and the utility's distribution system should be considered 76.32% used and useful, with the

exception of Accounts Nos. 346 and 347, which should be considered 100% used and useful. In the utility's last SARC, its distribution system was considered 100% used and useful. All lines added since that time have been donated. Therefore, for bookkeeping purposes, no used and useful adjustment is necessary to the distribution lines.

Contributions in Aid of Construction: The utility books showed a CIAC balance of ($58,198) at the end of the test year. Staff made an averaging adjustment of $500. Staff recommends test year CIAC of ($57,698).

Accumulated Depreciation: The utility books reflected an accumulated depreciation balance of ($86,800) at the end of the test year. Staff calculated accumulated depreciation starting with balances from Order No. 14376 and used the depreciation rates set forth in that Order to calculate depreciation up to the test year. Staff calculated test year depreciation expense using the rates prescribed by Rule 25-30.140, Florida Administrative Code. Staff made adjustments of: $4,508 to bring the utility's figure to staff's calculated amount; $637 to reflect the retirement of a chlorine alarm; ($79) to reflect depreciation on the proforma chlorine alarm; ($141) to reflect depreciation on the proforma transfer switch; ($833) to reflect depreciation on the proforma electrical plant; ($172) to reflect depreciation on the number one pump repair; ($158) to reflect depreciation on the hand held computer; and $12,491 to reflect an averaging adjustment. Staff recommends test year accumulated depreciation of ($70,547).

Accumulated Amortization: The utility books reflected an accumulated amortization balance of $23,791 at the end of the test year. Staff made adjustments of: ($177) to reflect staff's calculated amortization of CIAC, and ($1,063) to reflect an averaging adjustment. Staff recommends test year CIAC accumulated amortization of $22,551.

Working Capital Allowance: Consistent with Rule 25-30.443, Florida Administrative Code, staff recommends that the one-eighth of operation and maintenance (O&M) expense formula approach be used for calculating working capital allowance. Applying that formula, staff recommends a working capital allowance of $7,816 (based on O&M of $62,531.)

Rate Base Summary: Based on the foregoing, the appropriate balance of Tangerine's test year rate base should be $85,408. Rate base is

shown on Schedule No. 1, and adjustments are shown on Schedule No. 1A.

ISSUE 5: What is the appropriate rate of return on equity and the appropriate overall rate of return for this utility?

RECOMMENDATION: The appropriate rate of return on equity should be 8.98% with a range of 7.98% - 9.98%, and the appropriate overall rate of return should be 9.08% with a range of 8.40% - 9.75%. (CHU, CASEY)

STAFF ANALYSIS: Based on the staff audit, the utility's capital structure consists of common equity of $54,674 along with $5,925 of customer deposits. The utility has also provided copies of a proposed loan for pro forma plant in the amount of $20,000 at a cost of 10.25%. Using the current leverage formula approved by Order No. PSC-98-0903-FOF-WS, issued July 6, 1998, in Docket No. 980006-WS, the rate of return on common equity should be 8.98% with a range of 7.98% - 9.98%.

Applying the weighted average method to the total capital structure yields an overall rate of return of 9.08% with a range of 8.40% - 9.75%. The company's test year capital structure balance has been adjusted to match the total of the water rate base.

Tangerine's return on equity and overall rate of return are shown on Schedule No. 2.

ISSUE 6: What is the appropriate test year operating revenue?

RECOMMENDATION: The appropriate test year operating revenue should be $38,340. (CHU, CASEY)

STAFF ANALYSIS: Tangerine's records indicate revenues of $45,746 for the test year ending December 31, 1998. These revenues were derived using a cash basis of accounting for federal income tax purposes. Staff auditors examined billing registers and other utility records to calculate test year revenue of $38,340 using the accrual method of accounting per the uniform system of accounts. This amount includes revenues for the land lease ($186.79) with the Tangerine Improvement Society. Staff made an adjustment of ($7,406) to reflect the utility's test year revenues using the accrual method of accounting. Staff recommends test year revenues of $38,340.

ISSUE 7: What is the appropriate amount of operating expense?

RECOMMENDATION: The appropriate amount of operating expense should be $78,192. (CHU, CASEY, T. DAVIS)

STAFF ANALYSIS: The utility recorded operating expenses of $39,067 for the test year. The components of these expenses include operation and maintenance expenses, depreciation expense (net of related amortization of CIAC), taxes other than income taxes, and income taxes. The utility's test year operating expenses have been reviewed and invoices and other supporting documentation have been examined. Adjustments have been made to reflect unrecorded test year expenses and to reflect recommended allowances for plant operations.

Operation and Maintenance Expenses(O & M): The utility charged $31,707 to O & M expenses during the test year. A summary of adjustments that were made to the utility's recorded expenses follows:

(601) Salaries and Wages - Employees - The utility recorded employee salaries and wages of $11,212 for the test year. Staff made an adjustment of ($500) to capitalize labor for installation of a new computer program. A check with the utility's treasurer/bookkeeper showed the utility is Y2K compliant and not anticipating any computer problems in the year 2000. Staff prepared an analysis of the existing employee wages along with time spent by them on utility functions.

The president of the utility devotes 20 hours per month to utility duties. The duties are: to insure required reports, records, statements, and certificates are properly made and filed according to the law; to co-sign all stock certificates and loans or notes; to sign all contracts approved by the board; to schedule and conduct all board and annual shareholders meetings; and to conduct other duties incident to the position. Staff recommends an annual salary of $2,400 for the president.

The vice president of operations spends 20 hours per week performing utility duties. He is the chief operating officer with overall responsibility for: operation of the pumping station and water distribution system; assuring that supplies are on hand and maintenance of equipment and lines are performed; new line extensions; meters added, replaced and read; seeing that environmental water samples and tests are taken and reported; seeing that leaks are repaired; seeing that water service is disconnected or turned off in accordance with statutes; and seeing

that new customers submit applications for water service. The vice president also performs other duties as required by law to include monitoring of the class C operator. Staff recommends an annual salary of $15,600 for the vice president.

The treasurer of the utility, who is also a C.P.A., handles the day-to-day bookkeeping and customer relations for the utility and devotes approximately 15 hours per week performing utility duties. Duties include customer billing, collection and deposits; responsibility for all funds and securities of the corporation, including customer security deposits; making, signing and endorsing all company checks; maintaining a correct book of accounts of all company business and transactions; rendering financial statements of condition as required by the Board; and preparation of corporation filings and reports as required. Staff recommends an annual salary of $14,040 for the treasurer.

The secretary of the utility has duties which include taking minutes of the board and shareholders meeting; serving of all notices of the Corporation; being the custodian of the records and seal; maintaining the stock record and transferring books as required; signing of all certificates of stock; and performing other duties incident to the office of secretary. Staff recommends an annual salary of $150 for her duties.

The utility has requested that staff include monies for another employee position to handle regulatory matters. The utility currently has a past president of the utility, who is training the new officers in their respective duties. A timesheet submitted to staff shows this person has worked an average of 12 hours per week over a period of seven months. A utility comment at the bottom of the timesheet states, "This assistance was rendered to assist the water company during a trying period with all new officers attempting to learn their duties as well as request a rate increase from the PSC and a Consumptive Use permit from the SJR Water Management District." Since these are non-recurring expenses, staff did not include monies for a new employee position.

Accordingly, staff recommends total employee salaries and wages of $32,190.

(616) Fuel for Power Production - The utility recorded $43 in this account during the test year. Since the last rate case, the utility has purchased an emergency generator, which is required by DEP. Periodic start-ups and idling are necessary for proper maintenance, which requires the utility to purchase fuel on a regular basis. Staff made an adjustment of $207 to reflect the

staff engineer's recommended annual allowance of $250 for emergency power production.

(618)Chemicals - The utility recorded a chemical expense of $2,182 during the test year. Staff made an adjustment of ($112) to reflect a refund of sales tax, and ($251) to remove an out-of-test year expense. Staff recommends test year chemical expense of $1,819.

(620) Materials and Supplies - The utility recorded materials and supplies expenses of $2,107 for the test year. Staff made an adjustment of ($39) to remove non-utility expenses, and made an adjustment of ($43) to remove an out-of-period expense. Staff recommends a materials and supplies expense of $2,025 for the test year.

(635)Contractual Services - Testing - The utility recorded water testing expenses of $420 for the test year. Staff annualized the testing costs based on the required testing frequency. Staff made an adjustment of $775 to reflect the annualized water testing cost for the test year. The required tests and frequency at which those test must be repeated are:

Required Water Testing

Test	Frequency	Annualized Cost
Microbiological	Monthly	$ 315
Lead and Copper	Biannual	$ 225
Primary Inorganics	36 months	$ 35
Secondary Inorganics	36 months	$ 30
Asbestos	1/9 years	$ 30
Nitrate and Nitrite	12 months	$ 20
Volatile Organics	qtr'ly/1st yr/36 mos. Subsequent/Annual	$ 130
Pesticides & PCB	36 months	$ 160
Radionuclides		
Group I	36 months	$ 45
Group II	36 months	$ 45
Unregulated Organics		
Group I	qtr'ly/1st yr/9yr.	$ 90
Group II	36 months	$ 20
Group III	36 months	$ 50
	Annual Cost	$ 1,195

Staff recommends contractual services - testing expense of $1,195 for the test year.

Contractual Services - Other - The utility recorded contractual services - other in the amount of $818 for the test year. Staff made adjustments to this account to: remove $150 of unsupported repair expense; include $2,408 for repair expenses to the water lines, the auxiliary generator, and the chlorinator (amortized over five years); include $126 for 40 yards of rock for the plant grounds amortized over five years; include $237 for normal yearly repair and maintenance; include $948 for annual emergency generator maintenance; include $150 for annual line flushing; allow $600 for meter reading; allow $540 for water plant grounds keeping; and include $825 for an annual meter change-out program. The manufacturer's recommended life of a 5/8" x 3/4" meter is 17 years. The meter change-out program staff is recommending will allow the utility to annually replace 14 of the 230 meters through an annual replacement program. Total adjustments amount to $5,684, which results in staff's recommended contractual services-other in the amount of $6,502.

(640) Rents - The utility recorded $199 in the rent account for the test year, which includes $187 for the land lease with the Tangerine Improvement Society, and $12 for rental of a post office box. The utility office is located in the personal residence of the utility treasurer. She has one room of her home set aside as office space with all the necessary office equipment and supplies. The staff auditor made an office allocation based on the treasurer's personal federal tax deduction for operating a business in her home. The office allocation includes the use of her home as the utility's office and the use of all office equipment such as: computers, copiers, local phone service, miscellaneous office supplies, etc. to perform utility business. Staff made an adjustment of $3,000 to include annual utility office rent. Staff recommends rent expense of $3,199 for the test year.

(650) Transportation Expense - The utility books reflect $865 of transportation expense for the test year. In the performance of utility duties, the officers use their personal vehicles to monitor the service area, attend meetings with regulatory personnel, make bank deposits, pick up parts for repairs, run utility related errands, pick up supplies, etc. Since the service is in a remote area (twenty-five miles north of Orlando) it is estimated an average of 100 miles per week is required in travel. In accordance with allowances for state travel, an allowance of twenty-nine cents per mile is considered reasonable and prudent. Staff made an adjustment of $643 to reflect an annual transportation expense of $1,508 (100 mi X 52 wks X $.29) for officers of the corporation, as recommended by the staff engineer. Staff recommends an annual transportation expense of $1,508 for the test year.

(655) Insurance - The utility recorded insurance expense of $1,900 for the test year. Staff made a $455 adjustment to reflect an increase in general liability coverage to one million dollars, and made an adjustment of ($935) to remove an out-of-period expense.

In a March 10, 1999 letter to staff, the utility requested inclusion of a $3,758 directors/officers liability insurance policy as a pro forma expense. This policy would protect the members of the board of directors and management in the event of mismanagement or gross negligence. Order PSC-97-0531-FOF-WU, issued May 9, 1997, disallowed liability insurance for directors of that water utility, stating "we find that costs for management liability insurance are not appropriate expenses to be recovered through customer rates." It should be noted that while this Proposed Agency Action Order was protested, this particular issue was not protested, and thus became stipulated. Staff believes there is no direct benefit for the ratepayers for this type of insurance, and it would not be prudent or reasonable to allow directors/officers liability insurance in this SARC. Therefore, staff has disallowed this expense. Staff recommends a test year insurance expense of $1,420.

(665) Regulatory Commission Expense - The utility recorded $1,000 of regulatory commission expense for test year. Staff made an adjustment of ($750) to reflect the SARC filing fee ($1,000) amortized over four years, as required by Section 367.0816, Florida Statutes. Staff also made an adjustment of $142 to include the utility's CPA rate case expense ($568) amortized over four years. Staff recommends a regulatory commission expense of $392.

(670) Bad Debt Expense - The utility recorded no bad debt for the test year. Staff auditors analyzed the utility's records and determined that an annual allowance of $613 would be appropriate for this utility. Staff is also recommending the utility initiate customer deposits (Issue No. 13), and initiate a late payment fee (Issue No. 15) to reduce the amount of bad debt expense. Therefore, staff recommends a bad debt expense of $613 for the test year.

(675) Miscellaneous Expense - The utility books reflect $215 of miscellaneous expenses for the test year. Staff made an adjustment of ($106) to remove an out-of-period expense, and made an adjustment of $80 to include the cost of a consumptive use permit amortized over five years.

The vice president of operations carries a cell phone, which benefits the utility since it allows him to be on call 24 hours a day for utility emergencies. Since the utility began this service,

the average monthly billing has been $40.23 for the cell phone. Staff made an adjustment of $483 ($40.23 x 12 months) to include emergency cell phone service for the utility. Staff recommends test year miscellaneous expenses of $672.

Operation and Maintenance Expenses (O & M) Summary: Total operation and maintenance adjustments are $30,824. Staff recommends operation and maintenance expenses of $62,531. Operation and maintenance expenses are shown in Schedule No. 3B.

Depreciation Expense (Net of Amortization of CIAC): The utility recorded $1,562 of depreciation expense on its books for the test year. Staff calculated test year depreciation expense using the rates prescribed by Rule 25-30.140, Florida Administrative Code. Staff made adjustments of: $4,668 to bring the utility balance to staff's recommended amount; $79 to reflect depreciation expense on the pro forma chlorine alarm; $141 to include depreciation on the DEP required transfer switch; $833 to include depreciation on the DEP required electrical work; $344 to include the average depreciation cost for the number one pump repair; $316 to include depreciation expense on the pro forma hand held computer; ($37) to reflect the retirement of the existing chlorine alarm; and ($2,126) to reflect staff's test year amortization expense. Total adjustments amount to $4,218. Staff recommends depreciation expense net of CIAC amortization of $5,780 for the test year.

Taxes Other Than Income Taxes: The utility recorded taxes other than income of $5,798 for the test year. Staff made an adjustment of $308 to reflect regulatory assessment fees on staff's recommended test year revenue, made an adjustment of ($1,498) to remove out-of-period real estate taxes, and made an adjustment of $3,131 to allow for payroll taxes on staff's recommended salaries. Staff recommends test year taxes other than income of $7,739.

Operating Revenues: Revenues have been adjusted by $47,604 to reflect the increase in revenue required to cover expenses and allow the utility the opportunity to earn the recommended rate of return on investment.

Taxes Other Than Income Taxes: This expense has been increased by $2,142 to reflect the regulatory assessment fee of 4.5% on staff's recommended increase in revenue.

Income Taxes: This utility is an 1120 corporation. However, staff is not recommending inclusion of any income tax expense because the

utility has a loss carryover of $35,176 listed on its 1997 IRS tax return.

Operating Expenses Summary: The application of staff's recommended adjustments to the utility's test year operating expenses results in staff's recommended operating expenses of $78,192.

Operating expenses are shown on Schedule No. 3. Adjustments are shown on Schedule No. 3A.

ISSUE 8: What is the appropriate revenue requirement?

RECOMMENDATION: The appropriate revenue requirement should be $85,944. (CHU, CASEY)

STAFF ANALYSIS: The utility should be allowed an annual increase in revenue of $47,604 (124.16%). This will allow the utility the opportunity to recover its expenses and earn the recommended 9.08% return on its investment. The calculations are as follows:

	Water
Adjusted Rate Base	$ 85,408
Rate of Return	x .0908
Return on Investment	$ 7,752
Adjusted Operation Expenses	62,531
Depreciation Expense (Net)	5,780
Taxes Other Than Income Taxes	9,881
Revenue Requirement	$ 85,944
Annual Revenue Increase	$ 47,604
Percentage Increase/(Decrease)	124.16%

The revenue requirement and resulting annual increase are shown on Schedule No. 3.

ISSUE 9: What is the appropriate conservation rate structure for this utility?

RECOMMENDATION: The appropriate conservation rate structure is a continuation of the current base facility and gallonage charge rate structure. (GOLDEN)

STAFF ANALYSIS: Although Tangerine is located in a Water Use Caution Area, the utility was not aware that it was required to have its system reviewed for a consumptive use permit. Staff contacted the St. Johns River Water Management District (SJRWMD) and informed them that Tangerine did not have a consumptive use permit. The SJRWMD has since advised staff that a field inspection was conducted, and that the utility subsequently filed an application with the SJRWMD for a consumptive use permit.

The utility's current rate structure consists of a base facility charge and uniform gallonage charge rate structure. Under the current rate structure, the total average consumption per bill is 12,302 gallons per month (gpm). The total average consumption per bill for residential customers is 14,250 gpm. This usage level exceeds the 10,000 gpm threshold that is used by staff to determine if a more aggressive conservation-oriented rate structure should be considered. Consequently, staff initially considered the use of an inclining-block rate structure in this case to discourage high water consumption and promote conservation.

However, upon further review, staff believes that the magnitude of this rate increase may be sufficient to encourage conservation without the use of an inclining-block rate structure at this time. As discussed in the case background, the utility's rates have not been adjusted since 1985. This factor combined with the level of increase may result in a degree of rate shock for the customers. Further, the impact of the increase is amplified by the fact that the customers are billed on a quarterly basis. As will be discussed in Issue 10, staff's analysis indicates that a consumption reduction between 19% and 28% is possible in this case even with no change in rate structure.

In consideration of these factors, staff recommends that the base facility and gallonage charge rate structure be continued for this utility. However, implementation of an inclining-block rate structure should be considered in the utility's next rate proceeding if the customers' consumption levels have not dropped to acceptable levels by that time.

ISSUE 10: Is a repression adjustment to consumption appropriate for this utility, and, if so, what is the appropriate adjustment?

RECOMMENDATION: Yes, a repression adjustment of 6,741,770 gallons to water consumption is appropriate. In order to monitor the effect of the rate increase on consumption, the utility should be ordered to file, on a quarterly basis, reports detailing the number of bills rendered, the number of gallons billed and the total revenues billed during the quarter, with the totals shown separately for the residential and general service classes of service. These reports should be required for a period of two years, beginning the first quarter after the revised rates go into effect. (GOLDEN)

STAFF ANALYSIS: Staff has recommended repression adjustments in a limited number of cases to date. Therefore, in order to present a thorough analysis, a discussion of the merits of repression adjustments in general is warranted, as well as a discussion of staff's recommended adjustment.

General Discussion Regarding Repression and Price Elasticity

The term "price elasticity" refers to the relationship between water use and water price. Price elasticity measures the percentage change in the quantity demanded resulting from a one percent change in price, all other factors held constant. For example, if a water price increase of one percent leads to a 0.2 percent reduction in water use, price elasticity would be -0.2. In other words, there is an inverse relationship between price and the quantity demanded - this is the first law of demand. The term "repression" refers to the expected reduction in quantity demanded resulting from an increase in price. (Conversely, the term "stimulation" refers to the expected increase in quantity demanded resulting from a decrease in price.)

Consider the following example:

Assume:	A 10% increase in price
	Price elasticity = -0.3
Then:	Resulting price = 110%
	Reduction in demand = 3% (10% x -0.3)
	Resulting demand = 97%
	Resulting revenue increase = 6.7%
	(110% price x 97% demand)

The above example illustrates that ignoring price elasticity in rate design analysis creates the potential for both revenue

instability and revenue shortfalls. Furthermore, if rate structure is substantially modified or if a large rate increase is implemented, revenue shortfalls can be especially problematic. The preliminary increase in this case, before any adjustment for repression, is approximately 124%. Staff believes this increase is significant enough to warrant consideration of a repression adjustment in this proceeding.

Staff's Recommended Repression Adjustment

In an attempt to quantify the relationship between revenue increases and consumption impacts, staff has created a database of all water utilities that were granted rate increases or decreases (excluding indexes and pass-throughs) between January 1, 1990 and December 31, 1995. This database contains utility-specific information from the applicable orders, tariff pages and the utilities' annual reports for the years 1989 - 1995. A summary of the contents of the database is listed below:

Data Obtained from:

Orders

1. The dollar amount of the revenue requirement increase for the water system.
2. The utility's rate structure before and after the rate proceeding.

Annual Reports

1. The number of gallons sold for the years 1989 - 1995.
2. The number of meter equivalents for the years 1989 - 1995.

Tariff Pages

1. The effective date of the revised rates.

Resulting Calculations:

1. The revenue requirement percentage increase (decrease) for the water system.
2. The dollar amount of the revenue requirement increase (decrease) per meter equivalent.
3. The average monthly consumption per meter equivalent for the years 1989 - 1995.
4. The percentage change in the average monthly consumption per meter equivalent from the prior year for the years 1990 - 1995.

Several utilities were excluded from the analysis, typically due to the lack (or unreliability) of consumption data. Data from the remaining 67 utilities forms the basis for our analysis.

Our analysis in this case was performed using two different bases of comparison. The first basis of comparison used Tangerine's preliminary rate increase to the water system of 124.16%. This preliminary rate increase was compared to other utilities in the database which, as in Tangerine's case, underwent no change in the BFC/gallonage rate structure. Staff then isolated five utilities in the database which had experienced similar percentage increases in the average monthly bills. The change in average monthly consumption per meter equivalent (ME) for these five isolated utilities was (25%), (23%), (19%), (4%), and (3%). Next, staff compared Tangerine's average consumption per ME to the five utilities. The utility which most closely matched Tangerine's average consumption exhibited a 19% consumption reduction. Based on this analysis, a consumption reduction of 19% would appear to be a conservative prediction of Tangerine's anticipated consumption reduction.

The second basis of comparison used Tangerine's annual revenue requirement increase, which was $168/ME. The remaining steps using this basis of comparison follow those described in the preceding paragraph. The $168/ME increase was compared to similar increases in annual revenue requirement per ME of other utilities in the database which underwent no change in the BFC/gallonage rate structure. This comparison produced four utilities which experienced similar increases for water. The changes in average monthly consumption per ME for these four utilities were (28%), (7%), (1%), and 5%. We believe the utility with the 5% increase in average consumption is an anomaly, as it is illogical to conclude that a price increase would result in more usage. We then compared Tangerine's average consumption per meter equivalent to the remaining three utilities. The utility that exhibited a 28% reduction in consumption most closely matched Tangerine's average consumption. Using this basis of analysis, a 28% consumption reduction would appear to be a conservative prediction of Tangerine's anticipated consumption reduction.

Based upon our analysis, it appears that in this case a consumption reduction between 19% and 28% is more likely to occur than one of the low percentage reductions seen in our sample. Also, although the utilities we sampled had high rate increases, none were as high as the rate increase being recommended in this case. Therefore, it is conceivable that Tangerine could experience a consumption reduction even greater than those seen in our samples. Additionally, as discussed previously in Issue No. 9, staff believes that the rate increase may have an amplified impact on the customers due to the quarterly billing. Interestingly, the utilities in our sample that exhibited the 19% and 28% consumption

reductions likewise have quarterly billing. All other utilities in the sample use monthly billing.

As discussed above, staff has only recommended repression adjustments in a limited number of cases to date, and, as such, we have no established, previously-approved methodology to calculate an appropriate adjustment. Until we do have approved methodologies in place, we believe it is appropriate to err on the side of caution when considering the magnitude of our recommended adjustments. In consideration of the above, staff believes a conservative prediction of Tangerine's anticipated consumption reduction is 19%.

Therefore, staff recommends a repression adjustment of 6,741,770 gallons to water consumption. Further, staff believes it will be beneficial in future cases to monitor the effects of this rate increase on consumption. Therefore, staff recommends the utility should be ordered to file, on a quarterly basis, reports for both water and wastewater detailing the number of bills rendered, the number of gallons billed, and the total revenues billed during the quarter, with the totals shown separately for the residential and general service classes of service. These reports should be required for a period of two years, beginning the first quarter after the revised rates go into effect.

ISSUE 11: What are the recommended rates for this utility?

RECOMMENDATION: The recommended rates should be as shown in the staff analysis. The approved rates should be effective for service rendered on or after the stamped approval date on the tariff sheet, pursuant to Rule 25-30.475(1), Florida Administrative Code. The rates should not be implemented until notice has been received by the customers. The utility should provide proof of the date notice was given within 10 days after the date of the notice. (CHU, CASEY)

STAFF ANALYSIS: During the test year, Tangerine provided water service to approximately 225 connections estimated to be 234 Equivalent Residential Connections (ERCs). Approximately 34% (or $29,383) of the revenue requirement is associated with the fixed costs of providing service. Fixed costs are recovered through the base facility charge based on annualized number of factored ERCs. The remaining 66% (or $56,562) of the revenue requirement represents the consumption charge based on the estimated number of gallons consumed during the test period. Rates have been calculated using the number of bills and the number of gallons of water billed during the test year, adjusted for repression. Schedules of the utility's existing rates and staff's recommended rates are as follows:

Residential & General Service Water Rates

Base Facility Charge Meter Size	Existing Quarterly Rate	Staff Recommended Quarterly Rate
5/8" x 3/4"	$ 12.02	$ 25.89
3/4"	18.03	38.82
1"	30.05	64.68
1-1/2"	60.10	129.39
2"	96.16	207.03
3"	N/A	414.03
4"	N/A	646.92
6"	N/A	1,293.87
Gallonage Charge Per 1,000 gallons	$ .54	$ 1.48

Multi - Residential Water Rates

	Existing Unit Quarterly Rate	Staff Recommended Quarterly Rate
Per Unit	$ 8.01	$ 17.25
Gallonage Charge Per 1,000 gallons	$ .54	$ 1.48

Using the 208 test year residential customers with an average use of 42,750 gallons/quarter per customer (14,250 gallons/month per customer), an average residential **Quarterly** water bill comparison would be as follows:

	Average **QUARTERLY** Bill Using Existing Rates	Average **QUARTERLY** Bill Using Recommended Rates	Percent Increase
Base Facility Charge	$ 12.02	$ 25.89	
Gallonage Charge	23.09	63.27	
Total	$ 35.11	$ 89.16	153.94%*

*26.77% of the increase is due to repression.

The rates should be effective for service rendered as of the stamped approval date on the tariff sheets, provided the customers have received notice. The tariff sheets should be approved upon staff's verification that the tariffs are consistent with the Commission's decision, that the customer notice is adequate, and that any required security has been provided. The utility should provide proof of the date notice was given within 10 days after the date of the notice.

If the effective date of the new rates falls within a regular billing cycle, the initial bills at the new rate should be prorated. The old charge should be prorated based on the number of days in the billing cycle before the effective date of the new rates. The new charge should be prorated based on the number of days in the billing cycle on or after the effective date of the new rates.

In no event should the rates be effective for service rendered prior to the stamped approval date.

ISSUE 12: What is the appropriate amount by which rates should be reduced four years after the established effective date to reflect the removal of the amortized rate case expense as required by Section 367.0816, Florida Statutes?

RECOMMENDATION: The rates should be reduced as shown on Schedule No. 4 to remove rate case expense grossed-up for regulatory assessment fees and amortized over a four-year period. The decrease in rates should become effective immediately following the expiration of the four-year recovery period, pursuant to Section 367.0816, Florida Statutes. The utility should be required to file revised tariff sheets and a proposed customer notice setting forth the lower rates and the reason for the reduction not later than one month prior to the actual date of the required rate reduction. (CHU, CASEY)

STAFF ANALYSIS: Section 367.0816, Florida Statutes, requires that the rates be reduced immediately following the expiration of the four-year period by the amount of the rate case expense previously included in the rates. The reduction will reflect the removal of revenues associated with the amortization of rate case expense and the gross-up for regulatory assessment fees, which is $410 annually. The reduction in revenues will result in the rates recommended by staff on Schedule No. 4.

The utility should be required to file revised tariff sheets no later than one month prior to the actual date of the required rate reduction. The utility also should be required to file a proposed customer notice setting forth the lower rates and the reason for the reduction.

If the utility files this reduction in conjunction with a price index or pass-through rate adjustment, separate data should be filed for the price index and/or pass-through increase or decrease and the reduction in the rates due to the amortized rate case expense.

ISSUE 13: What is the appropriate amount of customer deposits, should the utility be required to pay interest on customer deposits collected since 1992, and should customers who have established a satisfactory payment record, and have had continuous service for a period of 23 months, have their deposits refunded?

RECOMMENDATION: The appropriate amount of residential customer deposits should be $116.00 per customer. The utility should file revised tariff sheets which are consistent with the Commission's vote. Staff should be given administrative authority to approve the revised tariff sheets upon staff's verification that the tariffs are consistent with the Commission's decision. If revised tariff sheets are filed and approved, the customer deposits should become effective for connections made on or after the stamped approval date of the revised tariff sheets, if no protest is filed. The utility should be ordered to pay interest on all customer deposits, including those collected since 1992, as required by Rule 25-30.311, Florida Administrative Code. Past due monies should include interest calculated in accordance with Rule 25-30.360, Florida Administrative Code. The utility should refund deposits of all customers who have established a satisfactory payment record and have had continuous service for a period of 23 months. Past due interest should be paid and eligible deposits should be refunded within 90 days of the effective date of the Commission order. (CHU, CASEY)

STAFF ANALYSIS: Customer Deposits - The utility's existing tariff states:

> Before rendering service, the company will require a deposit or guarantee satisfactory to the company to secure the payment of the bills; and the company shall give the customers a non-negotiable and non-transferable deposit receipt. The amount of such deposit shall be NONE or an amount necessary to cover minimum charges for service for three billing periods, whichever is greater.

Because of the vague wording of the existing tariff, the utility believed it was authorized to collect deposits in the amount equal to three billing periods. The utility started collecting deposits in 1992. This tariff became effective over 20 years ago (November 21, 1978), and staff believes the customer deposit amounts should be updated. Rule 25-30.311(1), Florida Administrative Code, states, "Each utility may require an applicant for service to satisfactorily establish credit, but such establishment of credit shall not relieve the customer from

complying with the utilities' rules for prompt payment of bills." Rule 25-30.311(7), Florida Administrative Code, states:

> A utility may require, upon reasonable written notice of not less than 30 days, such request or notice being separate and apart from any bill for service, a new deposit, where previously waived or returned, or an additional deposit, in order to secure payment of current bills; provided, however, that the total amount of the required deposit shall not exceed an amount equal to the average actual charge for water and/or wastewater service for two billing periods for the 12-month period immediately prior to the date of notice. In the event the customer has had service less than 12 months, then the utility shall base its new or additional deposit upon the average monthly billing available.

Staff believes the utility's existing amounts for customer deposits should be updated to an amount equal to the average charge for water service for one quarter plus one month. Normally, customer deposits are calculated as two times the average monthly bill. Since this utility is billing on a quarterly basis (and customers at the customer meeting voted unanimously to keep the billing quarterly), staff used the average customer bill for one quarter plus one month. The extra month was added to consider the twenty day billing period and five day shut-off notice before the utility would be able to cut off service for non-payment of a bill. Staff recommends a residential customer deposit of $116.00 for water service. The utility should file revised tariff sheets which are consistent with the Commission's vote. Staff should be given administrative authority to approve the revised tariff sheets upon staff's verification that the tariffs are consistent with the Commission's decision. If revised tariff sheets are filed and approved, the customer deposits should become effective for connections made on or after the stamped approval date of the revised tariff sheets, if no protest is filed.

Interest on Customer Deposits - The utility started collecting customer deposits in 1992. It was discovered during the audit that the utility has not paid any interest on the customer deposits it has received. Rule 25-30.311(4)(a), Florida Administrative Code, states:

> Each public utility which requires deposits to be made by its customers shall pay a minimum interest on such deposits of 6 percent per annum. The

> utility shall pay an interest rate of 7 percent per annum on deposits of nonresidential customers qualifying under subsection (5) below when the utility elects not to refund such a deposit after 23 months.

The utility books showed customer deposits of $5,925 for the test year. Staff's preliminary recommendation is that the utility be ordered to pay interest on all customer deposits, including those collected since 1992, as required by Rule 25-30.311, Florida Administrative Code. Past due monies should include interest calculated in accordance with Rule 25-30.360, Florida Administrative Code, and be paid within 90 days of the effective date of the Commission order. Further discussion of interest on customer deposits is included in Issue No. 18 of this recommendation.

Refund of Customer Deposits - Rule 25-30.311(5), Florida Administrative Code, states:

> After a customer has established a satisfactory payment record and has had continuous service for a period of 23 months, the utility shall refund the residential customer's deposits and shall, at its option, either refund or pay the higher rate of interest specified above for nonresidential deposits, providing the customer has not, in the preceding 12 months, (a) made more than one late payment of a bill (after the expiration of 20 days from the date of mailing or delivery by the utility), (b) paid with check refused by a bank,(c) been disconnected for nonpayment, or at any time, (d) tampered with the meter, or (e) used service in a fraudulent or unauthorized manner. Nothing in this rule shall prohibit the company from refunding at any time a deposit with any accrued interest.

The utility should investigate and determine if customers with deposits being held over 23 months have established a satisfactory payment record as described above. If so, the utility should refund those customer deposits to those customers within 90 days of the effective date of the Commission order.

ISSUE 14: What should the appropriate miscellaneous service charges be for Tangerine?

RECOMMENDATION: The appropriate miscellaneous service charges should be those recommended in the staff analysis. The utility should file revised tariff sheets which are consistent with the Commission's vote. Staff should be given administrative authority to approve the revised tariff sheets upon staff's verification that the tariffs are consistent with the Commission's decision. If revised tariff sheets are filed and approved, the miscellaneous service charges should become effective for service rendered on or after the stamped approval date of the revised tariff sheets, if no protest is filed. (CHU, CASEY)

STAFF ANALYSIS: The utility's existing tariff provides for a reconnect fee of $5.00 when performed during regular working hours, and a $10.00 reconnect fee if performed after regular working hours. Staff recommends that the following miscellaneous service charges be authorized:

	Preliminary Charges	
Initial Connection	$15.00	(Normal Business Hours)
Normal Reconnection	$15.00	(Normal Business Hours)
Premises Visit (in lieu of disconnection)	$10.00	(Normal Business Hours)
Violation Reconnection	$15.00	

The four types of miscellaneous service charges are:

1) Initial Connection: This charge is to be levied for service initiation at a location where service did not exist previously.

2) Normal Reconnection: This charge is to be levied for transfer of service to a new customer account at a previously served location, or reconnection of service subsequent to a customer requested disconnection.

3) Violation Reconnection: This charge is to be levied prior to reconnection of an existing customer after disconnection of service for cause according to Rule 25-30.320(2), F.A.C., including a delinquency in bill payment.

4) Premises Visit (in lieu of disconnection): This charge is to be levied when a service representative visits a premises for the purpose of discontinuing service for nonpayment of a due and collectible bill, but does not discontinue service because the customer pays the service representative or otherwise makes satisfactory arrangements to pay the bill.

These charges are designed to more accurately reflect the costs associated with each service and to place the burden of payment on the person who causes the cost to be incurred (the "cost causer"), rather than on the entire ratepaying body as a whole.

Therefore, staff recommends that the utility's tariff be revised to incorporate the charges discussed above. The utility should file revised tariff sheets which are consistent with the Commission's vote. Staff should be given administrative authority to approve the revised tariff sheets upon staff's verification that the tariffs are consistent with the Commission's decision. If revised tariff sheets are filed and approved, the miscellaneous service charges should become effective for service rendered on or after the stamped approval date of the revised tariff sheets, if no protest is filed.

ISSUE 15: Should the utility be allowed to initiate a late payment fee for bills?

RECOMMENDATION: Yes, the utility should be allowed a late payment fee of $3.75 for customer bills paid after the 20-day payment period provided in the utility's tariff. The utility should file a revised tariff sheet which is consistent with the Commission's vote. Staff should be given administrative authority to approve the revised tariff sheet upon staff's verification that the tariff is consistent with the Commission's decision. If a revised tariff sheet is filed and approved, the late payment fee should become effective for service rendered on or after the stamped approval date of the revised tariff sheet, if no protest is filed. (CHU, CASEY)

STAFF ANALYSIS: The utility provided information to staff that 31% of the utility customers consistently pay their water bills after the due date. The utility has requested it be allowed to impose a late fee of $3.75 for customer bills paid after the 20-day payment period. The Commission has previously approved late payment charges based on the rationale that the general body of rate payers should not shoulder the burden of costs caused by those customers who do not timely pay their bills. Absent a breakdown of actual utility costs, the Commission has normally approved a flat $3.00 late fee. By Order No. PSC-93-1824-FOF-SU, issued December 23, 1993, in Docket No. 920828-SU, the Commission stated:

> The utility has requested a late fee of $5 plus 1.5 percent monthly interest on accounts delinquent for more than 20 days. However, the utility has provided no detailed, cost-based documentation that would support its request. Therefore, we find it appropriate to deny the utility's request for late fees. However, as discussed earlier, approximately 7 percent of the utility's customers do not timely pay their bills. The Commission has approved late payment charges for other utilities in the past, based on the rationale that the general body of ratepayers should not shoulder the burden of costs caused by those customers who do not timely pay their bills. In addition, a late fee provides customers with an incentive to pay their bills within the 20-day period provided in the utility's tariff. Based on the typical incremental costs associated with collecting from late-paying customers, the Commission has found that a late fee of $3 recovers those incremental collection costs.

Therefore, we find it appropriate to approve a $3 late fee in this instance.

In this instance, the utility has provided staff with an actual breakdown of costs as follows:

Clerical Charges		
8 minutes @ $15/hour		$2.00
Payroll taxes @ .0845		.17
Supplies & postage:		
Card & tracking sheet	.07	
Postage-card	.20	
Postage	.33	
		.60
Travel - 2 trips @ 1.5 miles/trip @ $.325/mile		.98
		$3.75

Staff believes the utility requested late payment charge of $3.75 is fair and reasonable, and should be allowed for customer bills paid after the 20-day payment period provided in the utility's tariff. The utility should file a revised tariff sheet which is consistent with the Commission's vote. Staff should be given administrative authority to approve the revised tariff sheet upon staff's verification that the tariff is consistent with the Commission's decision. If a revised tariff sheet is filed and approved, the late payment fee should become effective for service rendered on or after the stamped approval date of the revised tariff sheet, if no protest is filed.

ISSUE 16: Should the recommended rates be approved for the utility on a temporary basis in the event of a protest filed by a party other than the utility?

RECOMMENDATION: Yes, the recommended rates should be approved on a temporary basis in the event of a protest filed by a party other than the utility. The utility should be authorized to collect the temporary rates after staff's approval of the security for a potential refund, the proposed customer notice, and revised tariff sheets. (CHU, CASEY)

STAFF ANALYSIS: This recommendation proposes an increase in water rates. A timely protest might delay what may be a justified rate increase resulting in an unrecoverable loss of revenue to the utility. Therefore, pursuant to Section 367.0814(5), Florida Statutes, in the event of a protest filed by a party other than the utility, staff recommends that the recommended rates be approved as temporary rates. The recommended rates collected by the utility should be subject to the refund provisions discussed below.

The utility should be authorized to collect the temporary rates upon staff's approval of security for both the potential refund and a copy of the proposed customer notice. The security should be in the form of a bond or letter of credit in the amount of $32,760. Alternatively, the utility could establish an escrow agreement with an independent financial institution.

If the utility chooses a bond as security, the bond should contain wording to the affect that it will be terminated only under the following conditions:

1) The Commission approves the rate increase; or

2) If the Commission denies the increase, the utility shall refund the amount collected that is attributable to the increase.

If the utility chooses a letter of credit as a security, it should contain the following conditions:

1) The letter of credit is irrevocable for the period it is in effect.

2) The letter of credit will be in effect until final Commission order is rendered, either approving or denying the rate increase.

If security is provided through an escrow agreement, the following conditions should be part of the agreement:

1) No refunds in the escrow account may be withdrawn by the utility without the express approval of the Commission.

2) The escrow account shall be an interest bearing account.

3) If a refund to the customers is required, all interest earned by the escrow account shall be distributed to the customers.

4) If a refund to the customers is not required, the interest earned by the escrow account shall revert to the utility.

5) All information on the escrow account shall be available from the holder of the escrow account to a Commission representative at all times.

6) The amount of revenue subject to refund shall be deposited in the escrow account within seven days of receipt.

7) This escrow account is established by the direction of the Florida Public Service Commission for the purpose(s) set forth in its order requiring such account. Pursuant to Cosentino v. Elson, 263 So.2d 253 (Fla. 3d DCA 1972), escrow accounts are not subject to garnishments.

8) The Director of Records and Reporting must be a signatory to the escrow agreement.

In no instance should the maintenance and administrative costs associated with the refund be borne by the customers. These costs are the responsibility of, and should be borne by, the utility. Irrespective of the form of security chosen by the utility, an account of all monies received as result of the rate increase should be maintained by the utility. This account should specify by whom and on whose behalf such monies were paid. If a refund is ultimately required, it should be paid with interest calculated pursuant to Rule 25-30.360(4), Florida Administrative Code.

The utility should maintain a record of the amount of the bond, and the amount of revenues that are subject to refund. In addition, after the increased rates are in effect, the utility should file reports with the Division of Water and Wastewater no later than 20 days after each monthly billing. These reports

should indicate the amount of revenue collected under the increased rates.

ISSUE 17: Should the utility's existing service availability policy be revised?

RECOMMENDATION: Yes, the utility's service availability policy should be revised to allow refundable advance agreements for future installation of distribution lines. The existing system capacity charge of $100 should be separated into a plant capacity charge of $64, and a main extension charge of $36. The existing tap-in fee of $100 should remain as is. If the Commission approves this new policy, the utility should file revised tariff sheets which are consistent with the Commission's vote. Staff should be given administrative authority to approve the revised tariff sheets upon staff's verification that the tariffs are consistent with the Commission's decision. If revised tariff sheets are filed and approved, the revised service availability charges should become effective for connections made on or after the stamped approval date of the revised tariff sheets, if no protest is filed. (CHU, CASEY)

STAFF ANALYSIS: The utility's existing service availability policy includes a system capacity charge of $100, a tap-in fee of $100, and a main extension policy which states:

> Service is provided as requested by customers within the water service territory. Mains are installed at the expense of the water company and remain the property of the water company.

The utility has requested that the service availability policy be revised to reflect that new distribution lines be installed by way of refundable advance agreements. As defined by Rule 25-30.515, Florida Administrative Code:

> Refundable Advance means money paid or property transferred to a utility by the applicant for the installation of facilities which may not be used and useful for a period of time. The advance is made so that the proposed extension may be rendered economically feasible. The advance is returned to the applicant over a specified period of time in accordance with a written agreement as additional users connect to the system.

Refundable advance agreements provide that the customer requesting the new line pay the cost of the line. As new customers hook-up to that line, the original customer who paid for the line would receive a pro rata refund of the cost of the line from the new

customer. The utility believes that if it is required to extend lines to all applicants, the utility could end up with large amounts of stranded investment, thus putting its financial stability at risk. The use of refundable advance agreements would eliminate that problem. The total potential customer base of the certified territory is estimated to be 300 connections (estimated to be 321 ERCs), and growth is minimal. There are presently approximately 234 ERCs.

Rule 25-30.580(1)(b), Florida Administrative Code, provides that:

> (b) The minimum amount of contributions in aid of construction should not be less than the percentage of such facilities and plant that is represented by the water transmission and distribution and sewage collection systems.

The utility is presently 39.86% contributed. Since this amount is less than the maximum 75% of CIAC recommended by Rule 25-30.580(1)(a), Florida Administrative Code, staff is recommending the utility be allowed to fund future distribution lines through refundable advance agreements.

By Order No. 14376, the Commission approved a system capacity charge of $100 for the utility. A system capacity charge includes a portion of the cost of the plant, as well as a portion of the cost of the lines. Current Commission practice is to separate system capacity charges into a plant capacity charge and a main extension charge when calculating service availability charges. This allows the utility to charge for only a plant capacity charge when a refundable advance agreement is used. Allowing a system capacity charge and a refundable advance agreement would result in double charging on the cost of the mains. Staff is recommending a plant capacity charge of $64, and a main extension charge of $36. By Order No. 14376, the Commission also approved a $100 tap-in charge. Staff is recommending retaining this charge.

Staff recommends that the utility's service availability policy should be revised to allow refundable advance agreements for future installation of distribution lines; that the existing system capacity charge of $100 should be separated into a plant capacity charge of $64, and a main extension charge of $36; and that the existing tap-in fee of $100 should remain as is. If the Commission approves this new policy, the utility should file revised tariff sheets which are consistent with the Commission's vote. Staff should be given administrative authority to approve the revised tariff sheets upon staff's verification that the tariffs are

consistent with the Commission's decision. If revised tariff sheets are filed and approved, the revised service availability charges should become effective for connections made on or after the stamped approval date of the revised tariff sheets, if no protest is filed.

ISSUE 18: Should the utility show cause why it should not be fined for violation of Rule 25-30.115(1), Florida Administrative Code, for failure to maintain its accounts and records in conformance with the National Association of Regulatory Utility Commissioners (NARUC) Uniform System of Accounts, for violation of Rule 25-30.311(4)(a), Florida Administrative Code, for failure to pay interest on customer deposits, and for violation of Rule 25-30.311(5), Florida Administrative Code, for failure to refund customer deposits?

RECOMMENDATION: No, the utility should not show cause why it should not be fined for violation of Rule 25-30.115(1), Florida Administrative Code, for failure to maintain its accounts and records in conformance with the NARUC Uniform System of Accounts, for violation of Rule 25-30.311(4)(a), Florida Administrative Code, for failure to pay interest on customer deposits, and for violation of Rule 25-30.311(5), Florida Administrative Code, for failure to refund customer deposits. However, the utility should be ordered to maintain its accounts and records in conformance with the NARUC Uniform System of Accounts. (CLEMONS, CHU, CASEY)

STAFF ANALYSIS: Section 367.161, Florida Statutes, authorizes the Commission to assess a penalty of not more than $5,000 per day for each offense, if a utility is found to have knowingly refused to comply with, or to have willfully violated any Commission rule, order, or provision of Chapter 367, Florida Statutes. Utilities are charged with the knowledge of the Commission's rules and statutes. Additionally, "[i]t is a common maxim, familiar to all minds that 'ignorance of the law' will not excuse any person, either civilly or criminally." Barlow v. United States, 32 U.S. 404, 411 (1833). Thus, any intentional act, such as the utility's continuing to charge the final rates and failing to file a motion to vacate the stay, would meet the standard for a "willful violation." In Order No. 24306, issued April 1, 1991, in Docket No. 890216-TL, entitled In Re: Investigation Into The Proper Application of Rule 25-14.003, F.A.C., Relating To Tax Savings Refund for 1988 and 1989 For GTE Florida, Inc., the Commission, having found that the company had not intended to violate the rule, nevertheless found it appropriate to order it to show cause why it should not be fined, stating that "'willful' implies an intent to do an act, and this is distinct from an intent to violate a statute or rule." Id. at 6.

Utility Records - Rule 25-30.115(1), Florida Administrative Code, states, "Water and wastewater utilities shall, effective January 1, 1998, maintain their accounts and records in conformity

with the 1996 NARUC Uniform Systems of Accounts (USOA) adopted by the National Association of Regulatory Utility Commissioners."

During the staff audit, the auditors discovered the utility's general ledgers were being maintained on a cash basis for income tax purposes. Its general ledger accounting system does not readily reconcile to the USOA because of multiple differences in accounting methods and treatments between income tax basis and the USOA/Commission basis of accounting for utility operations. However, staff was able to audit the books. Therefore, staff believes that a show-cause action for failure to maintain the utility books in accordance with the USOA is not warranted in this instance.

Customer Deposits - The utility started collecting customer deposits in 1992. It was discovered during the audit that the utility has not paid interest on the customer deposits it has received. Rule 25-30.311(4)(a), Florida Administrative Code, states:

> "Each public utility which requires deposits to be made by its customers shall pay a minimum interest on such deposits of 6 percent per annum. The utility shall pay an interest rate of 7 percent per annum on deposits of nonresidential customers qualifying under subsection (5) below when the utility elects not to refund such a deposit after 23 months."

The utility books showed customer deposits of $5,925 for the test year. Staff believes a show cause action for failure to pay interest on customer deposits is not warranted in this case, as customers would be better served by receiving the past due interest. In Issue No. 13, staff's recommendation is to order the utility to pay all monies due customers, plus interest calculated in accordance with Rule 25-30.360, Florida Administrative Code.

Refunds - In Issue No. 13, staff recommends that the utility investigate and determine which customers with deposits being held over 23 months have established a satisfactory payment record as described above. For those who have a satisfactory payment record, staff is recommending that the utility refund the customer deposits to those customers within 90 days of the effective date of the Commission order. Staff believes a show cause action for not refunding customer deposits held over 23 months for those customers who have established a satisfactory payment record is not warranted. Staff believes the refund of customer deposits for

those customers who qualify, along with interest as recommended in Issue No. 13, is the proper action.

Staff recommends that the Commission not order Tangerine to show cause why it should not be fined for violation of Rules 25-30.115(1), 25-30.311(4)(a), and 25-30.311(5), Florida Administrative Code. However, the utility should be ordered to maintain its accounts and records in conformance with the NARUC Uniform System of Accounts. Moreover, in issue No. 13, staff recommends the utility be ordered to pay interest on all customer deposits and refund deposit of all customers who have a satisfactory payment record for 23 months.

ISSUE 19: Should this docket be closed?

RECOMMENDATION: No. If no timely protest is received upon expiration of the protest period, the Order becomes final and effective upon the issuance of a consummating Order. The docket should remain open for an additional 180 days from the date of the consummating Order to allow staff to verify that the utility installed a DEP required chlorine alarm, installed a DEP required transfer switch, completed all DEP required electrical work, repaired the number one pump, completed the required line looping, acquired a hand held computer for meter reading, paid interest on all customer deposits, completed the required refunds of deposits to all customers who have a satisfactory payment record for 23 months, and filed revised tariff sheets. Once staff has verified that these requirements have been completed, the docket should be closed administratively. (CLEMONS, CHU, CASEY, DAVIS)

STAFF ANALYSIS: Staff has recommended that the utility install a DEP required chlorine alarm, install a DEP required transfer switch, complete all DEP required electrical work, repair the number one pump, completed the required line looping, and acquire a hand held computer for meter reading. Staff has also recommended that the utility pay interest on all customer deposits and investigate and determine which customers with deposits being held over 23 months have established a satisfactory payment record as described above. If no timely protest is received upon expiration of the protest period, the Order becomes final and effective upon the issuance of a consummating Order. This docket should remain open for an additional 180 days from the date of the consummating Order to verify that these requirements have been completed, after which time the docket should be closed administratively.

TANGERINE WATER COMPANY, INC.
SCHEDULE OF WATER RATE BASE
TEST YEAR ENDING DECEMBER 31, 1998

SCHEDULE NO. 1
DOCKET NO. 981663-WU

	TEST YEAR PER AUDIT	STAFF ADJUST. TO UTIL. BAL.		BALANCE PER STAFF
UTILITY PLANT IN SERVICE	$ 167,963	$ 15,323	A	$ 183,286
LAND/NON-DEPRECIABLE ASSETS	0	0		0
NON-USED AND USEFUL PLANT	0	0		0
CIAC	(58,198)	500	B	(57,698)
ACCUMULATED DEPRECIATION	(86,800)	16,253	C	(70,547)
AMORTIZATION OF CIAC	23,791	(1,240)	D	22,551
WORKING CAPITAL ALLOWANCE	4,399	3,417	E	7,816
WATER RATE BASE	$ 51,155	$ 34,253		$ 85,408

TANGERINE WATER COMPANY, INC.
ADJUSTMENTS TO RATE BASE
TEST YEAR ENDING DECEMBER 31, 1998

SCHEDULE NO. 1A
DOCKET NO. 981663-WU

		WATER
A.	UTILITY PLANT IN SERVICE	
1.	To capitalize labor for installation of computer program.	$ 500
2.	To adjust utility plant to staff's recommended balance.	602
3.	To include DEP required chlorine alarm.	1,345
4.	To retire existing chlorine alarm.	(637)
5.	To include DEP required transfer switch.	2,405
6.	To include DEP required electrical work.	14,159
7.	To include average cost for #1 pump repair.	4,650
8.	To include hand held computer for meter reading.	948
9.	To reflect an averaging adjustment.	(8,649)
		$ 15,323
B.	CONTRIBUTIONS IN AID OF CONSTRUCTION	
1.	To reflect an averaging adjustment.	$ 500
C.	ACCUMULATED DEPRECIATION	
1.	To reflect staff calculated accumulated depreciation.	$ 4,508
2.	To reflect the retirement of chlorine alarm.	637
3.	To reflect depreciation on pro forma chlorine alarm.	(79)
4.	To include DEP required transfer switch depreciation.	(141)
5.	To include DEP required electrical work depreciation.	(833)
6.	To include average depreciation cost for #1 pump repair .	(172)
7.	To reflect depreciation on pro forma hand held computer.	(158)
8.	To reflect averaging adjustment.	12,491
		$ 16,253
D.	AMORTIZATION OF CIAC	
1.	To reflect staff calculated amortization of CIAC.	$ (177)
2.	To reflect averaging adjustment.	(1,063)
		$ (1,240)
E.	WORKING CAPITAL ALLOWANCE	
1.	To reflect 1/8 of operation and maintenance expenses.	$ 3,417

TANGERINE WATER COMPANY, INC.
SCHEDULE OF CAPITAL STRUCTURE
TEST YEAR ENDING DECEMBER 31, 1998

SCHEDULE NO. 2
DOCKET NO. 981663-WU

	PER AUDIT	SPECIFIC ADJUSTMENTS	BALANCE BEFORE PRO RATA ADJUSTMENTS	PRO RATA ADJUSTMENTS	BALANCE PER STAFF	PERCENT OF TOTAL	COST	WEIGHTED COST
COMMON EQUITY	$ 54,674	$ 0	$ 54,674	$ 3,262	$ 57,936	67.83%	8.98%	6.09%
LONG TERM DEBT	0	20,000	20,000	1,193	21,193	24.81%	10.25%	2.54%
CUSTOMER DEPOSITS	$ 0	$ 5,925	$ 5,925	$ 354	$ 6,279	7.35%	6.00%	0.44%
TOTAL	$ 54,674	$ 25,925	$ 80,599	$ 4,809	$ 85,408	100.00%		9.08%

RANGE OF REASONABLENESS	LOW	HIGH
RETURN ON EQUITY	7.98%	9.98%
OVERALL RATE OF RETURN	8.40%	9.75%

TANGERINE WATER COMPANY, INC.
SCHEDULE OF WATER OPERATING INCOME
TEST YEAR ENDING DECEMBER 31, 1998

SCHEDULE NO. 3
DOCKET NO. 981663-WU

	TEST YEAR PER UTILITY	STAFF ADJ. TO UTILITY		STAFF ADJUSTED TEST YEAR	ADJUST. FOR INCREASE		TOTAL PER STAFF
OPERATING REVENUES	$ 45,746	$ (7,406)	A	$ 38,340	$ 47,604	E	$ 85,944
					124.16%		
OPERATING EXPENSES:							
OPERATION AND MAINTENANCE	$ 31,707	$ 30,824	B	$ 62,531	$ 0		$ 62,531
DEPRECIATION (NET)	1,562	4,218	C	5,780	0		5,780
AMORTIZATION	0	0		0	0		0
TAXES OTHER THAN INCOME	5,798	1,941	D	7,739	2,142	F	9,881
INCOME TAXES	0	0		0	0		0
TOTAL OPERATING EXPENSES	$ 39,067	$ 36,983		$ 76,050	$ 2,142		$ 78,192
OPERATING INCOME/(LOSS)	$ 6,679			$ (37,710)			$ 7,752
WATER RATE BASE	$ 51,155			$ 85,408			$ 85,408
RATE OF RETURN	13.06%			-44.15%			9.08%

TANGERINE WATER COMPANY, INC.
ADJUSTMENTS TO OPERATING INCOME
TEST YEAR ENDING DECEMBER 31, 1998

SCHEDULE NO. 3A
PAGE 1 OF 2
DOCKET NO. 981663-WU

		WATER
A.	OPERATING REVENUES	
1.	To reflect revenues using the accrual method of accounting.	$ (7,406)
B.	OPERATION AND MAINTENANCE EXPENSES	
1.	(601) Salaries and Wages - Employees	
a.	To capitalize labor for new billing system.	$ (500)
b.	To increase salaries to staff's recommended amounts.	21,478
		$ 20,978
2.	(616) Fuel for Power Production	
a.	To increase to engineer's recommended amount.	$ 207
3.	(618) Chemicals	
a.	To adjust for refund of sales tax.	$ (112)
b.	To remove out of test year expense	(251)
		$ (363)
4.	(620) Materials and Supplies	
a.	To remove non-utility expenses.	$ (39)
b.	To remove out of period expense.	(43)
		$ (82)
5.	(635)Contractual Services - Testing	
a.	To allow for all DEP required water testing.	$ 775
6.	(636) Contractual Services - Other	
a.	To remove unsupported repair expense.	$ (150)
b.	To reflect repair expenses amortized over five years.	2,408
c.	To include 40 yards of rock for plant grounds amortized over 5 years.	126
d.	To include normal yearly repair and maintenance.	237
e.	To include annual maintenance on emergency generator.	948
f.	To include line flushing expense.	150
g.	To include expense for meter reading.	600
h.	To allow for water plant grounds keeping.	540
i.	To include meter change-out program.	825
		$ 5,684
7.	(640) Rent	
a.	To include staff recommended office rent.	$ 3,000
8.	(650) Transportation Expense	
a.	To include engineer recommended transportation expense.	$ 643
9.	(655) Insurance Expense	
a.	To increase general liability coverage to $1M.	$ 455
b.	To remove out of period expense.	(935)
		$ (480)
10.	(665) Regulatory Commission Expenses	
a.	To reflect $1,000 rate case filing fee amortized over 4 years.	$ (750)
b.	To include CPA's rate case expense.	142
		$ (608)
11.	(670) Bad Debt Expense	
a.	To allow auditor's recommended bad debt expense.	$ 613
12.	(675) Miscellaneous Expenses	
a.	To remove out of period expense.	$ (106)
b.	To include 5 year amortized consumptive use pemit fee.	80
c.	To allow emergency pager service.	483
		$ 457
	TOTAL O & M ADJUSTMENTS	$ 30,824

TANGERINE WATER COMPANY, INC.
ADJUSTMENTS TO OPERATING INCOME
TEST YEAR ENDING DECEMBER 31, 1998

SCHEDULE NO. 3A
PAGE 2 OF 2
DOCKET NO. 981663-WU

		WATER
C.	DEPRECIATION EXPENSE	
1.	To reflect staff's calculated test year depreciation expense.	$ 4,668
2.	To reflect depreciation expense on pro forma chlorine alarm.	79
3.	To include DEP required transfer switch depreciation.	141
4.	To include DEP required electrical work depreciation.	833
5.	To include average depreciation cost for #1 pump repair .	344
6.	To include depreciation expense on pro forma computer unit.	316
7.	To retire existing chlorine alarm.	(37)
8.	To reflect staff's calculated test year amortization expense.	(2,126)
		$ 4,218
D.	TAXES OTHER THAN INCOME	
1.	To reflect regulatory assessment fees on staff's recommended test year revenue.	$ 308
2.	To remove out of period real estate taxes.	(1,498)
3.	To allow for payroll taxes on staff's recommended salaries.	3,131
		$ 1,941
E.	OPERATING REVENUES	
1.	To reflect increase in revenue required to cover expenses and allow recommended rate of return.	$ 47,604
F.	TAXES OTHER THAN INCOME	
1.	To reflect regulatory assessment fee at 4.5% on increase in revenue.	$ 2,142

TANGERINE WATER COMPANY, INC.
ANALYSIS OF WATER OPERATION AND
MAINTENANCE EXPENSE
TEST YEAR ENDING DECEMBER 31, 1998

SCHEDULE NO. 3B
DOCKET NO. 981663-WU

	TOTAL PER UTIL.	STAFF ADJUST.	TOTAL PER STAFF
(601) SALARIES AND WAGES - EMPLOYEES	$ 11,212	$ 20,978 [1]	$ 32,190
(603) SALARIES AND WAGES - OFFICERS	0	0	0
(604) EMPLOYEE PENSIONS AND BENEFITS	0	0	0
(610) PURCHASED WATER	0	0	0
(615) PURCHASED POWER	7,826	0	7,826
(616) FUEL FOR POWER PRODUCTION	43	207 [2]	250
(618) CHEMICALS	2,182	(363)[3]	1,819
(620) MATERIALS AND SUPPLIES	2,107	(82)[4]	2,025
(630) CONTRACTUAL SERVICES - BILLING	0	0	0
(631) CONTRACTUAL SERVICES - PROFESSIONAL	2,920	0	2,920
(635) CONTRACTUAL SERVICES - TESTING	420	775 [5]	1,195
(636) CONTRACTUAL SERVICES - OTHER	818	5,684 [6]	6,502
(640) RENTS	199	3,000 [7]	3,199
(650) TRANSPORTATION EXPENSE	865	643 [8]	1,508
(655) INSURANCE EXPENSE	1,900	(480)[9]	1,420
(665) REGULATORY COMMISSION EXPENSE	1,000	(608)[10]	392
(670) BAD DEBT EXPENSE	0	613 [11]	613
(675) MISCELLANEOUS EXPENSES	215	457 [12]	672
	$ 31,707	$ 30,824	$ 62,531

TANGERINE WATER COMPANY, INC.
SCHEDULE OF RATE CASE EXPENSE RATE
REDUCTION AFTER FOUR YEARS
TEST YEAR ENDING DECEMBER 31, 1998

SCHEDULE NO. 4
DOCKET NO. 981663-WU

MONTHLY RATES

RESIDENTIAL AND GENERAL SERVICE	RECOMMENDED RATES	RATE DECREASE
BASE FACILITY CHARGE:		
Meter Size:		
5/8" x 3/4"	$ 8.63	$ 0.01
3/4"	12.94	0.02
1"	21.56	0.03
1-1/2"	43.13	0.07
2"	69.01	0.11
3"	138.01	0.21
4"	215.64	0.33
6"	431.29	0.66
RESIDENTIAL GALLONAGE CHARGE PER 1,000 GALLONS	$ 1.48	$ 0.00

ATTACHMENT A

WATER TREATMENT PLANT USED AND USEFUL DATA

Docket No. 981663-WU

Utility: Tangerine Water Company Date 02/19/99

1)	Capacity of Plant	= 575	GPM *
2)	Maximum Daily Flow (1.1 X 2 X 230 avg. customers)	= 506	GPM *
3)	Average Daily Flow (1.1 X 230 avg. customers)	= 253	GPM *
4)	Fire Flow Capacity	= 500	GPM *

5) Margin Reserve (not to exceed 20% of Average GPM):

a)	Average number of customers(ERCs)	= 234	
b)	Average Customer Growth in ERCs for most Recent 5 Years	= 7	
c)	Construction Time for Additional Capacity	= 1.5	Years

$$\text{Margin Reserve} = 5b \times 5c \times \left(\frac{2}{5a}\right) = 22 \text{ GPM } \bullet$$

6) Excessive Unaccounted for Water = *none* GPM *

a) Total Amount -0- GPM = N/A % of Av. GPM Flow
b) Reasonable Amount -0- GPM = N/A % of Av. GPM Flow

PERCENT USED AND USEFUL FORMULA

$$\left[\frac{2 + 4 + 5 - 6}{1}\right] = 100 \%$$ Used and Useful

• This is a closed system. To evaluate its readiness to serve on a gallon per minute (GPM) basis is more appropriate.

** This system would be 100% used and useful with or without a Margin Reserve

Robert T. Davis - Engineer

ATTACHMENT B
USED AND USEFUL DATA

WATER DISTRIBUTION SYSTEM

Docket No. 981663-WU

Utility: Tangerine Water Company

Date 02/19/99

1) Capacity 321 ERCs (Number of potential customers without expansion)

2) Average number of TEST YEAR Connections 246 ERCs

3) Margin Reserve (Not to exceed 20% of present ERCs)

   a) Average yearly customer growth in ERCs for most recent 5 Years 7 ERCs

   b) Construction Time for Additional Capacity 1.5 Years

(3a) x (3b) = 11 ERCs Margin Reserve

PERCENT USED AND USEFUL FORMULA

$$\frac{(2 + 3)}{1} = 76.32\ \%$$ Used and Useful

** The water distribution system U&U without margin reserve = 72.89%

Robert T. Davis - Engineer