BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

SUPPLEMENTAL COMMENTS OF FRANK SEIDMAN

FOR THE

FLORIDA WATERWORKS ASSOCIATION

DOCKET NO. 911082-WS

IN RE: PROPOSED NEW, REVISED AND REPEALED RULES PERTAINING TO WATER AND WASTEWATER REGULATION

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
SUPPLEMENTAL COMMENTS OF FRANK SEIDMAN
FOR THE
FLORIDA WATERWORKS ASSOCIATION
DOCKET NO. 911082-WS

IN RE: PROPOSED NEW, REVISED AND REPEALED RULES PERTAINING TO WATER AND WASTEWATER REGULATION

The FWWA is in general agreement with the majority of the proposed additions and revisions to the rules being considered in this docket. We have therefore limited our comments to (1) specific rule proposals with which we disagree or (2) OPC suggested changes with which we disagree. For each rule addressed, the format is as follows: (1) identification of the rule number and title, (2) identification of the specific rule paragraph, (3) comment on the rule and (4) suggested rewording of the rule, if applicable. Reworded rules are in a general legislative format. Commission proposed deletions are ~~struck-through~~; Commission proposed additions are underlined; FWWA changes are redlined.

RULES ON WHICH COMMENTS ARE PROVIDED
INDEX

RULES ON WHICH COMMENTS ARE PROVIDED
INDEX (cont.)

RULES ON WHICH COMMENTS ARE PROVIDED
INDEX (cont.)

RULE 25-30.025 OFFICIAL DATE OF FILING

25-30.025(1)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. However, OPC has suggested adding language to the proposed rule to make it consistent with the testimony filing requirement of proposed rule 25-30.436(2). The Commission's proposal does not address testimony directly. Proposed Rule 25-30.4362(2) requires filing prepared direct testimony unless the utility has filed under the PAA option. The OPC suggested language does not include this limitation. It simply requires that direct testimony be filed in order for the official filing date to be established. That goes beyond the requirements of proposed rule 25-30.436(2). The FWWA suggested wording ties the need to file testimony directly to proposed rule 25-30.436(2).

SUGGESTED REWORDING

25-30.025(1) The "official date of filing" is the date on which a utility has filed completed sets of the minimum filing requirements (MFRs), and any testimony that may be required by 25-30.436(2), for any application that has been accepted by the Director of the Division of Water and Wastewater as being complete and paid the appropriate filing fee to the Director of Records and Reporting.

RULE 25-30.033 APPLICATION FOR ORIGINAL CERTIFICATE OF AUTHORIZATION AND INITIAL RATES AND CHARGES

25-30.033(1)(c)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. The rule requires that the applicant for an original certificate identify the names and addresses of all corporate officers, directors, partners and any other persons owning an interest in the applicant's business organization. OPC, however has suggested expanding this list to include "a description of the nature and identity of all parent companies, affiliated companies, and related parties." FWWA does not agree with OPC that this suggested modification is necessary "to evaluate the finances of the utility." What is necessary is information about the owners of the utility, and that is already required by the proposed rule. A number of water and wastewater utilities in Florida are subsidiaries of large corporations which are active in a diverse number of businesses. Under OPC's proposal, these corporations would not only have to identify what could be literally hundreds of companies, but also describe the nature of each of their businesses. Providing such information is burdensome, costly, impractical, irrelevant and immaterial.

THE ABOVE COMMENT ALSO APPLIES TO SIMILAR CHANGES SUGGESTED BY OPC FOR PROPOSED RULES 25-30.035(2) and 25-30.037(2)(c).

25-30.033(1)(j)

COMMENT: Section 25-30.033(1)(j) requires evidence showing ownership of land or provisions for the continued use of the land upon which treatment facilities are or will be located. The evidence called for in the rule is a warranty deed or an agreement, such as a 99-year lease. This is the same language as the existing rule, but FWWA believes that the 99-year lease is too restrictive and excludes other arrangements that provide adequate assurances. It should be revised to allow for either a long term lease or a written easement as assurance of continuing access to a treatment plant site.

SUGGESTED WORDING

25-30.033(1)(j) evidence, in the form of a warranty deed, that the utility owns the land upon which the utility treatment facilities are or will be located, or a copy of a long term agreement which provides for their continued use of the land, such as a long term lease or a written easement ~~99-year lease~~. The applicant ....

THE ABOVE COMMENT AND SUGGESTED WORDING ALSO APPLY TO SIMILAR PARAGRAPHS IN PROPOSED RULES 25-30.034(1)(e), 25-30.035(6), 25-30.036(2)(d), 25-30.037(3)(i), 25-30.038(4)(n), 25-30.433(10) and 25-30.436(4)(i).

25-30.033(1)(r)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. OPC suggests some expansive and clarifying language. Clarification is provided by identifying the required detailed statements as detailed "financial" statements. FWWA will not take issue with this change although it is evident by the rule references to the balance sheet and to the Commission rule on the uniform system of accounts. Clarification is also provided by combining the requirement for an operating statement in subsection (s) with the requirement for a balance sheet in subsection (r). FWWA will not take issue with this as long as the existing qualifier regarding operations for less than a year is retained. OPC also suggests expanding the requirements to include a statement of the source and application of funds. FWWA will not take issue with this suggestion if the requirement is on an as available basis. This rule requires that the statements be prepared in accordance with the NARUC Uniform System of Accounts and a source and application statement is not specified in the uniform system.

SUGGESTED WORDING

25-30.033(1)(r) a detailed financial statement (balance sheet and income statement), certified if available, of the financial condition of the applicant, that shows all assets and liabilities of every kind and character. The income statement shall be for the preceding calendar or fiscal year. If an applicant has not operated for a full year, than the income statement shall be for the lesser

period. The financial statement shall be prepared in accordance with Rule 25-30.115, Florida Administrative Code. If available, a statement of the source and application of funds will also be provided;

25-30.033(1)(s) Deleted

25-30.033(1)(u)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. The rule as proposed requires a cost study supporting the rates, charges and service availability charges. OPC suggests the term cost study be clarified by further describing it as a cost of service study. FWWA does not believe that any clarification is necessary. FWWA understands the term "cost study" as it is used in the existing and proposed rule to mean a determination of the costs comprising a utility's revenue requirement and the design of rates to recover those costs. If OPC agrees with this understanding, but believes changing the terminology will make this clearer, FWWA has no objection. However, if OPC understands the term to mean something else, we all need to know their definition before there can be any agreement as to whether a change in terms results in clarification or in a substantive change.

RULE 25-30.037 APPLICATION FOR AUTHORITY TO TRANSFER

25-30.037(2)(g)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. OPC has suggested modifications that expand the amount of information required to be filed with a contract for sale. FWWA does not take issue with the basic change, that is, to include all auxiliary or supplemental agreements to the contract for sale. This is a matter of clarification and merely points out that the term "contract for sale" means the total contract, including auxiliary and supplemental agreements. However, FWWA does take issue with the list of items which these agreements "shall include." OPC lists specific items which the copy of the contract shall include, such as the dollar amount of assets and liabilities, assumed and unassumed and a description of promised salaries, retainer fees etc. This list presupposes what the contract, auxiliary and supplemental agreements may or may not contain. The documents are what they are. If they contain the items listed by OPC, that will be evident upon their reading. If they do not contain such items, listing them in the rule will not make them available. One cannot produce what does not exist.

25-30.037(2)(k)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. OPC has suggested modifications that expand the amount of information required to be filed with regard to financial agreements with the utility. FWWA does not take issue with the

basic change, that is, to include all auxiliary or supplemental agreements to the financial agreements as this appears to be a matter of clarification. For further clarification we suggest the following:

SUGGESTED WORDING

25-30.037(2)(k) a list of all entities which have provided, or will provide, funding to the buyer ~~transferee~~, and an explanation of the manner and amount of such funding, which shall include their financial statements and copies of any financial agreements with the utility, including all auxiliary or supplemental agreements related to funding of the utility. This requirement ....

25-30.037(3)(g) SAME AS ABOVE

RULE 25-30.0371 RATE BASE ESTABLISHED AT TIME OF TRANSFER

25-30.0371(1)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. FWWA does take exception to the modifications proposed by OPC. OPC objects to the inclusion of Construction Work in Progress (CWIP) in the Commission's establishing rate base at the time of transfer. Although OPC recognizes that the term rate base as used in the context of this rule is very specific, it is concerned that a utility will at a future time claim that the Commission has established rate base to include CWIP.

The rule as proposed is very clear. It states, "For the purposes of this rule and Rule 25-30.037 and 25-30.038, rate base is defined as ..... " This rule establishes rate base at the time of transfer. The other referenced rules relate to the application to transfer. The rule leaves no doubt that its purpose is to establish the value of purchased plant assets at the time of transfer and not to set rates. Otherwise it would also include used and useful adjustments, working capital, deferred debits and any other items that arguably could be included as a basis for rates. CWIP is a purchased plant asset. It should be noted that the PSC Staff first proposed this exact wording more than two years ago in its original draft proposal for amending these rules. At that time it stated that the goal is to "codify and clarify what has been Commission practice since approximately 1983."

Even if The Commission agrees that clarification is necessary, OPC's premise and proposal are unacceptable. OPC's premise is that the Commission practice is to not include CWIP in rate base and that these assets earn a return through Allowance for Funds Used During Construction (AFUDC). That premise is not correct. The Commission often includes CWIP in rate base when it is considering a projected test year. That is one of the major purposes of using a projected test year. The Commission may even include it in a historical rate base if it is convinced that completion is imminent. The OPC proposal states that CWIP <u>will not be included</u> in

rate base when the Commission determines rates. This proposed change does not clarify, it specifically prohibits the Commission from continuing this long standing policy. It would also prevent the Commission from exercising its authority under 367.081(2)(a), Florida Statutes, " The Commission shall consider the investment of the utility in land acquired or facilities constructed or to be constructed in the public interest within a reasonable time in the future ...."

The rule as proposed by the Commission also provides for the Commission to consider the condition of purchased assets in deciding whether they should be removed from the rate base calculation. OPC suggests that the wording be stronger and should state that assets that have been poorly or improperly maintained be removed from the rate base calculation. FWWA disagrees with this suggested change. It is arbitrary and subjective. First, it does not define poor or improper maintenance. Second, it fails to consider whether the asset is functioning, is serving or is capable of serving the public. Why should an asset that provides service be removed from rate base because someone arbitrarily concludes that it was improperly or poorly maintained? Third, it is unfairly discriminatory. The proposed language establishes a different criterion for including plant in rate base merely because ownership changes. The assets being transferred have already been subject to Commission jurisdiction, only the ownership is changing. There is

no justification for changing the basis for the Commission's determination of rate base just because ownership has changed.

25-30.0371(2)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. The proposed rule regarding acquisition adjustments codifies Commission policy that has been well established in individual cases. As OPC is aware, Commission policy was formally established in an investigation which it initiated [see Order No.23376, 8/21/90 and Order No.25729,2/17/92 in Docket No. 891309-WS]. The Commission policy is that, barring extraordinary circumstances, rate base is owner neutral; that is, rate base is the same for the new owner as it was for the old owner. The customers are not harmed by a change in ownership because the rate base has not changed. And the policy provides a much needed incentive for the acquisition of distressed utilities. Commission policy is consistent with established regulatory interpretations and accounting practices, in that rate base includes the original cost of property when first devoted to public service. OPC argues that when a utility that is in need of repairs is purchased at less than original cost, the customers pay twice; once in the original investment and again when repairs are made. This argument lacks logic. Investment in necessary repairs is a utility responsibility. Whether it is made by an original owner or a subsequent owner is of no consequence. Whenever repairs are made they become an investment to be earned on or an expense to be recovered. A utility finds

itself in a state of disrepair precisely because it has not made necessary investments. Its lower rates reflect that lack of investment. When such a utility is purchased and an investment in repairs is made, that investment is reflected in rate base as it should be. It obviously does not duplicate any previous investment because the previous owner did not make it. If the previous owner had made the necessary investment, the new owner would not have to. If the previous owner had made the investment, it would already be part of the rate base at time of transfer. OPC would have us believe that investment for repairs is a legitimate investment for the first owner but is duplication of investment for a second owner. That is false. Investment for necessary repairs is a responsibility of a utility, regardless of ownership and it is a legitimate cost of service, regardless of ownership. OPC's argument is misleading because it implies that customers only pay for repairs when ownership changes. The customer always pays for repairs if and when they are made. Ownership plays no part in it. A Utility in disrepair, i.e., one that has not carried out necessary repairs, provides poor service because no investment has been made for necessary repairs. Rather than encouraging the purchase of distressed utilities by those willing to purchase them and improve them, OPC prefers to discourage such purchases by perpetuating the myth that the customer will pay twice for the system and deny the purchaser the incentive to earn a return on the assets. OPC suggests rule language which arbitrarily shares negative acquisition costs with customers and automatically

disallows positive acquisition adjustments. That will most certainly severely discourage acquisitions of troubled utilities in Florida leaving the customers of those systems with poor service. If the Commission intends to continue its policy of encouraging the purchase of distressed systems, it should not accept OPC's suggested changes to this proposed rule.

025-30.0371(4)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. The proposed rule codifies Commission policy regarding the establishment of rate base when adequate records are not available even though a good faith effort has been made to obtain them. OPC suggests an incentive to make a good faith effort, in the form of a mandatory zero rate base when such an effort is not demonstrated. FWWA disagrees with this suggestion. It is unnecessarily punitive. It would disallow even supported components of rate base if a good faith effort were not made to obtain just some portions of documents. There is no need for such severity. This rule is permissive, not mandatory. The Commission <u>may</u> establish rate base through cost reconstruction. Rarely are records supporting rate base either totally available or totally unavailable, and the Commission has sufficient authority and expertise to weigh all of the facts, or lack thereof, pertaining to rate base. In addition, this rule regarding establishment of rate base does not stand alone. Proposed Rule 30.037(2)(l) requires a statement by the buyer that a good faith, <u>extensive</u> effort was made

to obtain books and records and tax returns. Knowingly making false statements to the Commission is perjury punishable by a fine and/or prison. Also, existing Rule 25-30.570 gives the Commission the authority to impute CIAC when it is not supported by competent substantial evidence. There are sufficient incentives and checks already available.

RULE 25-30.038 EXPEDITED APPLICATION FOR ACQUISITION OF EXISTING SMALL SYSTEM

COMMENT: FWWA is concerned with the regulatory lag associated with purchasing small systems which this rule attempts to mitigate. It appears, however, that significant lag continues under this proposal, and it subjects the purchasing utility to a long period of uncertainty and an increasing rate refund liability.

RULE 25-30.117 ACCOUNTING FOR PENSION COSTS

25-30.117

COMMENTS: FWWA does not take issue with the rule as proposed by the Commission. It is a factual statement requiring that the accounting treatment of pension costs be consistent with Financial Accounting Standards. FWWA disagrees with OPC's suggestion to add a statement regarding how these costs are funded. That goes beyond the intent of the proposed rule which is accounting and not ratemaking treatment.

RULE 25-30.432 USED AND USEFUL IN RATE CASE PROCEEDINGS

GENERAL COMMENT: It is FWWA's understanding that the purpose of this rule is to establish and codify Commission policy and to set out standardized default formulas regarding the determination of used and useful. The apparent goal is to significantly reduce the number of points of controversy and hopefully reduce the associated rate case expense. Although FWWA is sympathetic to the Commission's goal, it believes that the Commission should not codify standardized default used and useful formulas. Determination of used and useful should remain utility specific. There are just too many variables and too many considerations to be adequately captured in standardized default formulas. FWWA believes that its concern is supported by historical Commission technical staff positions regarding the evaluation of used and useful, standardized formulas and their evolution, as summarized in the narrative to Exhibit A, the Users Manual prepared by the Florida Waterworks Association for the used and useful default formulas.

If standardized default formulas are to be adopted, we suport these contained in Exhibit B hereto.

SPECIFIC COMMENTS:

25-30.432(1)

COMMENTS: FWWA does not take issue with the rule as proposed by the Commission. FWWA disagrees with OPC's suggestion that the following sentence of this subparagraph be removed - "The utility's investment, prudently incurred, in meeting its statutory obligations shall be considered used and useful." OPC states that an investment may be prudently incurred but not be used and useful to current ratepayers. We disagree with OPC's characterization and conclusion. The point of the sentence is that investment incurred in meeting its statutory obligations shall be considered used and useful. That statement is the very heart of utility ratemaking. How can an investment that is necessary to meet statutory obligations not be used and useful? The reference to prudency is added to protect the consumer from paying for a utility to meet its obligations through imprudent expenditures. But before prudence is considered, statutory obligations must be met. To deny a utility the opportunity to earn on its investment incurred in meeting its statutory obligations is contrary to the intent of Section 367.081(2), Florida Statutes.

25-30.432(4)

COMMENTS: FWWA does not take issue with the rule as proposed by the Commission. FWWA disagrees with OPC's remarks. A utility is under no obligation to incur investment for which it will not be compensated. If the Commission policy is to consider as used and useful only that plant that serves existing customers without

regard to its statutory obligations to be ready to serve other potential customers, then a utility will build only the quantity of plant necessary for that purpose. It will not pursue larger plants even though that may benefit all customers with lower unit costs. OPC's arguments lead to that result. FWWA believes that the Commission intends to encourage decisions that promote lower costs in the long term. This rule encourages such action. It assures the utility that if it is willing to undertake investment in a plant that has lower unit costs, but due to its size a portion would be considered non-used and useful, it can at least recover the cost it would have had to incur had it built a plant that was fully used and useful according to the formulas. It would be an incentive to accept the risk of recovering the cost of mathematically non-used portions through AFPI, until the plant is totally used and useful. The Commission has adopted this position in the past. It is a reasonable position that benefits customers in the long run. It results in no harm to customers because they are never asked to pay more than the cost that would have been incurred on their behalf. OPC's comment that this rule would encourage a utility to build a plant larger than necessary is without merit. The Commission still has the ultimate authority to consider the prudency of the utility's decision.

25-30.432(5)(a) MARGIN RESERVE

COMMENTS: FWWA does not take issue with the rule as proposed by the Commission. FWWA disagrees with OPC's remarks regarding margin reserve. Margin reserve is a necessary component of used and useful plant and has been recognized as such by this Commission in numerous orders. As such, the investment in, and the return on, margin reserve is recoverable through current rates. The subject of margin reserve and arguments supporting it are addressed on pages 6 and 7 of the Exhibit A Users Manual. OPC raises a question regarding an alleged mismatch in terms. OPC asks why margin reserve [for treatment facilities] is based on the greater of permitted or actual ERC capacity, while the denominator of default formulas is firm reliable capacity. OPC concludes this is detrimental to the ratepayer, assumedly because firm reliable capacity can be no more than permitted capacity. Responses to Q6 and Q7 of the Users Manual (pp 7-9) explain that margin reserve requirements tie to the timetables a utility must meet to comply with regulatory construction requirements. The timetables are triggered by comparing flows to permitted capacity. On that basis, it is reasonable to assess margin reserve requirements in relation to permitted capacity. Actual capacity only comes into play when it exceeds permitted capacity so as not to understate expressed need. Firm reliable capacity is used in the denominator of default formulas because that is the safe operating level of capacity, as limited by practical constraints, that is available for providing service. It is not necessary that these two parts of the default

equation have the same base for measurement in order to be compatible. They provide different inputs into the formula. Combined they indicate the percentage of the operating level of capacity plus the reserve requirement necessary to meet permitting requirements.

25-30.432(6) USED AND USEFUL DEFAULT FORMULAS

GENERAL COMMENT: FWWA believes the Commission should not codify standardized default formulas. If the Commission does decide to adopt standardized default formulas, FWWA believes those contained in Exhibit B and supported by 25-30.432(7) and (8) are reasonable and provide the most practical means of addressing the many system variables. Exhibit B contains a simplified version of the proposed default formulas published in Order No. 930455. Exhibit B also compares, in legislative format, the simplified version and the published version of the formulas. Unlike the formulas contained in the proposed rules, there is only one set of formulas for each size category in the Exhibit B proposal.

OPC has proposed alternative formulas. The alternatives proposed by OPC generally include the following modifications.

1. Margin reserve is removed entirely from used and useful rate base.

2. All storage capacity requirements for emergency purposes is excluded.

3. Fire flow requirements are excluded in nearly all situations.

4. All distribution facilities are treated alike, regardless of system characteristics.

5. Transmission facilities are made subject to a used and useful proration.

6. Other plant is treated as if it were customer related.

The default formulas proposed by the Commission show consideration for the history of the used and useful approach in water and wastewater cases and the evolution of positions taken by the Commission. They recognize that different systems have different characteristics. They recognize engineering and regulatory considerations that overly simplistic formulas do not. They recognize the differences between developer related and non-developer related systems. The proposed alternative formulas ignore all of these considerations and defeat the intent of the Commission proposal. The alternative formulas produce a level of rate base that is clearly confiscatory. If a utility built plant that would fit the parameters of these alternative formulas it could not provide service capable of complying with its statutory obligations. They are the best argument for not codifying default formulas.

Many of the reasons for including the factors that OPC has seen fit to remove are explained in the Exhibit A Users Manual. The most

pertinent explanations are as follows:

Margin Reserve: Q1 - Q9 at pages 6 - 9. See also our previous comments on 25-30.432(5) regarding the propriety and necessity of including margin reserve in rate base.

Storage: Q7 at page 13. Q19 at page 13. See also the explanation of emergency storage under 25-30.432(7) DEFINITIONS.

Fire Flow: Q12 at page 10.

Distribution Systems: Q26 at page 15; Q27 at page 16.

Transmission Systems: Q9 at page 9.

Other Plant: Q28 at page 16 and discussion at page 2.

For the most part, the identified references are fully explanatory. Some further explanation may be helpful with regard to the water transmission system. FWWA believes that the default formulas correctly indicate that the water transmission system should be regarded as 100% used and useful. It serves the broad customer base, is not directly related to individual demands and its design must recognize overall system design, configuration and hydraulic considerations over the long term. Unlike treatment facilities, which may be added to in distinct stages, the transmission system cannot. It is neither economical, practical nor reasonable to increase transmission main capacity on a continuing basis at the

same rate as customer growth. The transmission system forms a backbone for the entire water system without which adequate service could not be provided. Portions of the investment in the transmission system should not be excluded from rate base on a pro rata basis.

OPC also expressed general concern regarding the calculation of margin reserve as related to capacity rather than ERCs. This is discussed in Q5 - Q6 at page 7 of the Users Manual. OPC expressed concern regarding the use of fill-in lots with regard to developer related distribution system used and useful. This is discussed under 25-30.432(7) DEFINITIONS.

SPECIFIC COMMENTS

25-30.432(6)(a)1. SMALL WATER SYSTEMS - With storage

25-30.432(6)(b)2. MEDIUM WATER SYSTEMS - No storage

25-30.432(6)(c)1. LARGE SYSTEMS - With storage

25-30.432(6)(c)2. LARGE SYSTEMS - No storage

COMMENT: OPC has interjected editorial comments regarding these system formulas that conclude that they do not or may not be able to provide fire protection. OPC then suggests modification of the formulas to exclude capacity for fire flow requirements. FWWA disagrees with the OPC's conclusions and modifications. The basis for the Commission's consideration of fire flow in used and useful calculations is covered in Proposed Rule 25-30.432(5)(b) FIRE FLOW. OPC did not express any problem with that rule. That rule states

that the Commission shall consider fire flow in used and useful calculations for any utility that requests fire flow be a consideration in its system requirements. Under this proposal, the utility must initiate the request. Therefore, fire flow requirements cannot be summarily eliminated from the default formulas. In addition, the rule specifies that insufficient capacity to provide adequate fire flow shall not be grounds to exclude it as a factor in determining used and useful, however, the Commission may require the utility to take steps to provide adequate fire protection. The intent of the rule is clearly to encourage utilities to provide fire protection, and, in the best interest of the customer, give the Commission the means to assure it is adequate.

25-30.432(7) DEFINITIONS

25-30.432(7)(c) Fill-in Lots

COMMENT: FWWA does not take issue with the definition proposed by the Commission. OPC expressed concern regarding the use of fill-in lots with regard to developer related distribution system used and useful, and recommended it be excluded from the formulas. Fill-in lots is a concept that simplifies the determination of used and useful in developer related distribution and collection systems. It recognizes that lines laid in isolated streets must necessarily pass vacant lots to serve others and therefore the used and useful factor should give credit for more than just the actual lots served. The proposed rule provides a fair means of accomplishing

this. As proposed, a line becomes fully used and useful when at least 25% of the lots on a street have service. OPC expressed concern that giving credit for fill-in lots may lead to collaboration between the utility and developer. Misuse of power by anyone, be it a utility, developer, commissioner or public counsel is a legitimate concern. The best protection is enforcement of fair and equitable laws and rules. This is a fair and equitable rule. A rule that fails to recognize that it is physically impossible to provide service to noncontiguous lots with the amount of lines and investment that OPC's proposal would allow is not fair and equitable. The fill-in lot concept is not new to the Commission. It has been accepted by the Commission in previous cases (see Docket No. 850151-WS, Deltona Utilities, Inc.)

25-30.432(7)(f) Fire-Flow Allowance

COMMENT: FWWA does not take issue with the definition proposed by the Commission. This allowance recognizes that capacity for fire flow allowance is a factor in distribution system capacity. OPC disagrees that fire flow is a function of the water distribution system. FWWA and the American Water Works Association disagree with OPC.

> The determining factor in sizing mains, storage facilities, and pumping facilities for communities with a population less than 50,000 is usually the need for fire protection. Introduction to Water Distribution, Sizing Mains, page 5, American Water Works Association, 1986.

When a system is not fully built out, the fire flow demand becomes the overriding component in determining the used and usefulness of the lines. The fire flow allowance recognizes that even though customer demand may be small, the lines serve a useful purpose in that they are needed for, and capable of, delivering fire flow. As customer demand increases fire flow demand becomes a smaller consideration.

25-30.432(7)(k) Lots Served

COMMENT: FWWA does not take issue with the definition proposed by the Commission. The definition recognizes that lots, once served, have caused the utility to provide service even though they may become inactive. OPC disagrees with this. The definition also recognizes that occupied lots capable of being served but not connected to the system do not detract from the usefulness of lines. They are beyond the utility's control and the line that passes by them is necessary to serve others. OPC again disagrees. If these factors are ignored, the effect is a contrived used and useful factor that has no relationship to reality. Let us look at a hypothetical situation. A utility has a line that serves five contiguous residences. Today, all residences are occupied and are active customers. The line is 100% used and useful. Tomorrow, two of the customers leave and terminate service. The next day, someone moves into one of the vacant residences and takes service. According to OPC, the used and usefulness of the line would go from 100% to 60% to 80%, and the amount of the investment on which the

utility would be allowed to earn and to recover depreciation would fluctuate accordingly. That does not make sense nor is it a fair or practical regulation. The argument with regard to occupied lots capable of being served is a little different. These are lots over which the utility has no control. To the utility they appear as a non-platted lot; a space upon which nothing can be built. They should either be added in to the lots served or deducted from the lots with service available.

RULE 25-30.433 RATE CASE PROCEEDINGS

25-30.433(1)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. This rule sets out standards the Commission will use to make a quality of service determination in a rate case. OPC suggests that the rule indicates that a fine will be imposed if any or all of the standards are not met. FWWA disagrees that such a statement adds anything to the rule and in fact it may limit the Commission in its actions. The Commission certainly has the authority to take action against a utility whose quality of service is inadequate. However, the type and the severity of action taken should be commensurate with the offense. It should not be just an arbitrary penalty, nor should it always be a penalty. The Commission may wish to consider requiring certain improvements be made within given time constraints. It may disallow certain costs from rate recovery. It may make recovery of certain costs dependent on completion of improvements. There are many ways open to the

Commission to deal with poor quality service, and as pointed out by OPC, it has not needed a specific rule to do it.

25-30.433(2)

COMMENT: FWWA does not take issue with the rule regarding working capital as proposed by the Commission, as it relates to cash working capital. OPC suggests that the rule require that working capital be determined using the balance sheet approach instead of the formula method. FWWA disagrees with OPC. OPC states that the formula method is inexact and more often than not results in a larger working capital allowance than necessary. Both the formula method and the balance sheet method are inexact. There is no argument on that point. Both are estimates of working capital as determined by a lead-lag study. There is certainly nothing more exact about a balance sheet analysis that looks at account balances on thirteen days out of 366. The balance sheet method is fraught with problems regarding the interpretation of which liabilities are investor supplied and which are not; which are utility related and which are not; which are used and useful and which are not. The formula method has as its basis, the adjusted operating and maintenance expenses for 365 days of the test year. It is for payment of these expenses that cash working capital is required. FWWA challenges the OPC conclusion that the formula method more often than not results in a larger allowance than necessary. It may indeed result in a larger allowance than the balance sheet method, but that is because the balance sheet method often results in zero

or negative amounts. That is because the balance sheet method, even when diligently performed, represents liquid funds available to pay current expenses, not the investment required to pay current expenses. FWWA contends that working capital as the term is used in determining rate base, is always a positive number and is more correctly estimated by the formula method.

25-30.433(3)

COMMENT: FWWA does take issue with the rule regarding the treatment of deferred debits in rate base. FWWA's comments on the treatment of deferred debits were filed April 23, 1993. FWWA's basic position is that deferred debits represent investment in property on which a utility is entitled to an opportunity to earn a return, and that netting used and useful deferred tax debits against total credit deferred taxes results in an understatement of the utility's investment upon which it is entitled to an opportunity to earn a return. The exclusion of this investment from rate base clearly contravenes the provisions of 367.081(2), Florida Statutes.

25-30.433(4)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission, as we believe a simple average of beginning and ending year balances significantly reduces the time and cost to prepare MFRs and reduces the opportunity for error in preparation. Nor does FWWA disagree with OPC's statement that a simple average can

overstate rate base. However, OPC fails to point out that there is an equal chance for a simple average to understate a utility's rate base. Further, the effect on revenue requirements of an over or understated rate base due to simple averaging is minimal when compared to the increase in rate case expense associated with the cost of preparing MFRs using a 13 month average balance.

25-30.433(6)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. OPC suggests that CIAC be imputed on the margin reserve calculation. FWWA disagrees. OPC takes the position that this rule is a deviation from past Commission policy and past policy should be continued. But that argument rings hollow. OPC has argued to discontinue allowing margin reserve, the formula method for working capital and the simple beginning/ending balance for rate base and capital. All of these represent past Commission policy from which OPC advocates that the Commission deviate. FWWA believes that CIAC should not be imputed against margin reserve because it results in a clear mismatch of speculative future contributions against current investment in used and useful plant. Further discussion of, and support for, this position is found in Q1 - Q5 at pages 6 and 7 of Exhibit A, the Users Manual.

25-30.433(7)

COMMENT: FWWA does take issue with the rule as proposed by the Commission. The rule proposes that income tax expense not be allowed for Subchapter S corporations, partnerships or sole proprietorships. Income tax expense is a legitimate cost of doing business for these business organizations, even though the tax is paid by the individual owners and not the corporations. Excluding this expense understates the cost of providing service and dilutes the allowed rate of return.

25-433(9)

COMMENT: FWWA does not take issue with this rule regarding abandonments, as proposed by the Commission. FWWA disagrees with OPC's position that the proposal is unfair to ratepayers and should be stricken. This rule is applicable to property which a utility has been forced to abandon and/or has been prudently abandoned. Such action is taken on behalf of the ratepayers. It is obvious from the Commission's wording of the rule that it is not applicable to imprudent abandonments. It is fair to the ratepayers and to the utility that the associated legitimate costs are a cost of service to be recovered in a timely manner. OPC's alternative rules suggest disallowance of the unamortized portion from rate base. Disallowance of the opportunity to earn a return on a prudent investment would be confiscatory. FWWA does not see any need nor basis for modifying the proposed formula for determining the amortization period.

25-30.433(12) NEW OPC RULE

COMMENT: OPC proposes a rule that removes all investment in nonutility operations from the equity component of capital. OPC states that this has been the standard practice of the Commission. FWWA does not agree that a rule should be established. The Commission takes several factors into consideration in determining the appropriate capital structure reconciliation for water and wastewater utilities. Investment in nonutility plant is only one such factor. FWWA does not agree that a rule need be established for this single factor. The Commission, through several orders has indicated its policy with regard to nonutility investment. The Commission has stated that, when reconciling capital structure to rate base, non-utility investment is removed directly from equity unless the utility can show, through competent evidence, that to do otherwise would result in a more equitable determination of the cost of capital for regulatory purposes than reconciling total capital to rate base. If the Commission does adopt this proposed rule, it should include the opportunity for a utility to make its case for not removing nonutility plant from equity.

SUGGESTED WORDING

25-30.433(12) Nonutility investment should be removed directly from equity when reconciling the capital structure to rate base unless the utility can show, through competent evidence, that to do otherwise would result in a more equitable determination of the cost of capital for regulatory purposes.

25-30.433(13) NEW OPC RULE

COMMENT: OPC suggests a new rule which appears to set out how to treat interest expense in the income tax calculation. The portion of the rule regarding investment tax credits is somewhat unclear. However, the rule as a whole just seems to restate procedures that are already included in other rules. Rule 25-14.002 establishes the procedure that must be followed to reflect the effect of parent debt on income tax. Rules 25-30.437 and 25-30.443 incorporate the Minimum filing Requirement (MFR) forms to be filed with a rate application. The "C" schedules included in the MFRs, specifically C-3 and C-8 dictate the procedure for calculating interest expense and the effect of parent debt. The rule proposed by OPC is redundant and unnecessary.

25-30.433(14) NEW OPC RULE

COMMENT: OPC seeks a rule that would disallow income tax expense for ratemaking purposes if the utility has access to loss carryforwards in the foreseeable future. FWWA strongly objects to this proposal. It is inequitable and confiscatory. Loss carryforwards are, just as they appear, cumulative losses. They occur because revenues were inadequate to cover expenditures and represent periods when rates were insufficient to recover costs. During periods when such losses are generated, customers were receiving service at less than cost. If they are allowed to be carried forward as an offset to income tax expense, rates will continue to be understated and the utility will be denied the

opportunity to earn a fair return. In addition, customers rates will be reduced below cost in future years as a reward for having received service below cost in prior years. This proposal should be rejected.

25-30.433(15) NEW OPC RULE

COMMENT: OPC proposes that a rule be adopted to hold down rate case expense. FWWA agrees that rate case expense is often very high - and disproportionately so for small utilities. This problem has been alleviated somewhat through the Staff Assisted Rate Case (SARC) program, although participation in that program requires a compromise as to the utility's rights of review and appeal. However, OPC's proposed solutions will not solve the problem. OPC states that consultants and attorneys often do not provide estimates. That is incorrect. Consultants and attorneys must, of necessity provide estimates, because the MFRs require it. In many cases, the estimates indicate the costs of preparing and filing versus the cost related to intervention and hearings. The costs related to interventions and hearings are subject to the most escalation because they are responsive activities; i.e., the amount of expense is directly related to the activity generated by, or for, intervenors. We believe it would be most helpful in controlling rate case expense if the following were considered: (1) OPC would set guidelines for when it will intervene - perhaps only when 50% or more of the affected customers request it; or when the revenue request is more than 5% per year compounded from the last

increase; (2) limit interrogatories to 50; (3) limit requests for discovery to not include information that is readily available, such as reports and data filed with the Commission or other regulatory agencies.

RULE 25-30.435 APPLICATION FOR A RATE INCREASE BY AN APPLICANT THAT OWNS MULTIPLE SYSTEMS

COMMENT: FWWA does not take issue with the rule as proposed, nor does it take issue with the alternative rule regarding an annual filing of allocated costs as described in the February 22, 1993 Staff Memorandum filed in this docket. The merits of these alternatives will be discussed by affected utilities.

RULE 25-30.436 GENERAL INFORMATION AND INSTRUCTIONS REQUIRED OF CLASS A AND B WATER AND WASTEWATER UTILITIES IN AN APPLICATION FOR RATE INCREASE

25-30.436(4)(h)

COMMENT: FWWA does not take issue with the rule as proposed by the Commission. OPC has suggested several improvements and requests for additional information. FWWA takes issue with the requests to file workpapers, contracts and agreements because of the burden and cost related thereto. When such documents are made part of the filing, multiple copies must be provided. This request is inconsistent with OPC's proposed rule 25-30.433(15), the intent of which is to control rate case expense. Further, some of the information, because it may involve nonutility affiliates, may contain

confidential information. The consequences of this suggested addition should be carefully scrutinized.

RULE 25-30.455 STAFF ASSISTANCE IN RATE CASES

COMMENT: FWWA does not take issue with the rule as proposed. OPC has suggested consideration of a form of mandated arbitration. Although we do not take issue with the concept, we are not sure what the basis for arbitration would be. Since, by statute a utility requesting staff assistance waives its right to protest, the only reason to arbitrate is because OPC or a customer has protested the rates found reasonable by the PSC staff and Commissioners. There is no benefit to the utility to arbitrate. Staff is required to defend its position and any rate case expense incurred by the utility to support the information provided to staff is recoverable. Arbitration can only benefit the customer to the extent the cost of defending the staff position is minimized. If such a rule is pursued, it must have language to protect the utility from having mandated arbitration used as a means of forcing it to accept a less than fair result .

RULE 25-30.515 DEFINITIONS

COMMENT: This rule is presently a part of the Service Availability section and contains definitions which are designated as being applicable to service availability policies and related agreements. FWWA, in its Comments filed in the docket on April 29, 1992, recommended some revisions to specific definitions and also recommended that all definitions be combined in one definition rule

that is applicable to all parts of the Water and Wastewater Rules. It is FWWA's understanding that these and other definitions are to be addressed in Phase II of this docket. On that basis, our specific comments are not restated here. If the Commission does intend to address these definitions in this proceeding, we ask that it take notice of the specific comments found at pages 33 - 38 of COMMENTS OF THE FLORIDA WATERWORKS ASSOCIATION ON PROPOSED NEW AND AMENDED WATER AND WASTEWATER RULES, April 29, 1992.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

SUPPLEMENTAL COMMENTS OF FRANK SEIDMAN

FOR THE

FLORIDA WATERWORKS ASSOCIATION

DOCKET NO. 911082-WS

IN RE: PROPOSED NEW, REVISED AND REPEALED RULES PERTAINING TO WATER AND WASTEWATER REGULATION

EXHIBIT A

Users Manual

ATTACHMENT 3

GATLIN, WOODS, CARLSON & COWDERY
Attorneys at Law
a partnership including professional associations

The Mahan Station
1709-D Mahan Drive
Tallahassee, Florida 32308

B. KENNETH GATLIN, P.A.
THOMAS F. WOODS
JOHN D. CARLSON
KATHRYN G.W. COWDERY
WAYNE L. SCHIEFELBEIN
ROBERT J. PIERSON

TELEPHONE (904) 877-7191
TELECOPIER (904) 877-9031

November 16, 1992

Chuck Hill, Director
Division of Water & Wastewater
Florida Public Service Commission
101 E. Gaines Street
Tallahassee, FL 32399-0850

Hand-Delivery

RE: Docket No. 911082-WS
Proposed New and Amended Water and Wastewater Rules

Dear Mr. Hill:

On behalf of the Florida Waterworks Association, enclosed is an expanded edition of our "Users Manual" regarding the proposed used and useful rules.

The Questions and Answers section has been greatly expanded, to compare traditional staff methodology with that proposed in the draft rules.

If you have any questions or comments, please let me know.

Sincerely,

Wayne L. Schiefelbein

Wayne L. Schiefelbein

WLS/dc

Enclosure

cc: (w/enc.)
Christiana T. Moore, Esq., Division of Appeals
Suzanne F. Summerlin, Esq., Division of Legal Services
Noreen S. Davis, Esq., Division of Legal Services

PROPOSED USED AND USEFUL RULES

FLORIDA ADMINISTRATIVE CODE 25-30.432

USERS' MANUAL

WITH EXPLANATION, SUPPORT
AND WORKING EXAMPLES

SUBMITTED ON BEHALF OF
FLORIDA WATERWORKS ASSOCIATION

USERS' MANUAL

TABLE OF CONTENTS

I. INTRODUCTION

The Staff of the Division of Water and Wastewater is proposing the adoption of a rule that incorporates default formulas for the determination of used and useful percentages in a rate case proceeding. The purpose of this rule is to establish and codify Commission policy governing specific formulas and factors that can be used by a utility in a rate proceeding in lieu of supporting a case-specific methodology. The primary goal is to eliminate or at least significantly limit the issue of how to measure used and useful for ratemaking purposes. The anticipated effects are a significant reduction in utility rate case expense and an accompanying savings to the customer.

In developing this rule, close attention has been paid to the history of the used and useful approach in water and wastewater rate cases, and the evolution of positions taken by the Commission regarding this issue. We believe that this rule incorporates the positions applied by the Commission to a broad range of systems and circumstances. The rule attempts to recognize, in preset formulas, the many engineering and regulatory considerations that the Commission has to evaluate. It attempts to do this without using overly complicated formulas while at the same time avoiding the pitfalls associated with deferring to overly simplistic formulas.

II. EVOLUTION OF FORMULAS

This Commission was first given the statutory authority and responsibility to regulate the rates and service of privately owned water and wastewater utilities in 1959. The concept of used and useful has always been a recognized factor in determining that portion of a utility's investment on which it is entitled to earn a rate of return. But, it was not until the late 1960's, when industry growth and case workload began to increase rapidly, that ratemaking concepts, including used and useful, were given serious study and consideration. In 1973, the Chief Engineer of the old Water and Sewer Department issued the first formal treatise on Used and Useful. For nearly ten years that paper served as a guide to staff engineers as to the technical and regulatory factors to be considered in evaluating used and useful in rate cases. That paper discussed general concepts, but concluded with the following summation:

> My main recommendation is to assure that each system evaluated for used and useful content be done so in a fair and equitable manner. Full consideration should be given to the design criteria and the reasonableness of the same. Using considerations other than design criteria measured against customers served and their requirements will result in an arbitrary decision as to what is used and useful in the public service.

Over the years, in response to Florida's growth, private water and wastewater systems proliferated and the rate cases associated with them became more complex. Each rate case applicant presented a utility specific evaluation of used and useful plant. By the early 1980's, Commissioners were expressing problems with lack of consistency and ambiguities in used and useful methodologies and computations, and confusion with terminology and measurement terms. Therefore, in 1981, the Water and Sewer Department initiated a research and restudy project of the used and useful determinations in water and sewer cases. Input was gathered from the individual utilities and the Florida Waterworks Association. The project was completed in November, 1982.

The result was a guide composed of methodologies, standards and illustrative formulas. The guide sets out the steps to be followed by the staff engineer to develop the necessary information upon which to base a conclusion and prepare computations. The guide also sets out the standards to be used in applying and measuring the information. And the guide provides a simplified formula for treatment plants and one for the distribution or collection system, to illustrate the function of key considerations. The formulas are introduced by this paragraph:

> A single formula which would be totally usable in all cases is not feasible as we previously mentioned. However, a very simplified formula is noted here to <u>illustrate</u> the function of key considerations in determining the percentage of a plant or system to be used and useful.

The paragraph following the formulas states:

> It should be noted that in some cases this percentage would not apply to all the NARUC accounts covering plant and systems. Some plant components are not capacity oriented and therefore would be 100% used and useful. Therefore, the Engineer will designate those accounts that are 100% and justify this reasoning.

Since that guideline was developed, the Commission staff has used it to evaluate the used and useful calculations developed by utilities in their rate case presentations. In most cases presented to the Commission, utilities still develop utility specific used and useful calculations. However, these calculations are nearly always a variation of the simple formulas set out in the guideline. That is:

$$\frac{\text{Demand + Reserve}}{\text{Capacity}} = \% \text{ used \& useful}$$

When the staff presents its recommendation in a rate case and often, when the final Commission order is written, this simplified formula is used to summarize the specifics of the case. The fact that it is used on a regular basis has made it appear as though indeed this simplified standard formula can be used, without modifications, to calculate used and useful in all cases. It would, therefore, appear to follow that there should be no problem in making the formula a part of the rules, to be used in all situations, in its simplified form. But this is not the case. This simplified formula cannot be, and is not, applied in all cases without modification. The Staff position as stated in 1982, regarding the illustrative function of the formula still applies. The simplified formula is illustrative, only. To apply it in any particular case, it has to be modified to recognize the characteristics of the system, or the portion of the system, to which it is applied. As a practical matter this is now being done in each case by evaluating the evidence. After the evidence is evaluated, the formula is used in the Staff recommendation to simplistically summarize the specifics of the case. In this way, the basic concepts of the formula have been made widely applicable and adaptable to a wide range of circumstances. This has not caused any problems because the formula has been recognized, by the Commission and by the parties to a case, as a guideline, and has not been codified.

III. CODIFYING THE DEFAULT FORMULAS

In the process of revamping the rules, the Commission has again expressed an interest in including standardized formulas in the rules. The goal is to simplify the rate case procedure, reduce points of controversy and as a result reduce the cost of a rate case. However, if only the simplified formula is codified, this goal will not be accomplished. Points of controversy will still exist because each applicant will be left to interpret, for the specific characteristics of its system, how demand and capacity are to be defined and measured. To avoid this pitfall, the rule must establish definitions that are applicable to the most common system characteristics and set out the formulas that apply to those specific characteristics. In this way, default formulas can be established that will fit the majority of cases.

To accomplish this, we have categorized systems by size and identified a series of default formulas for each size category that we believe can be codified. As can be seen, each of the formulas in the series retains the basic simplified form:

$$\frac{\text{Demand + Reserve}}{\text{Capacity}} = \% \text{ used \& useful}$$

Each of the formulas in the series addresses one of the several portions of the water or wastewater system that the Commission is expected to and, and at one time or another, has had to evaluate.

In this way, a utility applicant as well as the Commission, can identify a system by size category, and can prepare a used and useful analysis in those terms. Each formula in the series has its terms defined in the rule, so that this will not be a point of controversy. Formulas in the series are grouped and identified for each size category. An applicant utility would then use the formulas applicable to its system size category to calculate used and useful. Once a utility identifies itself by size category, the measures of the demand and capacity components are relatively straight forward, with very little being subject tc argument or interpretation. The rules recognize that not every utility circumstance can be addressed by predetermined, standardized, default formulas. If a utility cannot adequately depict its system circumstance through the use of the default formulas, or chooses not to use the default formulas, the rules provide it with the option of presenting evidence supporting its specific system circumstance.

IV. CATEGORIES OF WATER SYSTEMS

Water systems have been grouped into the following size categories and the default formulas applicable to them are found at the proposed rule subparagraph, as shown:

SYSTEM CATEGORY	RULE
Small Water Systems	25-30.432(6)(a).
Medium Water Systems	25-30.432(6)(b).
Large Water Systems	25-30.432(6)(c).

For each category, default formulas have been set out for each of seven major plant functions. These are:

	PLANT FUNCTION
1.	Source of Supply
2.	Water Treatment Equipment
3.	Finished Water Storage
4.	Water High Service Pumping
5.	Other Water Facilities
6.	Water Transmission System
7. - 9.	Water Distribution System

The distribution plant function is broken down further to recognize the specific circumstances surrounding developer related systems. Thus, specific definitions and formulas have been developed to recognize:

WATER DISTRIBUTION SYSTEMS

7. Non-developer related
8. Developer related, single family
9. Developer related, mixed developments.

V. CATEGORIES OF WASTEWATER SYSTEMS

For the purpose of establishing default formulas for wastewater systems, it was not necessary to categorize the plants by size. The formulas for wastewater systems are grouped under Rule 25-30.432(6)(d). The only categorization is by major plant function.

PLANT FUNCTION

1-3. Collection System and Pumping Stations
4. Wastewater Force Mains
5. Wastewater Treatment Equipment
6. Effluent Disposal Facilities
7. Other Wastewater Facilities

The collection system and pumping station plant function is broken down further to recognize the specific circumstances surrounding developer related systems. Thus, specific definitions and formulas have been developed to recognize:

WASTEWATER COLLECTION SYSTEMS AND PUMPING STATIONS

1. Non-developer related
2. Developer related, single family
3. Developer related, mixed developments.

VI. DEFINITION OF TERMS

For default formulas that are set out in a rule to actually be usable in a practical manner and with minimal opportunities for confusion, it is critical that the terms utilized in the formulas be clearly and singularly defined. For that reason, the definitions of all of the terms used in the formulas are listed alphabetically in a single subsection of this rule. The definitions utilized in the formulas are all found in proposed Rule 35-30.432(7), and for the convenience of the user, they are listed alphabetically.

VII. QUESTIONS AND ANSWERS REGARDING THE PROPOSED WATER AND WASTEWATER USED AND USEFUL RULES

The proposed water and wastewater rules move the Commission from a guideline approach to used and useful, to use of codified "default" formulas. This gives rise to many questions and concerns, such as, are the proposed formulas and definitions consistent with Commission policy, if not how do they differ, are the proposed rules reasonable and why is it not reasonable to continue with existing Staff formulas? The following Q & A's anticipate and attempt to answer many of those questions.

MARGIN RESERVE

Q1. What considerations define the margin reserve?

A1. The following factors are inherent in the definition of margin reserve. They have led to a long-standing recognition by the Commission that margin reserve is an integral and necessary component of used and useful rate base.

1. A utility must fulfill its statutory obligation to provide safe, efficient, and sufficient service. This requirement extends both to existing customers and future customers requesting service within a reasonable period of time.

2. The margin reserve encourages and rewards utilities for long-term planning and economies of scale which reduces the cost of service to customers.

3. An increment of used and useful capacity to cover changing demand characteristics of existing and potential customers.

4. That amount of plant capacity which may never be used and useful in expanding systems subject to current DER requirements, since plant expansion is required prior to 100 percent utilization.

5. For systems that are "built-out," margin reserve is that increment of excess capacity which is prudent for safe, reliable, efficient, and sufficient service to utility customers.

Based on the above, it is clear that the margin reserve is a necessary investment which benefits all customers, including existing customers.

Q2. Who makes the investment in margin reserve capacity?

A2. One hundred percent of the investment in margin reserve is made by the utility.

Q3. Doesn't CIAC fund or partially fund the margin reserve?

A3. Absolutely not. The margin reserve is a continuous increment of investment in capacity required for the reasons set forth above. When a new customer is added, a unit of capacity is sold from the margin reserve. In order to continuously maintain the total required margin reserve, a unit of unsold capacity not in the reserve must be added to the reserve to replace the unit of capacity sold. Although the company may collect CIAC from the new customer, for the unit of capacity sold from the margin reserve, it must be replaced by a unit of capacity funded solely by utility investment. Hence, CIAC never funds or pays for the margin reserve. As noted above, even at build-out, reserve capacity is required, since it would be imprudent to operate at 100 percent of designed capacity on a continuous basis. Therefore, as a practical matter, there will always be unsold prudently constructed capacity which is unfunded by CIAC, even at build-out.

Q4. What is the practical result of imputing CIAC against the margin reserve?

A4. Imputation of CIAC against the margin reserve effectively eliminates the margin reserve and defeats the very purpose for including it in rate base in the first place. In the past, the formula quantifying margin reserve typically included 18-24 months of customer growth. This has led to the erroneous perception that margin reserve exists solely to support future customer growth. As demonstrated above, this is not the case. If CIAC is imputed for customer growth, the margin reserve is reduced or eliminated entirely. This approach fails to recognize the fact that margin reserve is a continuous requirement over and above normal used and useful capacity at every level of plant utilization.

Q5. Do AFPI charges fund the margin reserve?

A5. No. The amount of net used and useful plant in rate base includes plant currently utilized, plus the margin reserve. AFPI charges only allow recovery of the carrying costs of the remaining net non-used and useful plant. Such remaining plant does not include margin reserve and, therefore, is not a component of the AFPI charge. Hence, collection of AFPI charges does not fund or pay for the margin reserve.

Q6. The present Staff formula worksheets calculate Margin Reserve as a percentage of customer growth. In these rules, Margin Reserve is calculated as a percentage of permitted or actual capacity. Is this consistent? If not, why the change?

A6. The reasons for including Margin Reserve in the proposed default formulas are consistent with those taken by Staff and supported by Commission orders. However, we believe that the proposed approach to calculating Margin Reserve better represents the reserves required by a utility to meet regulatory design requirements.

Until last year DER determined wastewater facilities expansion requirements by comparing actual flows to permitted capacity. Actions required by a utility, with regard to when it must begin designing, constructing, or completing plant additions, were stated in terms of when actual flows reached certain percentages of permitted capacity. Under those requirements, a utility had to commence planning and construction of facilities expansion when recorded flows reached 80% of capacity. DER has recently revised its rules, tying wastewater expansion planning and construction requirements to the following time table:

When Flows Equal or Will equal	Prepare
50% of permitted capacity	Capacity analysis
Permitted capacity in 5 years	Plans & prelim design
Permitted capacity in 4 years	Specific plans
Permitted capacity in 3 years	Construction permit appl.
Permitted capacity in 6 months	Operating permit appl.

[see Rule 17-600.405(3) and (8), F.A.C.]

This timetable is obviously designed to encourage long term, conservative planning. Under this timetable, a utility must obtain a construction permit application 3 years in advance of projected flows equalling capacity, but it must also apply for an operating permit 6 months prior to that time. It therefore must conceivably be prepared to complete construction within 2 1/2 years from when flows reach 50% of capacity. This timetable justifies maintaining a 20% per year capacity margin and is compatible with prior DER practice, which specified that a utility initiate procedures for plant expansion when flows equal 80% of permitted capacity. A 20% Margin Reserve is reasonable for wastewater systems.

Q7. Is the 20% Margin Reserve reasonable for water systems also?

A7. Yes it is. Although DER regulations do not specify construction timetables, county regulations often do, and DER typically adopts those timetables as reasonable. An example is Palm Beach County. Its regulations require a utility to initiate procedures for treatment plant expansion when distribution demand reaches 80% of approved design capacity. Construction must begin when demand reaches 90% of approved design capacity. The proposed 20% Margin Reserve for water

system components is reasonable.

Q8. The present Staff formulas provide for treatment plant Margin Reserve to be calculated based on growth, with a cap at 20% of present customers. The proposed revisions call for a fixed 20% of permitted or actual capacity, whichever is greater. Is it reasonable to continue the Staff approach? If not, why not? Is the proposed revision reasonable?

A8. It is not reasonable to continue the Staff approach for default formulas. Codified default formulas should be as simple and as free from controversy as possible. A Margin Reserve that is a fixed percentage of permitted design capacity meets that test.

Q9. The proposed rule regarding Margin Reserve states that prudently constructed water transmission mains and off-site wastewater mains and pumping stations, shall be considered 100% used and useful and Margin Reserve shall not be a factor. Why is this reasonable?

A9. Transmission mains and off-site wastewater mains and pumping stations are common elements of a system. Their capacities typically reflect long term design and economic considerations, rather than short term customer growth.

Q10. How should the PSC judge whether such mains, etc. are prudently constructed?

A10. There is no mathematical formula to determine prudence. Prudent construction implies decisions wisely made with foresight, not hindsight, and based on the information at hand at the time the decision is made. Proposed Rule 25-30.432(1)(c) sets out factors that should be generally considered in evaluating the prudence of any investment. Those factors should be considered here.

Q11. How would a utility "demonstrate" that on-site portions of its system "will likely reach buildout" within 36 months after the test year?

A11. This would be demonstrated through projections of customer growth based on an evaluation of historical growth data, known conditions such as building permit applications and extension agreements, and local economic conditions and building controls.

FIRE FLOW

Q12. How does the proposed minimum fire flow demand requirement (prescribed in the absence of applicable, specific government requirements), compare with current PSC practice?

A12. The proposal is consistent with and codifies current PSC practice. The current PSC rules do not specify what constitutes adequate fire flow demand. However, when local governments do not impose specific fire flow requirements, the Commission has long recognized the recommendations of the Insurance Service Office (ISO).

> [Note: See Used and Useful Determination - Water and Sewer Cases, PSC Staff Project WE-81-11-012, November 14, 1982 Memorandum - Fire Flow Capability - A recognition of the utilities' ability to furnish fire protection for their customers' general protection. The standards will be those as set by the Insurance Service Organization or by a governmental agency ordinance. The minimum standards to date are 500 gpm in residential areas for a two hour period or 1,500 gpm for a four hour period when customers are a mix of residential and sizeable commercial connections. Higher standards can prevail in higher density conditions.]
>
> [See Attachment A in the Appendix Section for the complete text of the November 14, 1982 Memorandum.]

The ISO Fire Suppression Rating Schedule (FSRS) determines various levels of fire suppression capabilities. The minimum fire flow demands in the proposed rule are based on interpretations of FSRS Section 340, Calculation of Needed Fire Flow. The proposed duration of fire flow is based on FSRS Section 604, Water Supply Fire Flow and Duration. The minimum pressure requirement is based on FSRS Section 603, Minimum Pressure. [See Attachment B in the Appendix for the text of the cited sections.]

UNACCOUNTED FOR WATER

Q13. The proposed rules allow a maximum level of unaccounted for water of 12.5%, without further explanation. Is this reasonable? Why is a flat 10% allowance unreasonable?

A13. The base from which unaccounted for water should be measured is the design condition of a new system. The American Water Works Association (AWWA) design standards recognize that a

system cannot be 100% "tight" even when it is new. A reasonable level of acceptable unaccounted for water for a working system, without further explanation, is 10% above the design level of leakage. Although there is no rule regarding unaccounted for water, the Staff has recognized in past departmental memoranda (see Attachment A), that "a fair average of unaccounted for water might be 10-20 percent, for fully metered systems with good meter maintenance programs and average conditions of service." The Commission practice has been to allow a flat 10%, without explanation. But, there is ample PSC decisional precedent for recognizing unaccounted for water in excess of 10% (e.g., Order No. 17304 - 19%, Order No. 21322 - 16 and 17%, Order No. 22843 - 13.5%). Restricting the allowance for unaccounted for water to only 10%, disregards the design allowance for leakage, and gives no recognition to the effects of age on a system. This makes the flat 10% allowance unreasonable. An allowable maximum, without explanation, of 12.5 percent unaccounted for water falls at the lower end of the 10-20% allowance recognized by Staff and PSC Orders.

INFILTRATION AND INFLOW

Q14. How does the proposed rule regarding infiltration and inflow compare to present Commission practice?

A14. As with unaccounted for water, there is no existing rule regarding inflow and infiltration. Present Commission policy is to recognize, in its orders, that both inflow and infiltration exist, but to recognize in numbers, an allowance only for infiltration. The proposed rule recognizes an allowance for both infiltration and inflow.

Q15. How does the proposed method of calculating an allowance for infiltration compare to the existing Commission method?

A15. They are almost identical. The proposed rule defines excess infiltration as flows in excess of 500 gpd/in. diam/mile of pipe, for all lines, including service laterals. This is an average specification allowance that is referred to in Water Environment Federation Manual of Practice No. 9. The Commission recognizes the same standard, but it is not clear whether it is being applied to all lines, including service laterals. If service laterals are not included in the Commission calculation, they should be, as they are a significant source of infiltration.

Q16. Is the present Commission policy of not providing an allowance for inflow, reasonable? If not, why not?

A16. No, it is not. The existence of Inflow is recognized as a design consideration. It represents such flows as surface water run-off into manholes and flows from unauthorized connections. The Commission also recognizes the existence of Inflow. However, it does thus far, not recognize an allowance for Inflow.

> [Note: See Order No. PSC-92-0807-FOF-WS, pages 12 and 13, 8/11/92, in Docket No. 910560-WS, In re: Application for approval of rate increase in Lee County by Tamiami Village Utility, Inc. In that order, the Commission discusses the presence of both infiltration and inflow. It explains the Staff identification of flows from customers and flows from infiltration and or inflow. It identifies what it considers to be a reasonable amount of infiltration, using the 500 gpd/in. diam/mile of pipe, discussed in the above question. It then labels, and disallows as excess infiltration, all flows above that amount, even though it had already acknowledged that the disallowed amount includes infiltration flows.]
>
> [See Attachment C in the Appendix Section for excerpts from Order No. PSC-92-0807-FOF-WS].

This is neither fair nor consistent regulatory treatment, and as such, it is unreasonable.

Q17. Is 10% of treated flows a reasonable amount of allowable Inflow?

A17. Yes. Rainfall seeping into the system through manholes is the most significant source of Inflow. Rainfall is also a significant presence in Florida. The long term average rainfall in the state is approximately 50 inches per year. It is difficult to estimate just how much of that rainfall finds its way into the sanitary sewer systems. But, if we assume that only one percent of that rainfall finds its way into the systems, that equates to about 10 percent of all the wastewater being discharged in urban systems, statewide. On that basis, an allowance for Inflow equal to 10% of treated flows, is quite reasonable.

USED AND USEFUL

Q18. The proposed rules set out specific formulas to determine Used and Useful for water and wastewater treatment plant, water source of supply, pumping, storage plant and water

distribution and wastewater collection plant. The present Staff formulas address only treatment plant and distribution and collection plant. Is it reasonable to continue with the staff approach? If not, why not? And is the proposed revision, to include other, specific formulas reasonable?

A18. The Staff approach is not reasonable. Although it may be Staff convention to apply the basic formula designated for treatment plant to other plant categories or components, a rule must be more specific. For that reason, it is not reasonable to retain the Staff approach, without modification. This is true, not only with regard to Used and Useful in general, but also with regard to Margin Reserve. It can be seen from the formulas proposed in this rule, that the components of demand to be considered for source of supply, pumping and storage are not necessarily the same as for treatment plant. For this reason also, continuing with the staff approach is not reasonable. Including specific formulas, as proposed, is a reasonable approach.

Q19. Alternative formulas are provided for calculating the used and useful percentages of a water system's source, treatment and pumping plant, when the system has negligible distribution storage. How do I determine when the alternative formulas are applicable?

A19. Because the economics do not warrant it, small systems often do not have either ground storage or elevated storage capacity designed into the system. However, they may have pneumatic tanks or small tanks for the purpose of maintaining pressure or some minimal detention time for disinfection. In those situations, whatever capacity is available is not designed to provide any significant capacity reserves. These are typical circumstances in which distribution storage capacity would be considered negligible and in which the alternative formulas would be applicable. Also, in those situations, any storage capacity would be considered 100% used and useful because it is performing the function for which it is intended.

Q20. The alternative formulas also use different measures of customer demand. The definitions are related to the size of plant and the amount of storage. Is this a reasonable approach?

A20. Yes, it is. Generally, small systems with negligible storage should be capable of serving instantaneous demand; medium size systems with negligible storage should be capable of serving peak hour demand; and large systems with negligible storage should be capable of serving maximum day demand. The diversity of demand that is gained as system size increases, tends to temper the severity of the demand peak.

Q21. For systems with storage, the proposed rules use maximum day demand for small and medium systems, but it uses the average 5 maximum days demand for large systems. Why are large systems treated differently.

A21. Again, the reason is diversity of customer demand. A large system is defined as one in excess of 5 million gallons per day. Single incidents tend to have less impact on the peak demand of such a large system, and the variation between maximum day demand and the average of maximum day demands will be less.

Q22. The present Staff formulas measure demand for water plants as, simply, the "maximum daily flow." Is that a reasonable approach?

A22. Not for codified default formulas. We know from experience that staff often interprets that term to mean the average of five days maximum demand. But that sometimes is taken to mean the five highest consecutive days in a test year or sometimes the five highest non-consecutive days. When a system has no storage, the staff has sometimes recognized peak hour demand. But all of these are interpretations. There is no specific definition of the maximum daily flow. That may be reasonable for a guideline, but not for a rule.

Q23. The proposed formulas for plant components, other than distribution and collection, measure Used and Useful against Firm Reliable Capacity. The present Staff formulas refers only to the "Capacity of the Plant." Is the present Staff designation of capacity reasonable? If not, why not? And is the proposed change reasonable?

A23. The present Staff designation is not reasonable for the purpose of codifying default formulas. It is not specific enough and requires too much interpretation. The proposed designation, as defined in the "Definitions" section of the proposed rule, is a practical modification.

Q24. The proposed rules set out formulas that are based on the size of the treatment plant. The present Staff formula for treatment plants does not differentiate on the basis of size. Is it reasonable to continue with the staff approach? If not, why not? And is the proposed change reasonable?

A24. It is not reasonable to continue with the Staff approach. Again, because it is not specific enough for a rule. The basis for measuring demand tends to be different for different size systems. Small systems typically lack storage and must be

able to serve instantaneous or peak hour demand. Larger systems can economically buffer these sharp peaks with storage or through customer demand diversity. The proposed formulas address this, and as such, are reasonable. The existing staff formulas do not address this, and as such are not reasonable. The Staff formulas may have been adequate when they could be viewed as guidelines, and interpretations could be made to fit the varied situations. But, if the formulas are to be codified, they must be more specific and less subject to interpretation.

Q25. Is it reasonable to determine Used and Useful for water supply, pumping, and storage plant on the basis of Firm Reliable Capacity, the same as for treatment plant?

A25. Yes. The default formulas proposed for source of supply, pumping and storage specify that Used and Useful be based on Firm Reliable Capacity. The definition of Firm Reliable Capacity refers to the capacity of that particular portion of plant.

Q26. The present Staff formulas allow for the calculation of Used and Useful percentages for distribution and collection plant, regardless of the type of utility system. The proposed rules differentiate between developer related and non-developer related systems. In the proposed rules, the distribution and collection system of non-developer related systems are designated as being 100% used and useful. A used and useful calculation is only necessary for developer related systems. Is present Staff requirement reasonable? If not, why not? And is the proposed approach reasonable?

A26. It is not reasonable to require a used and useful calculation for distribution and collection plant, regardless of the type of utility system. In the area of extensions of service, water and wastewater utility systems are no different than electric, gas or telephone utility systems. As such, they should not be treated differently. Each of these utilities are held to a prudency standard with regard to the extension of their respective systems to serve customers. The Commission does not adjust the distribution investment allowed in rate base for electric, gas or telephone utilities by the ratio of the lots served to potential lots in their respective service areas. That is because, for those utilities, there is usually no financial relationship between utility and the developers of the service area to potentially influence the decision of those utilities to invest in plant extensions. Similarly, there is no basis for applying that different standard to a water or wastewater utility where that utility has no financial relationship with the developers of its service

area.

Historically, it has been the potential for abuse of developer-utility relationships that has spurred the Commission to conduct used and useful analyses of water distribution and wastewater collection systems. The Commission, as a practical matter, has recognized that calculating Used and Useful for non-developer related systems is not necessary. The Staff has also recognized that it cannot necessarily determine the "capacity" of a non-developer related distribution or collection system. [e.g., see Staff Recommendation Used and Useful Schedules to Docket No. 850062-WS. Attachment D in the Appendix Section contains excerpts from the Order and Recommendation]. The proposed rules eliminate what would be an unnecessary, costly, and potentially burdensome requirement.

The proposed rules retain the used and useful calculation for distribution and collection plant in developer-related systems. That is a reasonable approach and serves to codify Commission practice.

Q27. Why do the proposed formulas for used and useful distribution and collection line distinguish between single family and mixed developments? Why is it unreasonable not to distinguish?

A27. The proposed rules make this distinction, because in a single family development, all ERCs can be equated to lots in any formula for calculating Used and Useful. For mixed systems, i.e., systems with multi-family and/or commercial customers, as well as single family homes, customers other than a single family residence, may have use characteristics different from a single family residence. In those systems, it is necessary to represent non residential lots as ERCs to recognize these differences. It would be unreasonable to ignore those differences, and as a consequence, misrepresent the actual and potential demand and capacity of those mixed systems.

Q28. How does assigning 100% Used and Useful to "Other" water and wastewater plant differ from current Commission practice?

A28. It doesn't. Current practice essentially assumes that the investment in "Other" plant is usually not demand or customer related, nor is that investment usually a significant percentage of total investment. The Commission has, therefore, not made it a practice to require a utility to calculate Used and Useful for that plant category.

VIII. WORKING EXAMPLES

As an aid in understanding how the default formulas would be applied in an actual situation, several examples have been developed using realistic data for hypothetical utility systems. These examples develop the used and useful calculations for 1) a water utility with fire flow requirement and adequate storage, 2) a water utility with fire flow requirements, but only pneumatic storage facilities, and (3) a wastewater utility. The examples also show how the formulas would be applied for developer related distribution and collection systems that serve either residential developments or mixed customer developments.

The examples are designed to "walk you through" the procedure, from the first decision, which is choosing the right set of formulas, to determining the value of the necessary parameters and finally to calculating the actual used and useful percentages.

WORKING EXAMPLES

HYPOTHETICAL WATER SYSTEM

PHYSICAL PLANT DATA
DEMAND AND ERC DATA

EXAMPLE I - Hypothetical system with (1) fire flow requirements and (2) distribution water storage capacity available.

EXAMPLE II - Hypothetical system with (1) fire flow requirements, (2) negligible distribution water storage capacity, except for pneumatic tanks, and (3) no high service pumping.

HYPOTHETICAL WATER COMPANY
PHYSICAL PLANT DATA

ATTACHMENT 3

Source: 4 Deep Wells
4,500 GPM Total Capacity
Largest Well - 1,000 GPM

Treatment: Aeration and Chlorination

Finished Storage:
Situation A:

Concrete & Steel Tanks - 650,000 Gallons
Pneumatic Tanks - 20,000 Gallons

Situation B:

Pneumatic Tanks - 20,000 Gallons

High service Pumping:
Situation A:
---
6 Pumps
3,000 GPM Total Capacity
Largest Pump - 800 GPM

Situation B:

None

Distribution System:
Developer related, all single family residential
Lots with service available - 3,000
Lots previously served, but presently inactive - 45
Fill-in lots (per system maps) - 115

ATTACHMENT 3

HYPOTHETICAL WATER COMPANY
DEMAND AND ERC DATA

Year	1	2	3	4	5
ERCs and Annual Water Pumped & Sold					
Beginning ERCs	1,243	1,161	974	904	668
Ending ERCs	1,492	1,243	1,161	974	904
Average ERCS	1,368	1,202	1,068	939	786
Annual MG Sold	120,538	119,119	91,521	89,261	73,578
Annual M-Gallons Pumped/treated	135,003	133,413	102,504	99,972	82,408
Monthly M-Gallons Pumped/Treated					
January	7,960	7,866	6,044	5,895	4,859
February	7,498	7,410	5,693	5,553	4,577
March	11,929	11,789	9,058	8,834	7,282
April	18,311	18,095	13,903	13,560	11,177
May	12,077	11,934	9,169	8,943	7,372
June	12,857	12,706	9,762	9,521	7,848
July	11,145	11,014	8,462	8,253	6,803
August	10,669	10,544	8,101	7,901	6,513
September	10,470	10,347	7,950	7,753	6,391
October	11,770	11,632	8,937	8,716	7,185
November	10,377	10,255	7,879	7,684	6,334
December	9,939	9,822	7,546	7,360	6,067
Totals	135,003	133,413	102,504	99,972	82,408
Monthly ERCs					
January	1,264	1,168	990	910	688
February	1,285	1,175	1,005	916	707
March	1,305	1,182	1,021	922	727
April	1,326	1,188	1,036	927	747
May	1,347	1,195	1,052	933	766
June	1,368	1,202	1,068	939	786
July	1,388	1,209	1,083	945	806
August	1,409	1,216	1,099	951	825
September	1,430	1,223	1,114	957	845
October	1,451	1,229	1,130	962	865
November	1,471	1,236	1,145	968	884
December	1,492	1,243	1,161	974	904
Totals	16,535	14,465	12,904	11,303	9,550
Monthly Gallons per ERC					
January	6,299	6,736	6,108	6,479	7,186
February	5,838	6,308	5,664	6,064	6,471
March	9,139	9,978	8,873	9,586	10,016
April	13,809	15,228	13,416	14,622	14,970
May	8,967	9,986	8,717	9,583	9,620
June	9,402	10,570	9,145	10,139	9,985
July	8,028	9,111	7,813	8,735	8,444
August	7,572	8,673	7,373	8,311	7,891
September	7,323	8,464	7,135	8,106	7,564
October	8,114	9,462	7,910	9,057	8,309
November	7,053	8,295	6,878	7,937	7,163
December	6,661	7,902	6,500	7,556	6,711
Max Month (avg gal/ERC)	13,809	15,228	13,416	14,622	14,970

Maximum Month is April (year 2), on a per ERC basis:

Max Day of Max Month is 904,772 GPD, per M.O.R.
or 761 GPD, per ERC

Peak Hour Demand - Not Measured
Instantaneous Demand - Not Measured

EXAMPLE 1

HYPOTHETICAL WATER COMPANY

SITUATION A: FIRE FLOW REQUIREMENTS
FINISHED WATER (DISTRIBUTION) STORAGE AVAILABLE

A. DETERMINE WHETHER SYSTEM IS SMALL, MEDIUM OR LARGE.

Calculate RELIABLE CAPACITY:

Total Well Capacity		4,500 gpm
Less: largest well out	(	1,000)
Reliable Capacity		3,500 gpm
	x	16 hours per day
		3,360,000 GPD

This is a Medium Water System (1 to 5 MGD)
See Rule 25-30.4.32(6)(b) for formulas.

B. SOURCE OF SUPPLY USED AND USEFUL

STEP 1: Determine parameters for Source of Supply, per Rule 25-30.432(6)(b)1.

Maximum Day Demand
(From Demand and ERC Data)

		761 GPD/ERC
	x	1,368 Avg Test Year ERCs
Maximum Day Demand		1,041,186 GPD

Firm Reliable Capacity
(See Definition at Rule 25-30.432(7)(h))

Total Well Capacity		4,500 gpm
Less: largest well out	(	1,000)
Firm Reliable Capacity		3,500 gpm
	x	16 hours per day
Firm Reliable Capacity		3,360,000 GPD

Fire Flow
(From Rule 25-30.432(5)(b)

		500 gpm
	x	2 hours
Fire Flow		60,000 GPD

Margin Reserve
(From Rule 25-30.432(5)(a)

		3,360,000 GPD Capacity
	x	20.00%
Margin Reserve		672,000 GPD

STEP 2: Calculate Source of Supply Used and Useful Percentage per Rule 25-432(6)(b)1.

$$\frac{\text{Maximum Day Demand} + \text{Fire Flow} + \text{Margin Reserve}}{\text{Firm Reliable Capacity}}$$

$$\frac{1,041,186 + 60,000 + 672,000}{3,360,000} = 52.77\%$$

C. TREATMENT EQUIPMENT USED AND USEFUL

STEP 1: Determine parameters for Treatment Equipment, per Rule 25-30.432(6)(b)2.

Same as for Source of Supply

STEP 2: Calculate Treatment Equipment Used and Useful Percentage per Rule 25-432(6)(b)2.

Same as for Source of Supply 52.77%

ATTACHMENT 3

D. FINISHED WATER STORAGE USED AND USEFUL

STEP 1: Determine parameters for Water Storage, per Rule 25-30.432(6)(b)3.

Equalization Volume
(See Definition at Rule 25-30.432(7)(c) - 4 hours storage at 16 hour demand)

Max Day Demand = 16 hour demand =		1,041,186 GPD
4 hours =		25.00%
Equalization Volume		260,296 GPD

Fire Flow		500 gpm
(From Rule 25-30.432(5)(b)	x	2 hours
Fire Flow		60,000 GPD

Emergency Storage
(See Definition at Rule 25-30.432(7)(c) - 1/2 of average annual daily demand)

Annual Demand	135,003 MG
(From Demand and ERC Data)	365 days
Average Annual Daily Demand	369,870 GPD
	50.00%
Emergency Storage	184,935 GPD

Firm Reliable Capacity
(See Definition at Rule 25-30.432(7)(h))

Concrete and Steel Tank Capacity	650,000 gallons
(From Physical Plant Data)	
Pneumatic Tank Cap. (not included)	20,000
Firm Reliable Capacity	650,000 gallons

Margin Reserve		650,000 gallons
(From Rule 25-30.432(5)(a)	x	20.00%
Margin Reserve		130,000 gallons

STEP 2: Calculate Water Storage Used and Useful Percentage per Rule 25-432(6)(b)3.

$$\frac{\text{Equalization Volume} + \text{Fire Flow} + \text{Emergency Storage} + \text{Margin Reserve}}{\text{Firm Reliable Capacity}}$$

$$\frac{260,296 + 60,000 + 184,935 + 130,000}{650,000} = 97.7\%$$

E. HIGH SERVICE PUMPING USED AND USEFUL

STEP 1: Determine parameters for High Service Pumping, per Rule 25-30.432(6)(b)4.

Maximum Day Demand (From Demand and ERC Data)		761 GPD/ERC
	x	1,368 Avg Test Year ERCs
Maximum Day Demand		1,041,186 GPD in 16 hours
	or	1,085 gpm

ERCs (From Demand and ERC Data)	1,368 Avg Test Year ERCs
	1.1 gpm/ERC
Peak Hour Demand	1,504 gpm

Fire Flow (From Rule 25-30.432(5)(b)	500 gpm

Firm Reliable Capacity
(See Definition at Rule 25-30.432(7)(h))

Total Pump Capacity		3,000 gpm
Less: largest pump out	(	800)
Firm Reliable Capacity		2,200 gpm

Margin Reserve (From Rule 25-30.432(5)(a)		2,200 gpm
	x	20.00%
Margin Reserve		440 gpm

STEP 2: Calculate High Service Pumping Used and Useful Percentage per Rule 25-432(6)(b)4.

$$\frac{\text{Maximum Day Demand} + \text{Fire Flow} + \text{Margin Reserve}}{\text{Firm Reliable Capacity}}$$

$$\frac{1,085 + 500 + 400}{2,200} = 92.03\%$$

F. OTHER WATER FACILITIES USED AND USEFUL

100% Used and Useful

Per Rule 25-30.432(6)(b)5.

G. WATER TRANSMISSION SYSTEM USED AND USEFUL

100% Used and Useful

Per Rule 25-30.432(6)(b)6.

H. WATER DISTRIBUTION SYSTEM USED AND USEFUL

ATTACHMENT 3

STEP 1: Determine parameters for Distribution System, per Rule 25-30.432(6)(b)7.
[This is a developer related single family home system.]

Lots Served
(See Definition at Rule 25-30.432(7)(k)

Lots Served = existing + previously active customers.

Existing customers (From Demand and ERC Data)	1,368 ERCs
Previously active services (From Physical Plant Data)	45
Lots Served	1,413 Lots

Fill-in Lots
(See Definition at Rule 25-30.432(7)(e)

From Physical Plant Data	115 Lots

Lots With Service Available
(See Definition at Rule 25-30.432(7)(l)

From Physical Plant Data	3,000 Lots

Margin Reserve (From Rule 25-30.432(5)(a)		3,000 Lots	
	x	20.00%	
Margin Reserve		600 Lots	

Fire Flow Allowance
(See Definition at Rule 25-30.432(7)(f)

$$\frac{FF}{FF + MDD} \times \left(1 - \frac{b + c}{a}\right)$$

$$\frac{500}{500 + 1,085} \times \left(1 - \frac{1,413 + 600}{3000}\right) = 10.39\%$$

Where:

FF	= Fire Flow (From Rule 25-30.432(5)(b)	500
MDD	= Maximum Day Demand (From Demand and ERC Data)	1,085
a	= Capacity of distribution system (Equiv to lots with service available)	3,000
b	= Average connection to dist. system (Equiv to lots served)	1,413
c	= Margin Reserve (20% of Distribution System Capacity from Rule 25-30.432(5)(a))	600

STEP 2: Calculate Distribution System Used and Useful Percentage per Rule 25-432(6)(b)8.

$$\frac{\text{Lots Served + Fill-in Lots + Margin Reserve}}{\text{Lots with Service Available}} + \text{Fire Flow Allowance}$$

$$\frac{1,413 + 115 + 600}{3,000} + 10.39\% = 81.30\%$$

EXAMPLE 1]

HYPOTHETICAL WATER COMPANY

SITUATION B: FIRE FLOW REQUIREMENTS
NEGLIGIBLE DISTRIBUTION STORAGE (ONLY PNEUMATIC TANKS)
NO HIGH SERVICE PUMPING

A. DETERMINE WHETHER SYSTEM IS SMALL, MEDIUM OR LARGE

Calculate RELIABLE CAPACITY:

Total Well Capacity		4,500 gpm
Less: largest well out	(	1,000)
Reliable Capacity		3,500 gpm
	x	16 hours per day
		3,360,000 GPD

This is a Medium Water System (1 to 5 MGD)
See Rule 25-30.4.32(6)(b) for formulas.

B. SOURCE OF SUPPLY USED AND USEFUL

STEP 1: Determine parameters for Source of Supply, per Rule 25-30.432(6)(b)1.

Peak Hour Demand - Not Measured
(Design basis per definition at Rule 25-30.432(7)(s) - 1.1gpm/ERC)

ERCs (From Demand and ERC Data)		1,368 Avg Test Year ERCs
		1.1 gpm/ERC
Peak Hour Demand		1,504 gpm

Fire Flow
(From Rule 25-30.432(5)(b) 500 gpm

Firm Reliable Capacity
(See Definition at Rule 25-30.432(7)(h))

Total Well Capacity		4,500 gpm
Less: largest well out	(	1,000)
Firm Reliable Capacity		3,500 gpm
	x	16 hours per day
Firm Reliable Capacity		3,360,000 GPD

Margin Reserve
(From Rule 25-30.432(5)(a)

		3,360,000 GPD Capacity
	x	20.00%
Margin Reserve		672,000 GPD
	or	
		3,500 gpm
	x	20.00%
Margin Reserve		700 gpm

B. SOURCE OF SUPPLY USED AND USEFUL (cont.)
STEP 2: Calculate Source of Supply Used and Useful Percentage per Rule 25-432(6)(b)1.

$$\frac{\text{Peak Hour Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}} = \frac{1,504 + 500 + 700}{3,500} = 77.26\%$$

C. TREATMENT EQUIPMENT USED AND USEFUL

STEP 1: Determine parameters for Treatment Equipment, per Rule 25-30.432(6)(b)2.

Same as for Source of Supply

STEP 2: Calculate Treatment Equipment Used and Useful Percentage per Rule 25-432(6)(b)2.

Same as for Source of Supply 77.26%

D. FINISHED WATER STORAGE USED AND USEFUL

100% Used and Useful

Per Rule 25-30.432(6)(b)3.

E. HIGH SERVICE PUMPING USED AND USEFUL

None

F. OTHER WATER FACILITIES USED AND USEFUL

100% Used and Useful

Per Rule 25-30.432(6)(b)5.

G. WATER TRANSMISSION SYSTEM USED AND USEFUL

100% Used and Useful

Per Rule 25-30.432(6)(b)6.

H. WATER DISTRIBUTION SYSTEM USED AND USEFUL

STEP 1: Determine parameters for Distribution System, per Rule 25-30.432(6)(b)8.
[This is a developer related single family home system.]

Lots Served
(See Definition at Rule 25-30.432(7)(k)

Lots Served = existing + previously active customers.

Existing customers (From Demand and ERC Data)	1,368 ERCs
Previously active services (From Physical Plant Data)	45
Lots Served	1,413 Lots

Fill-in Lots
(See Definition at Rule 25-30.432(7)(e)

From Physical Plant Data	115 Lots

Lots With Service Available
(See Definition at Rule 25-30.432(7)(l)

From Physical Plant Data	3,000 Lots

Margin Reserve (From Rule 25-30.432(5)(a)	x	3,000 Lots 20.00%	
Margin Reserve		600 Lots	

Fire Flow Allowance
(See Definition at Rule 25-30.432(7)(f)

$$\frac{FF}{FF + MDD} \times \left(1 - \frac{b + c}{a}\right)$$

$$\frac{500}{500 + 1{,}085} \times \left(1 - \frac{1{,}413 + 600}{3000}\right) = 10.39\%$$

Where:

FF = Fire Flow (From Rule 25-30.432(5)(b) — 500 gpm

MDD = Maximum Day Demand (From Demand and ERC Data)

	761 GPD/ERC	
x	1,368 Avg Test Year ERCs	
Maximum Day Demand	1,041,186 GPD	
or	1,085 gpm	

a	= Capacity of distribution system (Equiv to lots with service available)	3,000
b	= Average connection to dist. system (Equiv to lots served)	1,413
c	= Margin Reserve (20% of Distribution System Capacity from Rule 25-30.432(5)(a))	600

STEP 2: Calculate Distribution System Used and Useful Percentage per Rule 25-432(6)(b)8.

$$\frac{\text{Lots Served} + \text{Fill-in Lots} + \text{Margin Reserve}}{\text{Lots with Service Available}} + \text{Fire Flow Allowance}$$

$$\frac{1{,}413 + 115 + 600}{3{,}000} + 10.39\% = 81.30\%$$

WORKING EXAMPLES

HYPOTHETICAL WASTEWATER SYSTEM

PHYSICAL PLANT DATA
DEMAND AND ERC DATA

EXAMPLE III

HYPOTHETICAL SEWER COMPANY
PHYSICAL PLANT DATA

ATTACHMENT 3

Treatment: Extended Aeration
600,000 MGD Design Capacity

Effluent Disposal: Ponds and Spray Irrigation
750,000 MGD Design Capacity

Collection System:
Developer related, mixed customers
Residential lots with service available - 2,900
Lots previously served, but presently inactive - 45
Fill-in lots (per system maps) - 115
Commercial development:
- 100 store sites available
- 50 stores in place - 435 MG in peak month, per billing records

$$\frac{435{,}000 \text{ Gal per Mo.}}{30 \text{ days/mo} \times 410 \text{ GPD/ERC}} = 35.36 \text{ ERCs}$$

Collection System ERC Capacity

= Available Residential Lots + Commercial ERCs

= 2,900 + (35.36 x 2) = 2,970.2 ERCs

HYPOTHETICAL SEWER COMPANY
DEMAND AND ERC DATA

ATTACHMENT 3

Year	1	2	3	4	5
ERCs and Annual Water Pumped & Sold					
Beginning ERCs	1,243	1,161	974	904	668
Ending ERCs	1,492	1,243	1,161	974	904
Average ERCS	1,368	1,202	1,068	939	786
Annual MG Sold	120,538	119,119	91,521	89,261	73,578
Annual M-Gallons Pumped/treated	135,003	133,413	102,504	99,972	82,408
Monthly M-Gallons Wastewater Treated					
January	7,655	7,564	5,812	5,668	4,672
February	6,785	6,705	5,152	5,025	4,142
March	7,328	7,241	5,564	5,426	4,473
April	10,034	9,916	7,619	7,431	6,125
May	6,436	6,360	4,886	4,766	3,928
June	8,355	8,257	6,344	6,187	5,100
July	9,373	9,262	7,116	6,941	5,721
August	8,328	8,230	6,323	6,167	5,084
September	15,225	15,046	11,560	11,274	9,294
October	10,871	10,743	8,254	8,050	6,636
November	8,875	8,770	6,738	6,572	5,417
December	10,753	10,627	8,165	7,963	6,564
Totals	110,017	108,722	83,533	81,470	67,156
Monthly ERCs					
January	1,264	1,168	990	910	688
February	1,285	1,175	1,005	916	707
March	1,305	1,182	1,021	922	727
April	1,326	1,188	1,036	927	747
May	1,347	1,195	1,052	933	766
June	1,368	1,202	1,068	939	786
July	1,388	1,209	1,083	945	806
August	1,409	1,216	1,099	951	825
September	1,430	1,223	1,114	957	845
October	1,451	1,229	1,130	962	865
November	1,471	1,236	1,145	968	884
December	1,492	1,243	1,161	974	904
Totals	16,535	14,465	12,904	11,303	9,550
Monthly Gallons per ERC					
January	6,057	6,477	5,873	6,230	6,795
February	5,282	5,708	5,125	5,487	5,855
March	5,614	6,129	5,451	5,889	6,153
April	7,567	8,345	7,352	8,013	8,203
May	4,779	5,321	4,645	5,107	5,126
June	6,110	6,869	5,943	6,589	6,489
July	6,751	7,662	6,570	7,346	7,101
August	5,911	6,770	5,755	6,487	6,159
September	10,649	12,307	10,375	11,787	10,998
October	7,494	8,739	7,305	8,365	7,674
November	6,032	7,095	5,883	6,788	6,126
December	7,207	8,549	7,032	8,176	7,261
Max Month (avg gal/ERC)	10,649	12,307	10,375	11,787	10,998
Max Month, Avg day/ERC	355	410	346	393	367

(Maximum Month is Sept. (year 2), on a per ERC basis)

EXAMPLE III

ATTACHMENT 3

HYPOTHETICAL SEWER COMPANY

A. WASTEWATER COLLECTION SYSTEM USED AND USEFUL

STEP 1: Determine parameters for Collection System, per Rule 25-30.432(6)(d)3.
[This is a developer related mixed development system.]

Connected ERCs

Average ERCs in test year + previously active services

Average ERCs (From Demand and ERC Data)	1,368 ERCs
Previously active services (From Physical Plant Data)	45
Connected ERCs	1,413 Lots

Fill-in ERCs
(See Definition at Rule 25-30.432(7)(e)

Residential Fill-in Lots (From Physical Plant Data)	115 Lots
Commercial Store Sites (From Physical Plant Data)	50 ERCs
	165 ERCs

ERC Capacity

From Physical Plant Data	2,971 ERCs

Margin Reserve (From Rule 25-30.432(5)(a)		2,971 ERCs	
	x	20.00%	
Margin Reserve		594 ERCs	

STEP 2: Calculate Collection System Used and Useful Percentage per Rule 25-432(6)(d)3.

$$\frac{\text{Connected ERCs + Fill-in ERCs + Margin Reserve}}{\text{ERC Capacity}}$$

$$\frac{1,413 + 165 + 594}{2,971} = 73.10\%$$

B. WASTEWATER FORCE MAINS USED AND USEFUL

100% Used and Useful

Per Rule 25-30.432(6)(d)4.

ATTACHMENT 3

C. TREATMENT EQUIPMENT USED AND USEFUL

STEP 1: Determine parameters for Treatment Equipment, per Rule 25-30.432(6)(d)5

Maximum Month Flow (From Demand and ERC Data)	x	410 GPD/ERC 1,368 Avg Test Year ERCs
Maximum Day Demand		561,008 GPD

Firm Reliable Capacity
(See Definition at Rule 25-30.432(7)(h))

Firm Reliable Capacity (From Physical Plant Data)		750,000 GPD
Margin Reserve (From Rule 25-30.432(5)(a)	x	750,000 GPD Capacity 20.00%
Margin Reserve		150,000 GPD

STEP 2: Calculate Treatment Equipment Used and Useful Percentage per Rule 25-432(6)(d)5.

$$\frac{\text{Maximum Month Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

$$\frac{561{,}008 + 150{,}000}{750{,}000} = 94.80\%$$

D. EFFLUENT DISPOSAL USED AND USEFUL

STEP 1: Determine parameters for Effluent Diposal, per Rule 25-30.432(6)(d)6.

Maximum Month Flow (From Demand and ERC Data)	x	410 GPD/ERC 1,368 Avg Test Year ERCs
Maximum Day Demand		561,008 GPD

Firm Reliable Capacity
(See Definition at Rule 25-30.432(7)(h))

Firm Reliable Capacity (From Physical Plant Data)		1,000,000 GPD
Margin Reserve (From Rule 25-30.432(5)(a)	x	1,000,000 GPD Capacity 20.00%
Margin Reserve		200,000 GPD

STEP 2: Calculate Effluent Diposal Used and Useful Percentage per Rule 25-432(6)(d)6.

$$\frac{\text{Maximum Month Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

$$\frac{561{,}008 + 200{,}000}{1{,}000{,}000} = 76.10\%$$

E. OTHER WASTEWATER FACILITIES USED AND USEFUL

100% Used and Useful

Per Rule 25-30.432(6)(d)7.

APPENDICES

ATTACHMENT A

MEMORANDUM

November 14, 1982

TO : DALE A. KNAPP, DIRECTOR, WATER AND SEWER DEPARTMENT

FROM: J. O. COLLIER, ASSISTANT DIRECTOR, WATER AND SEWER DEPARTMENT

RE : USED AND USEFUL DETERMINATIONS - WATER AND SEWER CASES
PROJECT WE-81-11-012

Our most recent research and restudy of the used and useful determinations made in water and sewer cases is complete.

The result is a composition of methodology and standards. This composition is intended to guide each person making a used and useful determination in a professional and consistent manner. It is proposed that the resultants from the engineer's used anduseful calculations be noted on pre-prepared data sheets and presented with each docketed case. These data sheets will provide a clear accountability for the key computations and adjustments made as a result of the computations.

The Florida Waterworks Association has expressed a desire to participate in discussions of this subject with the Commissioners when it is scheduled for their consideration.

JOC/w
Attachments

USED AND USEFUL DETERMINATIONS IN WATER AND SEWER CASES

INTRODUCTION

The Commissioners, in considering water and sewer cases at agenda conferences, have voiced concern over the seeming lack of consistency in used and useful computations. Several attempts were made to clarify individual measurement terms used that were confusing to the Commissioners and the Administrative staff.

A presentation was made by the Water and Sewer staff at the May 3, 1982 Internal Affairs conference with the Commissioners. This meeting clearly brought to light the ambiguities that the Commissioners were facing in understanding the methodology used in making used and useful determinations.

This Internal Affairs conference served well to identify those specific concerns and to provide guidance in our efforts to design an understandable working formula in determining used and useful plant for rate-making purposes.

The Commissioners have expressed a desire for a "formula". Naturally we all visualize a formula as a fixed procedure with little or no room for flexibility which is so necessary in used and useful determinations.

We have interpreted the need of a formula to be a requirement to establish and identify key standards applied in used and useful determinations. These standards are expected to be constant and utilized in a step by step manner so that any necessary deviation can be readily recognizable and properly judged by the Commissioners.

To solidify these standards and avoid future conflicts we have thoroughly researched those that are proposed to be utilized with the Department of Environmental Regulation and the Florida Waterworks Association. This will assure consistency and less variables in used and useful determinations.

An identifiable basis and legal authority should be established. This we have provided through research and interpretation of applicable law and rules and regulations.

METHODOLOGY

The engineering investigation develops the necessary information used in making the used and useful determinations. The steps taken in this process are as follows:

1) Accomplish a complete evaluation and inventory of plant and system components.

2) Make a study of the service area, numbers and types of customers.

3) Make a comprehensive review and analysis of plant operational data.

4) Make an evaluation of the capacity of the existing plant and system.

5) Make an economy of scale and prudency determination regarding the design and construction of the plant and system.

6) Complete a study of the past and future utility customer growth.

Having completed these essential actions the Engineer should have all of the necessary information upon which to base his conclusions and computations. The standard used in applying and measuring this information are listed later in this document.

A single formula which would be totally usable in all cases is not feasible as we previously mentioned. However, a very simplified formula is noted here to illustrate the functions of key considerations in determining the percentage of a plant or system to be used and useful.

TREATMENT PLANT FORMULA

Components

1) Capacity of plant in gallons per day

2) Maximum daily flow in test year in gallons per day

3) Average daily flow in test year in gallons per day

4) Fire flow requirements in test year in gallons per day

5) Margin reserve in gallons per day

6) Excessive infiltration or excessive unaccounted for Water in gallons per day

Formula - Water Plant - $\frac{[(2 + 5) + 4] - 6}{1}$ = % used and useful

Formula - Sewage Treatment Plant - $\frac{(3 + 5) - 6}{1}$ = % used and useful

Note: Gallons per day shall be expressed in thousands

Water Transmission or Sewage Collection System Formula

Components

1) Capacity of system in ERCs

2) Number of connections during test year in ERCs

3) Margin reserve in ERCs

Formula

$$\frac{2 + 3}{1} = \% \text{ used and useful}$$

Note: ERCs = Equivalent Residential Connections

It should be noted that in some cases this percentage would not apply to all of the NARUC accounts covering plant and systems. Some plant components are not capacity oriented and therefore would be 100% used and useful. Therefore, the Engineer will designate those accounts that are 100% and justify this reasoning.

Attached are data sheets which would show the final computations for used and useful They would be available to be included with staff recommendations for agendas.

STANDARDS

The standards used must be consistent in use and set in quality. Consistency will facilitate identification of variances when required. Definitive standards insure fairness and quality of determinations.

All of the standards utilized are arranged in an alphabetical glossary for reference Selected critical and most readily used standards are mentioned as follows:

1. AVERAGE DAILY FLOW - An average of the daily flows during the peak usage month during the test year. Care should be exercised to be sure the flow data is not influenced by abnormal infiltration due to rainfall periods.
2. CAPACITY 1) General - The quantity that can be contained exactly, or the rate of flow that can be carried exactly. The load for which a machine, apparatus, station or system is rated.

   2) Treatment Plants - The hydraulic rated capacity expressed in "thousands gallons per day".

   3) "Water Distribution and Sewage Collections Systems" - The capacity in terms of ability to serve a designated number of Equivalent Residential Connections. The capacity then can be related to actual connected density in terms of ERCs.
3. EQUIVALENT RESIDENTIAL CONNECTION - A basic design criteria tool. Based on 100 gallons per day per person. A single family connection is considered to serve 3.5 persons @ 100 gpdc which makes the ERC equate to 350 gallons per day. Other types

of connections have different flow characteristics and can be equated to ERC Equivalencies. For example:

	ERC EQUIVALENTS		
Single Family	1.0	@	350 GPD
Duplex or Triplex	0.86	@	300 GPD
Townhouse	0.86	@	300 GPD
Mobile Home	0.86	@	300 GPD
Apartment	0.71	@	250 GPD

→ 4. FIRE FLOW CAPABILITY - A recognition of the utilities' ability to furnish fire protection for their customers' general protection. The standards will be those as set by the Insurance Service Organization or by a governmental agency ordinance. The minimum standards to date are 500 gpm in residential areas for a two hour period or 1500 gpm for a four hour period when customers are a mix of residential and sizeable commercial connections. Higher standards can prevail in higher density conditions.

Fire-flow capabilities are usually calculated over and above maximum daily requirements. Therefore, any water system that provides fire protection capacity over and above maximum daily consumptive needs should be reimbursed for the cost of the excess capacity, which it cannot use for the sale of revenue producing water. The excess capacity is determined from the formula; water supply capacity - Maximum Daily Consumption Rate.

Note: The excess capacity for fire capability shall not exceed the needed fire flow requirements.

5. INFILTRATION - The quantity of groundwater that leaks into a pipe through joints, porous walls or breaks. This amount is measured above the peak sanitary flows. Sanitary sewers are designed to carry unavoidable amounts of groundwater infiltration or seepage in addition to the peak sanitary flows. Infiltration specifications are generally in the range of 250 to 500 gallons per day/inch diameter/mile. The standard reference used is Water Pollution Control Federation Manual or Practice

No. 9 entitled "Desi[illegible] and Construction of Sanitary[illegible] Storm Sewers". This is a joint preparation of the WPCF and the American Society of Civil Engineers.

6. MARGIN RESERVE - A proportionate share of the existing treatment facilities or water distribution system or sewage collection system. This share is intended to afford the utility the ability to accept additional connections as noted in 367.111. Plants cannot be constructed rapidly and economically to always just have the capacit to serve only the test year customers. There will more often always be some excess capacity available.

Margin reserve is to recognize an appropriate and fair amount of "readiness to serve capacity" and not to unjustly burden the existing customers with an unnecessary amount of excess plant in rate base.

To determine margin reserve the yearly growth rate in ERCs is averaged for the most recent 5 year period. A construction period necessary to add capacity to the existing facilities is established. Then the growth rate in ERCs for the constructio period is developed as the margin reserve. A representative construction period is 18 months for an average treatment plant and 12 months for collection and distributic systems but can vary depending on many facets to be considered by the Engineer. Generally margin reserve should not be permitted to exceed 15-20% of plant serving existing customers.

7. MAXIMUM DAILY FLOW - An average of the 5 days with the highest pumpage rate from the month with the highest pumpage rate during the test year. These five days should be verified against fire, line breaks or other unusual occurances that would effect the pumpage rate.

8. PRUDENCE - Care, caution and good judgment as well as wisdom in looking ahead. Examples of an imprudent investments in water or sewer facilities would be:

   a. Economies of scale were not considered
   b. Present customers would be burdened for considerable future periods
   c. Mismanagement of construction
   d. Improper engineering input
   e. Excessive construction costs
   f. Community needs disregarded

9. UNACCOUNTED-FOR-WATI Water that is taken from a sc ce into a distribution system which is not delivered to the customers or otherwise accounted for.

The proper amount of unaccounted-for-water in any given system is a function of that system alone. A fair average of unaccounted-for-water might be 10-20 percent for fully metered systems with good meter maintenance programs and average conditions of service.

The standard reference used is Amercian Waterworks Association Manual No. 8 entitled "Water Distribution Training Course".

Note: All technical terms used in the used and useful determinations will adhere to the Glossary, Water and Wastewater Control Engineering. This Glossary is a joint publication of the American Public Health Association, American Society of Civil Engineers, American Waterworks Association and Water Pollution Control Federation. This will insure consistenc in terminology and definition.

CONSIDERATIONS IN EVALUATING PLANTS AND SYSTEMS

Preparing to apply the aforementioned criteria and formula to a used and useful conclusion will require a considerable amount of technical judgment and appraisal. The following are items to be considered during the Engineer's evaluation of data and utility systems.

1) Design criteria imposed by the State, Local and Federal Regulatory Agencies.
2) The requirements of the community to meet the needs of the public for safe, adequate, sufficient, responsive and economic service to serve all those that apply.

   Such factors shall include but not be limited to peak demands, fire flows, connection to regional systems, sizes of mains, type of construction, pollution control, air and ground and service waters, availability of service and any other demand of the community affecting the utility.
3) Regulatory requirements for standby wells, emergency power and other standby facilities should be considered used and useful.
4) Any facility required to be installed by a regulatory agency other than lines

required by real estate regulatory agencies, should be considered used and useful.

5) Actual operating data shall be utilized in computations when available and reliable. Accepted design criteria shall be used in the absence of experienced, historical data.

6) Marginal reserves should be determined on a case by case basis considering all the factors of community needs, lead time for managerial decisions, engineering, construction and regulatory approvals.

7) The utility should have capacities sufficient to allow for down time for maintenance of portions of its plant.

8) Seasonal variations should be taken into account for population changes, occupancy rates, infiltration or usage variations.

9) Safe withdrawal levels from water wells for prevention of salt water intrusion and all other safe well levels of operation shall be considered.

10) When determining required storage capacity consideration should be given to peak hour and fire flow requirements.

11) An economy of scale cost determination should be made and compared to hydraulic share cost allocation.

12) A formula for the very small systems is often very difficult or impossible to apply. It requires a great amount of flexibility to develop reasonable allocations which will result in reasonable rates to the customers.

CONCLUSIONS

The sole purpose of this presentation is to provide standards and formulization for an engineering determination. There will no doubt be cases where other rate-making philosophies and concepts will be considered. None of these have been considered here because the variables that would be involved are too numerous.

Application of these foregoing standards and methodology will provide for a consistent and equitable engineering evaluation of the plant and system necessary to render safe and efficient service to the utility's customers.

ATTACHMENT B

FIRE SUPPRESSION RATING SCHEDULE

INSURANCE SERVICES OFFICE

Edition 6-80

600. GENERAL:

This item reviews the water supply system that is available for fire suppression in the city.

601. PART OF CITY UNPROTECTED:

If any built-on area of the city is not within 1,000 feet of a recognized water system, the unprotected area may receive Class 9 (See Items 801 and 802).

602. MAXIMUM DAILY CONSUMPTION RATE (MDC):

The maximum daily consumption rate is the average rate of consumption on the maximum day. The maximum day is the 24-hour period during which the highest consumption total is recorded in the latest 3-year period. High consumption that will not occur again due to changes in the system, or that was caused by unusual operations, will not be considered.

When no actual figure for maximum daily consumption is available it will be estimated on the basis of consumption in other cities of similar character and climate. Such estimates will be at least 50 percent greater than the average daily consumption. When a system is in 2 or more service levels, consider the total maximum daily consumption that must pass through the service level being reviewed.

603. MINIMUM PRESSURE:

A water system is reviewed at a residual water pressure of 20 psi.

604. FIRE FLOW AND DURATION:

The fire flow duration should be 2 hours for Needed Fire Flows (NFF_i) up to 2500 gpm, and 3 hours for Needed Fire Flows of 3000 and 3500 gpm.

605. SERVICE LEVEL:

A service level is a part of the city distribution system which is served by one or more sources of supply but which is separated from the remaining distribution system by closed valves, check valves or pressure regulating equipment, or is not connected.

When a system is supplied from 2 or more sources or supply works, the credit shall be based upon the combined protection provided from all sources or supply works.

610. REVIEW OF SUPPLY SYSTEM:

The ability of the water supply system to deliver the Needed Fire Flow (NFF_i)at representative locations throughout the city is reviewed in Items 611 through 616. For each representative location, the supply works, mains, and hydrant distribution are reviewed separately.

611. SUPPLY WORKS:

The absolute minimum supply available from water sources under extreme dry weather conditions should not be taken as the measure of the normal ability of the source of supply. The normal sustained flow of supplies should be used as the normal capacity of the source. If the supply is regularly reduced for a period exceeding one month per year, prorate the available supply by the time available.

A. **Minimum Storage (MS_i):**

The average daily minimum water storage maintained is the maximum amount that can be credited. For storage floating on the distribution system, only the portion of average daily minimum storage that can be delivered at the required residual pressure, and for the fire duration at the point of use shall be credited. (MS) is the sum of all these storages ($MS = \sum MS_i$) available at the test location for the fire duration, expressed in gpm.

For ground or below-ground storage, where the average daily minimum storage must be repumped, the storage is credited, or is limited by pumps under PU_i according to the capacity of the pumping facility for the fire duration.

340. CALCULATION OF NEEDED FIRE FLOW (NFF_I):

$$NFF_I = (C_I)(O_I)(X + P)_I$$

When a wood shingle roof covering on the building being considered, or on exposed buildings, can contribute to spreading fires add 500 gpm to the Needed Fire Flow.

The Needed Fire Flow shall not exceed 12,000 gpm nor be less than 500 gpm.

The Needed Fire Flow shall be rounded off to the nearest 250 gpm if less than 2500 gpm and to the nearest 500 gpm if greater than 2500 gpm.

Note 1: For 1- and 2-family dwellings not exceeding 2 stories in height, the following Needed Fire Flows shall be used.

Distance between buildings	Needed Fire Flow
Over 100'	500 gpm
31-100'	750
11-30'	1000
10' or less	1500

Note 2: Other habitational buildings, up to 3500 gpm maximum.

ATTACHMENT C

ATTACHMENT 3
A Publication of FALR, Inc. P.O. Box 3
Gainesville, FL 32602 (904) 375-8036

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for approval of rate increase in Lee County by TAMIAMI VILLAGE UTILITY, INC.	)	DOCKET NO. 910560-WS ORDER NO. PSC-92-0807-FOF-WS ISSUED: 08/11/92

The following Commissioners participated in the disposition of this matter:

THOMAS M. BEARD, Chairman
SUSAN F. CLARK

APPEARANCES:

ROBERT S. MEDVECKY, Esquire
Suite 230
1500 Collier Blvd.
Fort Myers, FL 33907
On behalf of Tamiami Village Utility, Inc.

MATTHEW J. FEIL, Esquire
Florida Public Service Commission
101 East Gaines Street
Tallahassee, Florida 32399-0863
On behalf of the Staff of the Commission

WILLIAM WYROUGH, Esquire,
Florida Public Service Commission
101 East Gaines Street
Tallahassee, Florida 32399-0861
Counsel to the Commissioners

FINAL ORDER ESTABLISHING INCREASED RATES
FOR WATER AND WASTEWATER SERVICE

BY THE COMMISSION:

CASE BACKGROUND

Tamiami Village Utility, Inc., (TVU) is a Class C utility providing water and wastewater service to 717 residential customers in Lee County, Florida. On November 6, 1991, TVU filed a request

for increased water
deficiencies in its
information filed.
information which sati
set forth in our rules
for this proceeding is
calculating rates is t

TVU's MFRs show t
system and $95,660 fo
($70,565) for the wat
system. TVU requests
annual water system re
$[illegible],491 in annual wa
$[illegible],331 (120.04%).

By Order No. 2566
TVU's proposed rates
increase, subject to re
water rates.

Pursuant to TVU's
matter was held in Ft.

FINDIN

Having considered
utility, and the recomm
findings of fact, law,

Prior to the hea
Commission proposed t
facilities should be co
to a margin reserve; (2
reduced by $2,144, and
be reduced by $4,404; (
have a zero cost rate;
based on the plant ra
wastewater.

Upon considerati
stipulations are reason

ORDER NO. PSC-92-0807-FOF-WS
DOCKET NO. 910560-WS
PAGE 12

NET OPERATING INCOME

Our calculation of net operating income is depicted on Schedule No. 3-A for the water system and on Schedule No. 3-B for the wastewater system. Our adjustments are itemized on Schedule No. 3-C. Those adjustments which are self-explanatory or which are essentially mechanical in nature are reflected on those schedules without further discussion in the body of this Order. The major adjustments are discussed below.

OPERATION AND MAINTENANCE EXPENSE (O & M)

Pro Forma Expense for Sludge Hauling

In its MFRs, TVU included an $11,438 pro forma adjustment in order to recover the cost of sludge disposal required by Lee County Ordinances 89-20 and 90-32. These ordinances, which we took official notice of, require that Lee County wastewater utilities send their sludge to a county-approved landfill. Utility witness Thomas testified that Lee County is not currently enforcing the ordinances and he does not know when the County will begin doing so.

Considering the uncertainty over when TVU will have to incur the requested sludge hauling expense, we do not think it appropriate at this time to allow TVU to recover the expense through rates. However, we would encourage TVU to seek recovery of this expense through a limited proceeding once enforcement of the subject ordinances is more certain.

Excessive Infiltration--Chemicals and Purchased Power

Staff witness Crouch explained that infiltration refers to the leakage of groundwater or rainwater into a wastewater collection system through the pipes, while inflow refers to rainwater leakage into manholes. All collection systems, he stated, experience a certain level of infiltration, since most of the wastewater lines are below the groundwater level.

However, Mr. Crouch opined that the level of infiltration entering TVU's wastewater collection system is excessive. He calculated TVU's infiltration by comparing the flows recorded at the wastewater treatment plant's flow meter with the expected wastewater generated by the customers. To calculate expected wastewater flows, Mr. Crouch assumed that 80% of the water used by residential customers, 96% of the water used by commercial customers, and none of the water used for irrigation would be

returned to the wastewater collection system. For the test year, the wastewater plant treated 39,027,000 gallons of wastewater; the expected flows from customers, however, was 21,469,280 gallons of wastewater. This means that approximately 17,557,720 gallons of wastewater treated during the test year was infiltration and or inflow. Mr. Crouch thought that a reasonable infiltration allowance would be 500 gpd/inch diameter/mile of pipe. He then calculated that a reasonable amount of infiltration for TVU would be 9,171,178 gallons. He therefore considered 8,386,542 gallons (21.5%) gallons to be excessive infiltration.

Mr. Crouch testified that the customers should only be responsible for paying the costs of treating a reasonable amount of infiltration. Accordingly, he recommended that we disallow expenses for electricity and chlorine for treating the excessive infiltration in proportion to the 21.5% figure.

In its brief, TVU argues that a specific expense should not be disallowed unless it can be shown that the expense was imprudent, unreasonable, or excessive. TVU believes that an adjustment to power and chemical expenses is inappropriate since it did nothing to cause the infiltration and an adjustment will render it unable to pay for all of the electricity and chemicals it needs.

We conclude that even if TVU did nothing to cause the infiltration problem, the ratepayers should not be required to pay the extra costs for the treatment of excessive infiltration. Therefore, we have reduced test year chemical expense by $307 (21.5% of $1,430) and test year power expense by $2,721 (21.5% of $12,658) because of excessive infiltration.

Purchased Water Costs

In its MFRs, the utility requests $116,612 in purchased water costs. This amount includes $75,753 in test year expenses and a $40,859 pro forma adjustment. Utility witness Thomas testified that the Lee County utility rate department had recommended rates on a four-year plan, but that the Lee County Commission had not approved the increased water rates for 1992-1993, as of the date of the hearing in this matter. When the County Commission approves the bill, the rates will be charged retroactively from October first, Mr. Thomas stated. Mr. Thomas also stated that he hoped that the County would approve the increase before August so that the utility would have the rate increase included in this rate case.

In its brief, TVU poi
projected test year was
reason for requesting app
impending, known increase
that the new Lee County ra
water rates will become ef

We are aware that T
scheduled to be increased c
case will become effectiv
increase to any expense wh
utility's projected test
subject would be the same
through rate increase pr
Florida Statutes, TVU can
notified the Commission
changed. The paperwork req
Rule 25-30.020, Florida
required.

To calculate the appr
however, we think it approp
Lee County rate, which is
No. 3. To calculate the
gallons sold from MFRs Sche
detailed the amount of gal
the descriptions of the me
shown in Late-filed Exhibi
by meter type and adding t
an annualized purchased wa
$11,598 higher than the t
what TVU requested.

Non-rate Case Legal Fees

TVU's MFRs show that
case legal expenses for
requests a pro forma adjust
case legal expenses, for a
testified that TVU request
annually recurring legal e
booked $3,031 for non-ra
wastewater system.

The staff audit rep
expenses in two areas, aud
no. 4. Audit exception

ATTACHMENT D

ATTACHMENT 3

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application of MEADOWBROOK UTILITY SYSTEMS, INC., for increased rates to its customers in Palm Beach County, Florida; and an Investigation into Overearnings.	)	DOCKET NO. 850062-WS
	)	ORDER NO. 17304
	)	ISSUED: 3-19-87

The following Commissioners participated in the disposition of this matter:

JOHN R. MARKS, III
JOHN T. HERNDON

Upon proper notice a public hearing in the above-noted docket was held on December 11 and 12, 1986, in West Palm Beach, Florida. This hearing was continued on January 9 and 26, 1987, in Tallahassee, Florida.

APPEARANCES: B. KENNETH GATLIN, Esquire, Gatlin, Woods, Carlson and Cowdery, 1709-D Mahan Drive, Tallahassee, Florida 32308
On behalf of Meadowbrook Utility Systems, Inc.

JACK SHREVE, Public Counsel and STEPHEN C. BURGESS, Associate Public Counsel, Office of the Public Counsel, c/o Florida House of Representatives, The Capitol, Tallahassee, Florida 32399-1300
On behalf of the Citizens of the State of Florida

RALPH R. JAEGER, Esquire, Florida Public Service Commission, 101 East Gaines Street, Tallahassee, Florida 32399-0850
On behalf of the Staff of the Florida Public Service Commission

PRENTICE P. PRUITT, GREGORY J. KRASOVSKY, CURLEY R. DOLTIE, Esquires, Florida Public Service Commission, 101 East Gaines Street, Tallahassee, Florida 32399-0850
On behalf of the Commissioners of the Florida Public Service Commission

ORDER GRANTING MOTION, SETTING FINAL RATES AND CHARGES AND REQUIRING REFUND

BY THE COMMISSION:

CASE BACKGROUND

On September 10, 1984, this Commission issued Order No. 13664 which initiated an investigation into possible overearnings of Meadowbrook Utility Systems, Inc. (Utility). That order stated that the investigation and evaluation of overearnings was to be ". . . based upon an evaluation of actual 1984 financial data . . ." and acknowledged that the utility had agreed to refund the amount of excess revenues based upon this evaluation. The investigation into overearnings was assigned to Docket No. 840287-WS.

On February 13, 1985, the utility requested approval of the year ending December 31, 1984, as a test year to be used in a rate case. This request was granted and the application was assigned to Docket No. 850062-WS. On May 31, 1985, the utility filed an application for increased water and sewer rates. However, the utility did not meet all the filing requirements until August 6, 1985, and this date was established as the official date of filing.

other companies (See Audit Exception No. 2). However, it should be increased by $225 to correct improper treatment of plant retirements (See Audit Exception No. 3), and by $485 to show capital items improperly expensed (See Audit Exception No. 9).

2) Used and Useful Calculations - The utility's position is that the water distribution system, transmission system, sewage collection system, and plant, to include the pro forma plant, should all be considered 100% used and useful. The OPC has calculated the used and useful percentages to be as follows:

Sources of Supply (Accts 310-314)	31.2%
WTP (Accts 330-332)	47.6%
High Service Pumping (Accts 321-326)	60.7%
Storage (Acct 342)	44.3%
Water Trans. & Dist. System	100%
Sewage Collection System	100%

The OPC did not include a margin reserve; however, if a margin reserve is used, the OPC believes that the contributions-in-aid-of-construction associated with the facilities included in the margin reserve should be imputed.

Since we have disallowed the pro forma plant for water, we have used 1,500,000 gallons per day as the capacity for the water treatment plant (See Page 52, Exhibit 27-A). In calculating the used and useful percentage of this plant, we have taken the maximum daily flow and added a margin reserve and the required fire flow, and then divided by the above capacity. Based on Page 52 of Exhibit 27-A, the maximum daily flow is calculated to be 1,011,000 gallons per day (gpd).

The margin reserve was calculated by taking the average yearly customer growth in equivalent residential connections (ERCs) for the most recent five years to include the test year - which was 235 ERCs, multiplied by the construction time for additional capacity - which was 1.5 years. This figure was then multiplied by the maximum daily flow of 1,011,000 gpd divided by average test year customers of 2,365. This resulted in a margin reserve of 150,688 gpd. Also, the fire flow requirement was calculated to be 360,000 gpd. Taking the above figures, the water treatment plant is calculated to be 100% used and useful.

In reviewing the position of the OPC, it appears that the engineering witness for the OPC did not allow for fire flow requirements (TR 1127). Also, we note that the capacity of the new well could be smaller by installing a smaller impeller in the same well pump (TR 1251). However, we do not think this is in the best interests of the customers. Therefore, instead of analyzing each component as OPC has done, we have calculated the used and useful percentage for the water treatment plant as set out above.

All parties agreed that the water distribution and sewage collection system were 100% used and useful.

3) Accumulated Depreciation - Rate base for water has been decreased by $4,051 to show the adjustments from Order No. 12595 not reflected in the filing (See Audit Exception No. 1) and by $47 to show capital items improperly expensed (See Audit Exception No. 9). However, rate base for water has been increased by $48 to remove that portion of the president's car which applies to other companies (See Audit Exception No. 2)

MEMORANDUM

ATTACHMENT 3

June 9, 1986

TO: DIVISION OF RECORDS AND RECORDING

FROM: DIVISION OF WATER AND SEWER (B. DAVIS, BYRD, WALDEN)
DIVISION OF LEGAL SERVICES (JAEGER)

JUN 19 1986

OFFICE OF
KENNETH GATT...

RE: UTILITY: MEADOWBROOK UTILITY SYSTEMS, INC.
DOCKET NO. 850062-WS COUNTY: PALM BEACH
CASE: APPLICATION FOR INCREASED WATER AND SEWER RATES

AGENDA: JULY 1, 1986 - CONTROVERSIAL - PROPOSED AGENCY ACTION

PANEL: FULL COMMISSION - PARTIES MAY PARTICIPATE

ISSUE AND RECOMMENDATION SUMMARY

QUALITY OF SERVICE

ISSUE 1: Quality of Service

RECOMMENDATION: The quality of service is satisfactory.

ISSUE 2: Customer Inquiries and Complaints

RECOMMENDATION: The utility should be more responsive to customer inquiries and complaints.

ISSUE 3: Chlorine Level

RECOMMENDATION: The utility should strive to maintain the chlorine level more in line with the county's minimum requirement instead of 3 to 4 ppm.

ATTACHMENT 3

WATER DISTRIBUTION SYSTEM — USED AND USEFUL DATA

Docket No. 850062-WS Utility Meadowbrook Utility Systems Date 2/24/86

1) Capacity unknown ERC's (Number of potential customers without expansion) *

2) Number of Test Year Connections 2365 ERC's

a) Begin Test Year 2233 ERC's

b) End Test Year 2496 ERC's

c) Average Test Year 2365 ERC's

3) Margin Reserve 235 ERC's
*Not to exceed 20% of present customers

a) Average Yearly Customer Growth in ERC's for Most Recent 5 years Including Test Year 235 ERC'S

b) Construction Time for Additional Capacity 1 Years

(a) x (b) = 235 ERC's Margin Reserve

PERCENT USED AND USEFUL FORMULA

$\frac{2 + 3}{1}$ = see below % Used and Useful

The utility's distribution system is largely contributed. New lines * are generally installed by developers. Staff recommends the distribution system be considered 100% used and useful.

D. Bradley Engineer

ATTACHMENT 3

SEWAGE COLLECTION SYSTEM — USED AND USEFUL DATA

Docket No. 850062-WSUtility Meadowbrook Utility Systems Date 2/24/86

1) Capacity unknown ERC's (Number of potential customers without expansion) *

2) Number of Test Year Connections 2117 ERC's

a) Begin Test Year 2004 ERC's

b) End Test Year 2230 ERC's

c) Average Test Year 2117 ERC's

3) Margin Reserve 211 ERC's
*Not to exceed 20% of present customers

a) Average Yearly Customer Growth in ERC's for Most Recent 5 years Including Test Year 211 ERC'S

b) Construction Time for Additional Capacity 1 Years

(a) x (b) = 211 ERC's Margin Reserve

PERCENT USED AND USEFUL FORMULA

$\frac{2 + 3}{1}$ = see below % Used and Useful

The collection system is essentially constructed to serve the existing customers. New lines are installed by developers and deeded to the utility as CIAC. Staff recommends the collection system be considered 100% used and useful. *

T. Snelgrove Engineer

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

SUPPLEMENTAL COMMENTS OF FRANK SEIDMAN

FOR THE

FLORIDA WATERWORKS ASSOCIATION

DOCKET NO. 911082-WS

IN RE: PROPOSED NEW, REVISED AND REPEALED RULES PERTAINING TO WATER AND WASTEWATER REGULATION

EXHIBIT B

Attachment 5 to PSC Staff Memorandum, December 31, 1992 prepared for the January 14, 1993 Special Commission Conference on Water & Wastewater Rules.

and

Proposed Simplified Default Formulas for Water Systems in Legislative Format

ATTACHMENT 5

GATLIN, WOODS, CARLSON & COWDERY
Attorneys at Law
a partnership including professional associations

The Mahan Station
1709-D Mahan Drive
Tallahassee, Florida 32308

TELEPHONE (904) 877-7191
TELECOPIER (904) 877-9031

B. KENNETH GATLIN, P.A.
THOMAS F. WOODS
JOHN D. CARLSON
KATHRYN G.W. COWDERY
WAYNE L. SCHIEFELBEIN
ROBERT J. PIERSON

October 16, 1992

Chuck Hill, Director
Division of Water & Wastewater
Florida Public Service Commission
101 E. Gaines Street
Tallahassee, FL 32399-0850

Hand-Delivery

RE: Docket No. 911082-WS
Proposed New and Amended Water and Wastewater Rules

Dear Mr. Hill:

Over the last two months, the Board of Directors of the Florida Waterworks Association has considered various revisions to its proposed water utility default formulas for the used and useful section of the rules. The Board has now finalized its position and voted to amend its previous proposal.

Enclosed is the revised text of the default formulas, which now includes fire flow in the numerator, regardless of storage adequacy. The major changes are (1) systems are categorized by size only and not by size and storage adequacy; (2) fire flow is included in the numerator for source of supply, treatment, storage and high service pumping. None of the definitions have been changed. The major section designations of the rule are now:

25-30.432(6)(a) - Small Water Systems
25-30.432(6)(b) - Medium Water Systems
25-30.432(6)(c) - Large Water Systems
25-30.432(6)(d) - Wastewater Systems
25-30.432(7) - Definitions

Please note that the sections for water supply, treatment and high service pumping contain alternative formulas for systems with negligible storage. This was necessary to recognize that, for systems in which storage is not designed into the system, capacity must be sufficient to serve the instantaneous or peak hour demand, rather than the maximum day demand. Also note that the finished water storage formula contains a statement excluding hydropneumatic tanks from that formula and prescribing them as being 100% used and useful in all instances.

Overall, we believe that these revisions simplify the originally proposed formulas, and the end product is more consistent with existing Commission policy.

We respectfully request that the draft rules to be put before the Commission be amended to incorporate our revised proposal.

Please let me know if clarification or further information is needed on this matter.

Thank you for your attention.

Sincerely,

Wayne L. Schiefelbein

WLS/dc

Enclosure

cc: Suzanne F. Summerlin, Esquire, Division of Legal Services
Christiana T. Moore, Esquire, Division of Appeals

The following text is a proposed revision to the PSC Staff draft water and wastewater used and useful rule. It replaces the text and formulas beginning at line 2, page 115 and continuing through line 10, page 124, of the current version.

RULE 25-30.432

(5)(f) Used and useful Analysis -

1. As a part of its rate filing, each utility shall provide a determination of the used and useful percentage for each primary plant account along with the supporting formulas and documentation.

2. In lieu of presenting evidence in support of used and useful percentages, the utility may elect to use the default formulas in Rule 25-30.432(6), F.A.C. for calculating used and useful percentages for water supply, treatment, pumping and storage equipment, water transmission and distribution systems, wastewater treatment and effluent disposal equipment and wastewater pumping and collection systems. The terms used in the default formulas are defined in Rule 25-30.432(7).

(6) Used and Useful Default Formulas

(a) Small Water Systems (Less than 1 MGD Capacity)

1. Water Source of Supply

$$\frac{\text{Maximum Day Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

or

$$\frac{\text{Instantaneous Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[When there is negligible distribution storage]

1

2. Water Treatment Equipment

$$\frac{\text{Maximum Day Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

or

$$\frac{\text{Instantaneous Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[When there is negligible distribution storage]

3. Finished Water Storage

$$\frac{\text{Equalization Volume + Fire Flow + Emergency Storage + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[Hydropneumatic tanks are not included in determining finished water storage capacity and are considered to be 100% used and useful]

4. Water High Service Pumping

$$\frac{\text{Peak Hour Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

or

$$\frac{\text{Instantaneous Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[When there is negligible distribution storage]

5. Other Water Facilities

100% used and useful

6. Water Transmission System

100% used and useful

7. Water Distribution System - Non-developer related

100% used and useful

8. Water Distribution System - Developer related, singlefamily developments

$$\frac{\text{Lots Served + Fill-in Lots + Margin Reserve}}{\text{Lots with Service Available}} + \text{Fire Flow Allowance}$$

9. Water Distribution System - Developer related, mixed developments (e.g., single family, multi-family and commercial)

$$\frac{\text{Connected ERCs + Fill-in ERCs + Margin Reserve}}{\text{ERC Capacity}} + \text{Fire Flow Allowance}$$

(b) Medium Water Systems (1 MGD to 5 MGD Capacity)

1. Water Source of Supply

$$\frac{\text{Maximum Day Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

or

$$\frac{\text{Peak Hour Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[When there is negligible distribution storage]

2. Water Treatment Equipment

$$\frac{\text{Maximum Day Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

or

$$\frac{\text{Peak Hour Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[When there is negligible distribution storage]

3. Finished Water Storage

$$\frac{\text{Equalization Volume + Fire Flow + Emergency Storage + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[Hydropneumatic tanks are not included in determining finished water storage capacity and are considered to be 100% used and useful]

4. Water High Service Pumping

$$\frac{\text{Maximum Day Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

or

$$\frac{\text{Peak Hour Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[When there is negligible distribution storage]

5. Other Water Facilities

100% used and useful

6. Water Transmission System

100% used and useful

7. Water Distribution System - Non-developer related

100% used and useful

8. Water Distribution System - Developer related, single family developments

$$\frac{\text{Lots Served + Fill-in Lots + Margin Reserve}}{\text{Lots with Service Available}} + \text{Fire Flow Allowance}$$

9. Water Distribution System - Developer related, mixed developments (e.g., single family, multi-family and commercial)

$$\frac{\text{Connected ERCs + Fill-in ERCs + Margin Reserve}}{\text{ERC Capacity}} + \text{Fire Flow Allowance}$$

(c) Large Water Systems (over 5 MGD Capacity)

1. Water Source of Supply

$$\frac{\text{Average 5 Maximum Days Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

or

$$\frac{\text{Maximum Day Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[When there is negligible distribution storage]

2. Water Treatment Equipment

$$\frac{\text{Average 5 Maximum Days Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

or

$$\frac{\text{Maximum Day Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[When there is negligible distribution storage]

3. Finished Water Storage

$$\frac{\text{Equalization Volume + Fire Flow + Emergency Storage + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[Hydropneumatic tanks are not included in determining finished water storage capacity and are considered to be 100% used and useful]

4. Water High Service Pumping

$$\frac{\text{Maximum Day Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

or

$$\frac{\text{Peak Hour Demand + Fire Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

[When there is negligible distribution storage]

5. Other Water Facilities

100% used and useful

6. Water Transmission System

100% used and useful

7. Water Distribution System - Non-developer related

100% used and useful

8. Water Distribution System - Developer related, single family developments

$$\frac{\text{Lots Served + Fill-in Lots + Margin Reserve}}{\text{Lots with Service Available}} + \text{Fire Flow Allowance}$$

9. Water Distribution System - Developer related, mixed developments (e.g., single family, multi-family and commercial)

$$\frac{\text{Connected ERCs + Fill-in ERCs + Margin Reserve}}{\text{ERC Capacity}} + \text{Fire Flow Allowance}$$

(d) Wastewater Systems

1. Wastewater Collection System and Pumping Stations - Non-developer related

100% used and useful

2. Wastewater Collection System and Pumping Stations - Developer related, single family developments

$$\frac{\text{Lots Served + Fill-in Lots + Margin Reserve}}{\text{Lots with Service Available}}$$

3. Wastewater Collection System and Pumping Stations - Developer related, mixed developments (e.g., single family, multi-family and commercial)

$$\frac{\text{Connected ERCs + Fill-in ERCs + Margin Reserve}}{\text{ERC Capacity}}$$

4. Wastewater Force Mains

100% used and useful

5. Wastewater Treatment Equipment

$$\frac{\text{Maximum Month Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

6. Effluent Disposal Facilities

$$\frac{\text{Maximum Month Flow + Margin Reserve}}{\text{Firm Reliable Capacity}}$$

7. Other Wastewater Facilities

100% used and useful

PROPOSED SIMPLIFIED DEFAULT FORMULAS FOR WATER SYSTEMS

IN LEGISLATIVE FORMAT

25-30.432 Used and Useful in Rate Case Proceeding

(6) Used and Useful Default Formulas

(a) Small water systems (less than 1 million gallons per day (MGD) capacity).

1. Small water systems (less than 1 MGD capacity) ~~with adequate reliable finished water storage capacity to meet the local fire flow ordinances and to meet the peak hour demand of its customers~~ shall use the following formulas:

a. Water Source of Supply:

(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

or, when there is negligible distribution storage:

(Instantaneous Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

b. Water treatment equipment:

(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

or, when there is negligible distribution storage:

(Instantaneous Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

c. Finished water storage:

(Equalization Volume + Fire Flow Requirement + Emergency Storage + Margin Reserve) / Firm Reliable Capacity

[Note: Hydropneumatic tanks are not included in determining finished water storage capacity and are considered to be 100% used and useful]

d. Water high service pumping:

~~(Instantaneous Demand + Margin Reserve) / Firm Reliable Capacity~~

~~or, if the utility chooses:~~

~~(Peak Hour Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity~~

(Peak Hour Demand + Fire Flow + Margin Reserve) / Firm Reliable Capacity

or, when there is negligible distribution storage:

(Instantaneous Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

e. Other Water Facilities: 100 percent used and useful

f. Water transmission system: 100 percent used and useful

g. Water distribution system - non-developer related: 100% used and useful

h. Water distribution system - developer related, single family development:

((Lots Served + Fill-in Lots + Margin Reserve) / Lots with Service Available) + Fire Flow Allowance

i. Water distribution system - developer related, mixed developments (e.g. single family, multi-family and commercial):

((Connected ERCs + Fill-in Lots + Margin Reserve) / ERC Capacity) + Fire Flow Allowance

~~2. Small water systems (less than 1 MGD capacity) ....~~

[STRIKE ENTIRE SECTION]

(b) Medium water systems (1 MGD to 5 MGD capacity):

1. Medium water systems (1 MGD to 5 MGD capacity) ~~with adequate reliable finished water storage capacity to meet the local fire flow ordinances and to meet the peak hour demand of its customers~~ shall use the following formulas:

a. Water Source of Supply:

(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

or, when there is negligible distribution storage:

(Peak Hour Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

b. Water treatment equipment:

(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

or, when there is negligible distribution storage:

(Peak Hour Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

c. Finished water storage:

(Equalization Volume + Fire Flow Requirement + Emergency Storage + Margin Reserve) / Firm Reliable Capacity

[Note: Hydropneumatic tanks are not included in determining finished water storage capacity and are considered to be 100% used and useful]

d. Water high service pumping:

~~(Peak Hour Demand + Margin Reserve) / Firm Reliable Capacity~~

~~or, if the utility chooses:~~

~~(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity~~

(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

or, when there is negligible distribution storage:

(Peak Hour Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

e. Other Water Facilities: 100 percent used and useful

f. Water transmission system: 100 percent used and useful

g. Water distribution system - non-developer related: 100% used and useful

h. Water distribution system - developer related, single family development:

((Lots Served + Fill-in Lots + Margin Reserve) / Lots with Service Available) + Fire Flow Allowance

i. Water distribution system - developer related, mixed developments (e.g. single family, multi-family and commercial):

((Connected ERCs + Fill-in Lots + Margin Reserve) / ERC Capacity) + Fire Flow Allowance

~~2. Medium water systems (1 MGD to 5 MGD capacity) ....~~

[STRIKE ENTIRE SECTION]

(c) Large water systems (over 5 MGD capacity):

1. Large water systems (over 5 MGD capacity) ~~with adequate reliable finished water storage capacity to meet the local fire flow ordinances and to meet the peak hour demand of its customers~~ shall use the following formulas:

a. Water Source of Supply:

(Average 5 Maximum Days Demand + Fire Flow Requirement ± Margin Reserve) / Firm Reliable Capacity

or, when there is negligible distribution storage:

(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

b. Water treatment equipment:

(Average 5 Maximum Days Demand + Fire Flow Requirement ± Margin Reserve) / Firm Reliable Capacity

or, when there is negligible distribution storage:

(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

c. Finished water storage:

(Equalization Volume + Fire Flow Requirement + Emergency Storage + Margin Reserve) / Firm Reliable Capacity

[Note: Hydropneumatic tanks are not included in determining finished water storage capacity and are considered to be 100% used and useful]

d. Water high service pumping:

~~(Peak Hour Demand + Margin Reserve) / Firm Reliable Capacity~~

~~or, if the utility chooses:~~

~~(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity~~

(Maximum Day Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

or, when there is negligible distribution storage:

(Peak Hour Demand + Fire Flow Requirement + Margin Reserve) / Firm Reliable Capacity

e. Other Water Facilities: 100 percent used and useful

f. Water transmission system: 100 percent used and useful

g. Water distribution system - non-developer related: 100% used and useful

h. Water distribution system - developer related, single family development:

((Lots Served + Fill-in Lots + Margin Reserve) / Lots with Service Available) + Fire Flow Allowance

i. Water distribution system - developer related, mixed developments (e.g. single family, multi-family and commercial):

((Connected ERCs + Fill-in Lots + Margin Reserve) / ERC Capacity) + Fire Flow Allowance

~~2. Large water systems (over 5 MGD capacity) ...~~

[STRIKE ENTIRE SECTION]