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**REBUTTAL TESTIMONY OF RICHARD M. HARVEY, P.E.
BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
ON BEHALF OF
SOUTHERN STATES UTILITIES, INC.
DOCKET NO. 950495-WS**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Richard M. Harvey. My business address
3 is Kimley-Horn and Associates, Inc., 2700 Blair
4 Stone Road, Suite D, Tallahassee, FL 32301.

5 **Q. COULD YOU BRIEFLY DESCRIBE YOUR EDUCATIONAL**
6 **BACKGROUND AND YOUR PROFESSIONAL QUALIFICATIONS?**

7 A. I have a Bachelor of Science degree in Zoology from
8 the University of Florida, a Bachelor of Science
9 degree in Civil Engineering from Florida State
10 University, and a Master of Science degree in
11 Environmental Engineering from the University of
12 Florida. I am a registered Professional Engineer
13 in the State of Florida, and I am currently a
14 member of the American Water Works Association.
15 Throughout my career I have been a member of a
16 number of professional organizations which focus on
17 water and wastewater utility issues, including the
18 Water Pollution Control Federation (now known as
19 the Water Environment Federation) and the North
20 American Lake Management Society.

21 **Q. PLEASE DESCRIBE YOUR EMPLOYMENT EXPERIENCE RELATING**
22 **TO WATER AND WASTEWATER UTILITY SERVICE.**

23 A. From 1972 until 1976, I worked for the Florida
24 Department of Pollution Control. The Florida
25 Department of Pollution Control became the Florida

1 Department of Environmental Regulation by act of
2 the Legislature in 1975. My primary job
3 responsibilities during that period included the
4 administration of a program charged with developing
5 river basin water quality management plans for all
6 thirteen basins in Florida and providing technical
7 support to the municipal wastewater facilities
8 planning/construction grants program for the state.
9 These two programs were designed not just to fund
10 wastewater facility construction, but to identify
11 the treatment levels the facilities had to meet to
12 protect water quality and the most cost-effective
13 ways to achieve those treatment levels as well.

14 From 1976 to 1985, I worked for the United
15 States Environmental Protection Agency ("EPA")
16 Region IV office in Atlanta, Georgia. While
17 employed by EPA, one of the jobs I held was Chief
18 of the Alabama/Georgia 201 Facilities Planning
19 Section. That Section was responsible for
20 coordinating the development of "Facilities Plans"
21 for municipal wastewater utilities in Alabama and
22 Georgia. The Facilities Plans were planning
23 documents which evaluated and recommended cost-
24 effective collection, treatment, and disposal
25 options for the municipal wastewater facilities.

1 From 1988 to 1991, I served as Deputy Director
2 of the Water Facilities Division of the Florida
3 Department of Environmental Regulation ("DER").
4 The Water Facilities Division was and still is,
5 responsible for a number of important water
6 resources and water facility programs, including
7 the domestic wastewater program, the drinking water
8 program, the National Pollutant Discharge
9 Elimination System ("NPDES") program, the state
10 revolving loan fund program, and the Underground
11 Injection Control ("UIC") program. Essentially,
12 the Water Facilities Division is responsible for
13 administering all state and delegated federal
14 regulatory programs for over 11,000 domestic
15 wastewater and drinking water treatment facilities
16 in Florida -- the vast majority of which are
17 privately owned and operated. From 1991 until the
18 end of 1995, I served as Director of the Water
19 Facilities Division at DER, which became the
20 Department of Environmental Protection ("DEP") in
21 1994.

22 From December 1995 until the present, I have
23 been employed by Kimley-Horn and Associates, Inc.
24 as Director of Water Resources. In that capacity,
25 I provide consulting services on permitting related

1 issues for both publicly and privately owned
2 domestic wastewater and drinking water treatment
3 facilities.

4 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

5 A. The purpose of my testimony is to rebut certain
6 assertions made in the direct testimony of Office
7 of Public Counsel ("OPC") witness Mr. Ted Bidy,
8 Marco Island Civic Association ("MICA") witness Mr.
9 Michael Woelffer, and Sugarmill Woods Civic
10 Association, Inc. ("SMWCA") witness Mr. Buddy L.
11 Hansen. Specifically, I will rebut the following
12 from the testimony of these witnesses: 1) that
13 Southern States Utilities, Inc. ("SSU") not be
14 allowed its requested margin reserve in its rate
15 base and 2) that plant facilities dedicated to
16 reuse should not be considered 100% used and
17 useful. I will also comment on certain portions of
18 the prefiled direct testimony of staff witness Mr.
19 Gregory Shafer. Since I believe my comments on the
20 testimony of Mr. Shafer are an appropriate
21 introduction to my comments on the intervenors'
22 testimony, I will begin there.

23 **Q. WHAT COMMENTS DO YOU HAVE CONCERNING THE TESTIMONY**
24 **OF MR. SHAFER?**

25 A. Mr. Shafer makes a number of statements on the role

1 of the Commission in relation to the role of
2 environmental agencies, such as DEP and the water
3 management districts. For example, on page 3,
4 beginning at line 6, Mr. Shafer states that the
5 Commission is obligated to provide utilities the
6 opportunity to generate funds necessary to meet
7 environmental standards and that the Commission has
8 always recognized the importance of providing
9 adequate financial coverage for utilities to meet
10 those standards even though the Commission itself
11 does not set those standards. On page 5, beginning
12 at line 15, Mr. Shafer discusses the Commission's
13 function in assisting environmental agencies to
14 facilitate compliance with the requirements of
15 those agencies. On page 9, beginning on line 14,
16 Mr. Shafer mentions that cooperation between the
17 Commission and the environmental agencies reduces
18 regulatory inefficiency and allows utilities to
19 achieve environmental compliance. I agree with Mr.
20 Shafer that cooperation between the Commission and
21 the environmental agencies is highly desirable.
22 However, I am concerned that because of certain
23 used and useful conventions the Commission has
24 employed in the past, the Commission has neither
25 substantially encouraged compliance with

1 environmental/public health requirements nor
2 substantially promoted resource protection.

3 **Q. COULD YOU EXPLAIN WHAT YOU MEAN?**

4 A. Yes. I think SSU witness Hartman's direct
5 testimony framed this broader issue very concisely,
6 and I am in complete agreement with Mr. Hartman.
7 The Commission must formulate economic regulation
8 practices and policies which encourage and advance
9 environmental compliance, protection of public
10 health environmental preservation, proper facility
11 design, and economies of scale. Economic
12 regulation which does little to promote these ends
13 is deleterious to the environment, the utility, the
14 customers, and the citizens of the state at large.
15 As Mr. Hartman pointed out, if the Commission's
16 used and useful conventions do not parallel design
17 and regulatory requirements, used and useful is a
18 direct financial **disincentive** for regulatory
19 compliance and environmental protection. Such a
20 disincentive promotes resource **endangerment**.
21 Furthermore, as a matter of principle, I think it
22 is fundamentally unfair for one or more agencies of
23 the state to require compliance with certain level
24 of service, public health, and environmental
25 standards and for the Commission's enabling statute

1 and its rules to require the same, but for the
2 Commission to disallow the full costs of such
3 compliance.

4 On page 5 of his testimony, Mr. Shafer
5 mentions the goal of resource protection and how
6 the Commission may help achieve that goal by, for
7 example, setting conservation rates. Mr. Shafer's
8 example is illustrative and appropriate. However,
9 it seems to me that the most conspicuous mechanism
10 for the Commission to achieve the goal of resource
11 protection is the used and useful mechanism. Used
12 and useful dictates on what level of investment a
13 utility under Commission regulation may earn.
14 Therefore, it has a direct influence on a utility's
15 action or inaction regarding compliance and a
16 direct influence on what type and size of water and
17 wastewater facilities a utility constructs.
18 Neither the Commission nor the environmental
19 agencies can expect a utility to achieve meaningful
20 compliance with environmental requirements and
21 protect the public health and preserve the
22 environment if the utilities which the Commission
23 regulates do not have a meaningful opportunity to
24 recover the costs associated with compliance,
25 protection, and preservation.

1 It is my testimony that the Commission must in
2 this case and in all cases, in Mr. Shafer's words,
3 "provide the utility with the opportunity to
4 generate the funds necessary to meet environmental,
5 health, and safety standards," and "reduce
6 confusion on the part of utilities and allow
7 utilities flexibility in the way that they achieve
8 compliance with each agency." However, in my
9 observation, certain of the Commission's used and
10 useful actions have been susceptible to a rates-
11 driven resistance which is counterproductive to
12 environmental and public health concerns.

13 **Q. ON WHAT DO YOU BASE THIS OBSERVATION?**

14 A. Until a few years ago, I was personally not even
15 familiar with the concept of used and useful
16 despite my many years of experience in the water
17 and wastewater industry. It was only when the
18 Water Facilities Division began hearing complaints
19 from some utilities about their inability to
20 recover the costs associated with reuse projects
21 identified in their legislatively mandated reuse
22 feasibility studies that it was brought to my
23 attention. It had always been my belief, and the
24 belief of the other engineers at DER/DEP, that
25 privately owned utilities, having no access to

1 public funds, would and must prudently spend the
2 money they had available to maintain and expand
3 their facilities and, at the same time, take
4 advantage of economies of scale wherever possible.
5 After all, constructing and maintaining these water
6 and wastewater facilities is a capital intensive
7 proposition.

8 Upon hearing the utilities' complaints, I
9 asked my staff to meet with the Commission staff so
10 we could obtain a better understanding of the used
11 and useful concept. We had several meetings, some
12 of which I attended. Eventually, the Commission
13 and DER came to agree to a Memorandum of
14 Understanding ("MOU") which set forth various
15 cooperative efforts and responsibilities. I
16 thought the MOU was a very positive step, even
17 though in the process of negotiating the MOU there
18 appeared to be a certain measure of resistance to
19 the rates impacts of DER's goals of protecting the
20 public health and the environment. With regard to
21 DER's reuse concern, the MOU reinforced the law at
22 the time. The MOU states,

23 As noted in Section 403.064(6), F.S., and
24 pursuant to Chapter 367, the PSC shall
25 allow utilities which implement reuse

1 projects to recover the full cost of such
2 facilities through their rate structures.
3 For ease in reference and identification, a copy of
4 the MOU is attached to my testimony as Exhibit ____
5 (RMH-1).

6 At about the same time as the MOU was being
7 worked out, the Commission staff was working on
8 proposed rules which addressed used and useful on a
9 broad scale. These proposed rules were discussed
10 at various meetings between Commission staff and
11 DER employees under my supervision. When drafts of
12 the used and useful rules were completed, the
13 Commission staff sought DER's comments on the
14 rules. Attached to my testimony as Exhibit _____
15 (RMH-2) are two letters from DER to the Commission
16 staff commenting on the proposed rules as they
17 existed at the time. The first letter, dated July
18 30, 1992, is from me to Mr. Charles Hill, and the
19 second, dated July 14, 1993, is from one of my
20 Bureau Chiefs, Richard Drew, to Mr. John Williams.
21 Both letters, emphasize, among other things, that
22 the proposed rules should be written so all
23 facilities necessary for reuse be considered 100%
24 used and useful and so the Commission's used and
25 useful policies parallel the requirements of Rule

1 17-600.405, Florida Administrative Code (which has
2 since be renumbered as Rule 62-600.405). This rule
3 addresses planning for wastewater facility
4 expansions. Sometime after these letters were
5 sent, the Commission decided to postpone
6 consideration of the proposed used and useful
7 rules.

8 After the MOU was signed, DER included PSC
9 staff members on the Reuse Coordinating Committee,
10 consisting of representatives from DER/DEP, the
11 five water management districts, and, now,
12 Commission staff. When Commission staff contacted
13 DER/DEP staff for input on the used and useful
14 rules still being worked on, we provided input.

15 By a letter from Mr. Charles Hill dated May
16 15, 1995, to Ms. Elsa Potts and Mr. Van Hoofnagle,
17 Section Administrators under my supervision as
18 Division Director, the Commission staff transmitted
19 to DEP for comment staff's latest draft of the
20 proposed used and useful rules. A copy of the
21 letter and the draft rules is attached as Exhibit
22 _____ (RMH-3). I note from this Exhibit that the
23 Commission staff did not change any of its previous
24 drafts to adequately address the reuse question and
25 it refused DEP's repeated recommendations

1 concerning Rule 62-600.405. On June 29, 1995, I
2 wrote a letter to Mr. John Williams of the
3 Commission staff commenting on the draft rules. A
4 copy of this letter is attached as Exhibit ____
5 (RMH-4). In the letter, I emphasized that the used
6 and useful rules should and must separately
7 identify reuse facilities and declare those
8 facilities to be 100% used and useful. I also
9 stressed that the margin reserve component for used
10 and useful be at least five years for both water
11 and wastewater facilities, the latter being
12 consistent with Rule 62-600.405. On July 12 and
13 13, 1995, the Commission staff held a public
14 workshop to discuss the staff's May 10, 1995, draft
15 used and useful rules. I directed persons under my
16 supervision to participate in the workshop on
17 behalf of DEP. Representatives from DEP, the water
18 and wastewater industry, Commission staff, and OPC
19 were present. From the reports of my people and
20 the transcript of the workshop, the Commission
21 staff was, again, not receptive to the above two
22 recommendations in my letter. On February 20,
23 1996, DEP Secretary Wetherell wrote Commission
24 Chairman Clark emphasizing the need for cooperation
25 between agencies on the used and useful rules. A

1 copy of this letter is attached as Exhibit _____
2 (RMH-5).

3 I do not understand why, after three years and
4 several law changes which solidify the issue, the
5 used and useful status of reuse facilities can even
6 be considered subject to debate. Further, during
7 the time the used and useful rules were being
8 discussed, the Commission has more than once
9 rejected the assertion that Rule 62-600.405
10 mandates at least a five-year margin reserve for
11 wastewater treatment plants, contrary to DEP's
12 recommendations.

13 In consideration of the above, and in
14 consideration of the comments I read in the
15 transcript from a recent Commission agenda
16 conference at which a reuse project plan for Aloha
17 Utilities was considered, I think a rates-driven
18 resistance to environmental and public health
19 protection and environmental preservation is
20 present. The intervenors in this case, needless to
21 say, make no bones about their motivation for the
22 used and useful recommendations in their testimony.

23 **Q. WHAT ARE THE DANGERS OF A RATES-DRIVEN**
24 **RESISTANCE TO PROTECTING THE ENVIRONMENT AND PUBLIC**
25 **HEALTH?**

1 A. Mr. Shafer seems to acknowledge the dangers. If a
2 utility does not have sufficient earnings to comply
3 with regulatory requirements, the utility cannot
4 comply. It is that simple. Depending on the
5 utility's situation, the environmental and public
6 health impacts of noncompliance may be devastating
7 and not easily, if ever, reversed.

8 The Commission must understand that since
9 regulatory compliance is an expensive proposition
10 and is becoming even more expensive, as Mr. Shafer
11 and staff witness Dr. Beecher assert, the risk to
12 the public health and the environment can be
13 measured by the financial viability of the
14 utilities who bear the ultimate responsibility for
15 protecting the environment and public health. A
16 utility "on the edge" financially is a utility "on
17 the edge" as far as the environment and public
18 health are concerned. Focusing again on used and
19 useful, I will make my point this way. If the
20 Commission's used and useful practices do not
21 provide an incentive for utilities to promote
22 environmental compliance and preservation and
23 protect the public health, the utilities cannot
24 function in a way which achieves those goals.

25 Let me offer some examples of the dangers I

1 have referred to. First is the example of the
2 Miami-Dade wastewater collection, treatment, and
3 disposal system. Exhibit _____ (RMH-6) is an
4 article from the Engineering News Record describing
5 the circumstances of the case. Since the situation
6 arose while I was at DEP, I am personally familiar
7 with the pertinent facts. For many years, the
8 Miami-Dade sewer rates failed to generate adequate
9 revenues to properly operate and maintain the sewer
10 system. As a result, and not unexpectedly, major
11 problems developed in the wastewater system.
12 Eventually, thousands of sewer overflows and
13 numerous pipe and pump station failures occurred
14 which resulted in, among other things, street
15 intersections being periodically flooded with
16 thousands of gallons of raw sewage and raw sewage
17 spilling into the Miami River and other bodies of
18 water. In order to correct the problems, Miami-
19 Dade is spending over \$1.1 billion to rehabilitate
20 its facilities, the largest wastewater collection
21 and treatment system in the Southeast. To generate
22 the revenues needed to fund the rehabilitation,
23 monthly water and sewer bills have more than
24 doubled, with no end in sight. The point of this
25 example is that the financial disaster, the

1 environmental disaster, and the public health
2 hazard could have been avoided in the first place
3 had Miami-Dade not insisted on keeping rates as low
4 as the public wanted the rates and instead charged
5 rates sufficient to operate and maintain the system
6 in an environmentally sound manner.

7 The contamination of the Apalachicola Bay also
8 illustrates the impact of ignoring environmental
9 and public health concerns in rate setting. The
10 City of Apalachicola is located at the mouth of the
11 Apalachicola River, which flows into Apalachicola
12 Bay. The Apalachicola Bay is a Class II water body
13 and was one of Florida's last remaining water
14 bodies approved for shellfish harvesting. The
15 City's wastewater utility rates did not generate
16 revenues sufficient for the City to adequately
17 operate and maintain its existing wastewater
18 collection, treatment, and disposal system or to
19 design, construct, and install additional
20 facilities. The latter aspect was of particular
21 concern because had the City's rates generated
22 adequate revenue, the City may have provided
23 central wastewater service to areas served by
24 malfunctioning septic tanks. Over time the City's
25 facilities deteriorated and continued to

1 malfunction. Downstream water quality problems
2 became significant. Shellfish harvesting was
3 halted. To help correct the environmental and
4 public health problems in and around the Bay, the
5 State of Florida, through Legislatively approved
6 grants and, more recently, a loan exceeding \$4
7 million, will financially assist the City with its
8 wastewater problems so the water quality issues can
9 be avoided in the future. Again, all of this may
10 have been avoided if proper consideration been
11 given to the environment and the public health in
12 rate-setting.

13 **Q. WHY ARE THESE MATTERS IMPORTANT TO YOUR REBUTTAL**
14 **TESTIMONY IN THIS CASE?**

15 A. DEP's recommendations on the used and useful
16 considerations of the Commission are stated in the
17 letters I referred to and the MOU. DEP's
18 recommendations were offered, not in support of the
19 utility industry, not in support of utility
20 customers, but in support of environmental
21 preservation, the public health, and the statutes,
22 rules, regulations, and permits which DEP enforces.
23 The reuse and margin reserve used and useful
24 proposals offered by the intervenor witnesses in
25 this case are contrary to those DEP recommendations

1 and, therefore, will put SSU at risk of regulatory
2 noncompliance and potentially put the environment
3 and public health at risk. SSU's used and useful
4 proposals in these areas are consistent with DEP's
5 recommendations.

6 **Q. BEFORE DISCUSSING THE SPECIFIC SUBJECT AREAS OF**
7 **YOUR REBUTTAL TO THE INTERVENORS' TESTIMONY, DO YOU**
8 **HAVE ANY PRELIMINARY COMMENTS TO THEIR TESTIMONY?**

9 A. Yes. It is entirely too clear to me that the
10 intervenor witnesses have not given due
11 consideration, or any consideration, to the broader
12 issues I have mentioned. The intervenors instead
13 insist that used and useful is exclusively a
14 mechanism to financially partition indivisible
15 system components in order to artificially and
16 temporarily reduce what current customers will pay.
17 I am astounded by the intervenors' proposals that
18 there be no margin reserve whatsoever and that
19 facilities necessary to provide reuse not be
20 considered 100% used and useful, the latter despite
21 clear legal authority to the contrary. I
22 understand perfectly the customers' interests in
23 these matters. However, for the reasons I, and
24 SSU's other witnesses, have explained, used and
25 useful cannot be as the intervenors say it should

1 be.

2 In addition, I believe it is totally
3 inappropriate for anyone to consider SSU's used and
4 useful proposals as some sort of opposite extreme
5 to the proposals of the intervenors and, therefore,
6 not really supportable and subject to pruning to
7 reach a middle-ground. SSU's used and useful
8 proposals on margin reserve and reuse are
9 consistent with DEP's recommendations. Contrary to
10 the impression some people unfortunately have, DEP
11 is not an extremist, fringe environmental advocacy
12 group. DEP is an agency of the State of Florida,
13 charged by the Florida Legislature with enforcing
14 statutes of the Legislature's creation and rules
15 which the Legislature has authorized DEP to
16 implement. Contrary to another impression some
17 people unfortunately have, DEP does in fact
18 consider the financial impacts of its regulations.
19 Like every state agency, DEP is required by law to
20 study those impacts before it passes a rule. There
21 is little point to the Legislature and DEP making
22 public interest determinations regarding issues of
23 public health and environmental impact if the
24 Commission takes counteractive measures such as
25 those advocated by the intervenors.

1 **Q. WHAT DO YOU BELIEVE WOULD BE THE RAMIFICATIONS OF**
2 **ELIMINATING SSU'S REQUESTED MARGIN RESERVE AS THE**
3 **INTERVENOR'S PROPOSE?**

4 A. I believe the results would be the sort of
5 perpetual capacity crises mentioned in the DEP
6 letters and referred to by Mr. Hartman. With the
7 capacity crises comes: 1) compliance problems, 2)
8 service problems, 3) increased risk of
9 environmentally harmful conditions, 4) increased
10 risk to the public health and 5) higher costs to
11 customers in the long run. The Commission would
12 place utilities in the position of having to
13 constantly catch up to capacity and reliability
14 requirements because the utilities have no economic
15 incentive to plan ahead. This will almost
16 inevitably lead to service and compliance issues,
17 such as insufficient water pressure, connection
18 moratoria, lack of sufficient disposal facilities,
19 improper discharge of wastewater, and insufficient
20 wastewater treatment to name a few. Building
21 plants in increments sized to meet short-term
22 demand, and only as that demand becomes immediate,
23 costs the utility and the customers more in the
24 long run. The economies of scale referenced in the
25 DEP letters and supported by the economies of scale

1 evaluation Mr. Hartman sponsors in his rebuttal are
2 not encouraged without a margin reserve.

3 I noted with curiosity that Mr. Buddy L.
4 Hansen on page 14, line 7, of his testimony
5 expresses concern with SSU's building water plants
6 sized only to meet immediate needs, yet he opposes
7 a margin reserve. Mr. Hansen apparently fails to
8 understand the cause and effect correlation: the
9 lack of a sufficient margin reserve is one very
10 clear way a Commission regulated utility is
11 encouraged to operate at or near capacity. This is
12 so whether the margin reserve period is eliminated
13 or insufficient or if the Commission imputes
14 contributions against the margin reserve and
15 thereby diminishes the margin's incentive, as Mr.
16 Hartman states.

17 **Q. CAN YOU ADDRESS HOW DEP RULES ADDRESS THE PURPOSE**
18 **AND NEED OF A MARGIN RESERVE?**

19 A. Yes. While the term "margin reserve" is not
20 specifically used in the DEP rules, the concept is
21 most conspicuously embodied in Rule 62-600.405,
22 which is entitled "Planning for Wastewater
23 Facilities Expansion." A copy of this rule is
24 attached as Exhibit _____ (RMH-7). This rule
25 states,

1 The permittee **shall** provide for the
2 timely planning, design, and construction
3 of wastewater facilities necessary to
4 provide proper treatment and reuse or
5 disposal of domestic wastewater.

6 The rule then goes on to establish a schedule of
7 expansion activities when certain conditions exist,
8 as I will discuss later. The purpose/goal of the
9 rule is to insure that utilities have adequate
10 facilities for the proper collection, treatment and
11 reuse or disposal of wastewater flows and thereby
12 avoid exposure to the environmental and health
13 hazards of improper wastewater discharges which
14 result when facilities are inadequate. When this
15 rule was being developed under my supervision in
16 1991, DEP and all those participating in the rule-
17 making process recognized that to plan, permit,
18 design, and construct wastewater treatment
19 facilities routinely takes a significant period of
20 time. Because of this, and in order to ensure the
21 proper protection of the public health and the
22 environment, a process was developed in the rule to
23 make certain that utilities began the expansion
24 process for treatment facilities when five years or
25 less of reserve capacity was available. In

1 recognition of how long it takes to go through the
2 expansion process, DEP wanted to make certain that
3 utilities started the process early enough so
4 adequate treatment plant capacity would be
5 available when that capacity was needed, again,
6 with the goal of avoiding improper discharges
7 attributable to capacity deficiencies. What this
8 means is that if a wastewater facility does not
9 have at least five years of available capacity, the
10 utility **must** have begun the expansion process.

11 I think it important to understand that
12 expansion is the subject of the rule. The
13 difficulty and impact of each step in the expansion
14 process will vary from case to case, as DEP and the
15 rule recognize. The construction step of the
16 expansion process may be long or short, expensive
17 or inexpensive, in relation to the other steps.
18 For instance, the Town of Jupiter recently spent
19 over \$600,000 just to get a discharge permit for
20 one of its facilities, and the Pace Water Board has
21 spent the last three years trying to identify an
22 acceptable disposal option for its excess (that
23 which cannot be reused) reclaimed water.
24 Nonetheless, the expansion requirements of the rule
25 must be met within the times prescribed.

1 DEP's existing rules address drinking water
2 facility sizing and planning in that those rules
3 establish design standards and level of service
4 requirements. The existing drinking water rules do
5 not have a provision which parallels Rule 62-
6 600.405. However, as mentioned in my June 29,
7 1995, letter, Exhibit _____ (RMH-4), DEP has
8 recognized the need for a drinking water facilities
9 rule similar to Rule 62-600.405 and has for the
10 last year or so been working on one. I note that
11 Exhibit _____ (RMH-4) states that DEP recommends at
12 least a five year margin reserve for water
13 facilities. Many of the reasons justifying a five-
14 year margin reserve for wastewater facilities apply
15 to water facilities as well. The search for a
16 suitable well site and obtaining a consumptive use
17 permit, for example, can very often take a
18 considerable period of time, contrary to what Mr.
19 Biddy seems to imply.

20 **Q. DO YOU DISAGREE WITH MR. BIDDY'S TESTIMONY**
21 **REGARDING THE MEANING OF RULE 62-600.405 AS IT**
22 **RELATES TO MARGIN RESERVE?**

23 A. Yes. In Mr. Biddy's testimony, he states that
24 the five year time frame in the rule is mainly used
25 as the interval for submitting a capacity analysis

1 report ("CAR") and that the Commission should not
2 translate that five year time frame as the actual
3 time required for new plant expansions. Mr.
4 Bidby's interpretation is flatly incorrect. The
5 rule prescribes actions that are to be taken to
6 insure that facility expansions are completed in a
7 timely manner. The rule mandates actions the
8 permittee must take depending on how much time the
9 CAR indicates is remaining before the facility
10 capacity is exceeded. If the CAR indicates less
11 than five years of capacity are left, the permittee
12 must take appropriate actions to expand the
13 facility. Specifically, if less than five years of
14 capacity remain, the CAR has to include a
15 statement, signed and sealed by a professional
16 engineer that planning and preliminary design of
17 the necessary expansion have been initiated. If
18 less than four years of capacity remain, the CAR
19 must include a signed and sealed statement that
20 plans and specifications for the necessary
21 expansion have been prepared. If less than three
22 years remain, a complete construction permit
23 application must be submitted. And if less than
24 six months remain, an application for an operating
25 permit for the newly expanded facility must be

1 submitted. So clearly, once a CAR identifies that
2 less than five years of capacity remain, the rule
3 prescribes a process to follow to insure the
4 facility expansion is completed in a timely manner
5 (always less than five years).

6 Mr. Bidy interprets the rule in such a way as
7 to suggest that utilities are discouraged from
8 plant expansion until the last possible moment.
9 That is precisely the situation the rule was
10 designed to avoid. If the Commission accepts Mr.
11 Bidy's proposal or any margin reserve period for
12 wastewater treatment facilities less than five
13 years, the Commission will defeat the purpose of
14 the rule and disregard the cost-effective
15 resolution to the environmental and public health
16 issues.

17 **Q. WHY IS THAT?**

18 A. For all of the reasons DEP representatives have
19 already explained to the Commission staff in person
20 and in writing and as I and Mr. Hartman have
21 already said.

22 Exhibit _____ (RMH-4) provided comment on
23 staff's proposed three year margin reserve for
24 wastewater plant on the premise that the margin
25 reserve should only reflect a period for

1 construction time. As Mr. Hill acknowledged in his
2 letter included in Exhibit _____ (RMH-3), this
3 premise was motivated by the Commission staff's
4 concern with rate levels. On page 6 of Exhibit __
5 (RMH-4) DEP refuses the Commission staff's proposal
6 of a three year margin reserve for wastewater
7 treatment plants, as well as water treatment
8 plants, as follows (bold type in original):

9 BY SPECIFYING THAT "USED AND USEFUL"
10 INCLUDE NO MORE THAN A THREE-YEAR
11 RESERVE CAPACITY FOR WATER AND
12 WASTEWATER TREATMENT FACILITIES, THE
13 PSC WILL BE ENCOURAGING UTILITIES TO
14 BUILD THESE FACILITIES IN THREE-YEAR
15 STAGES. AND BY ENCOURAGING
16 UTILITIES TO BUILD WATER AND
17 WASTEWATER TREATMENT FACILITIES IN
18 THREE-YEAR STAGES, THE PSC WILL BE
19 ENCOURAGING UTILITIES TO IGNORE
20 ECONOMIES OF SCALE AND LONG-TERM
21 ECONOMIC BENEFITS TO THEIR
22 CUSTOMERS, WHICH IS EXACTLY THE
23 OPPOSITE OF WHAT THE PSC WANTS TO
24 ENCOURAGE. (THE PSC'S PROPOSED RULE
25 25-30.432(3) STATES, "UTILITIES ARE

1 ENCOURAGED TO UNDERTAKE PLANNING
2 THAT RECOGNIZES CONSERVATION,
3 ENVIRONMENTAL PROTECTION, ECONOMIES
4 OF SCALE, AND [THAT] WHICH IS
5 ECONOMICALLY BENEFICIAL TO ITS
6 CUSTOMERS OVER THE LONG TERM.")

7 FURTHERMORE, BY RECOGNIZING
8 ONLY A THREE-YEAR RESERVE CAPACITY,
9 THE PSC WILL BE PUTTING UTILITIES IN
10 AN AWKWARD POSITION. THE DEP'S
11 EXISTING RULE 62-600.405 REQUIRES
12 UTILITIES TO BEGIN PLANNING AND
13 DESIGNING THE EXPANSION OF
14 WASTEWATER TREATMENT FACILITIES WHEN
15 THERE IS FIVE YEARS OR LESS OF
16 RESERVE CAPACITY AT THE FACILITIES.
17 (NOTE THAT WE INTEND TO IMPLEMENT A
18 SIMILAR RULE FOR COMMUNITY DRINKING
19 WATER TREATMENT FACILITIES.) YET,
20 UTILITIES WILL HAVE TO CONSTRUCT
21 WATER AND WASTEWATER TREATMENT
22 FACILITIES IN NO MORE THAN THREE-
23 YEAR STAGES IF THEY WANT TO RECOVER
24 THE FULL COST OF THE FACILITIES.
25 THUS, UTILITIES THAT WANT TO RECOVER

1 THE FULL COST OF THEIR WATER AND
2 WASTEWATER TREATMENT FACILITIES WILL
3 HAVE TO BE CONTINUOUSLY PLANNING AND
4 DESIGNING THE NEXT THREE-YEAR
5 EXPANSION OF THESE FACILITIES EVEN
6 WHILE THEY ARE CONSTRUCTING THE
7 PRESENT THREE-YEAR EXPANSION OF
8 THESE FACILITIES.

9 WE STRONGLY RECOMMEND THAT THE
10 PSC ALLOW AT LEAST A FIVE-YEAR
11 RESERVE CAPACITY FOR WATER AND
12 WASTEWATER TREATMENT FACILITIES.
13 ALTHOUGH A FIVE-YEAR RESERVE
14 CAPACITY MAY STILL NOT FULLY
15 ENCOURAGE USE OF ECONOMIES OF SCALE,
16 IT WILL MAKE THE PSC'S "USED AND
17 USEFUL" RULE SOMEWHAT CONSISTENT
18 WITH THE DEP'S RULE 62-600.405.
19 (UTILITIES THAT WANT TO RECOVER THE
20 FULL COST OF THEIR WASTEWATER
21 TREATMENT FACILITIES WILL HAVE TO
22 BEGIN PLANNING AND DESIGNING THE
23 NEXT FIVE-YEAR EXPANSION OF THESE
24 FACILITIES ONLY AFTER THEY HAVE
25 COMPLETED CONSTRUCTING THE PRESENT

1 FIVE-YEAR EXPANSION OF THESE
2 FACILITIES.) IF THE PSC TRULY WANTS
3 TO ENCOURAGE UTILITIES TO TAKE
4 ADVANTAGE OF ECONOMIES OF SCALE, THE
5 PSC SHOULD CONSIDER ALLOWING AT
6 LEAST A TEN-YEAR RESERVE CAPACITY
7 FOR WATER AND WASTEWATER TREATMENT
8 FACILITIES. GUIDELINES DEVELOPED
9 UNDER THE U.S. ENVIRONMENTAL
10 PROTECTION AGENCY'S OLD CONSTRUCTION
11 GRANTS PROGRAM FOR WASTEWATER
12 TREATMENT FACILITIES RECOMMENDED
13 CONSTRUCTING WASTEWATER TREATMENT
14 FACILITIES IN NO LESS THAN TEN-YEAR
15 STAGES.

16 This correspondence exemplifies all of the
17 things I have talked about so far. DEP recommended
18 a margin reserve consistent with the rules it
19 implemented to protect the public health and the
20 environment and consistent with DEP's expertise in
21 water and wastewater facilities. As Mr. Shafer,
22 Mr. Hartman, and Secretary Wetherell all agree,
23 economic regulatory policies must be consistent
24 with environmental goals so the environmental goals
25 can be attained. Yet, a three-year margin reserve

1 has been urged because of a rate-driven resistance
2 which not only serves to defeat environmental and
3 public health goals, but which is not in the least
4 bit cost-effective. As illustrated by the Miami-
5 Dade and Apalachicola examples, overdue capital
6 investment can be extraordinarily costly, and as
7 explained in detail by Mr. Hartman in his rebuttal,
8 a margin reserve of five years is needed for the
9 utility to take even modest advantage of economies
10 of scale.

11 **Q. IS IT YOUR TESTIMONY THEN THAT THE MARGIN RESERVE**
12 **ALLOWANCES SSU HAS REQUESTED IN THIS CASE ARE**
13 **JUSTIFIED?**

14 A. Yes. SSU's requested margin reserve allowances are
15 less than, but consistent with, DEP's
16 recommendations and should be adopted for the
17 reasons I have explained.

18 **Q. SHOULD FACILITIES NECESSARY TO PROVIDE REUSE BE**
19 **CONSIDERED 100% USED AND USEFUL?**

20 A. Absolutely. My answer is not just a matter of
21 opinion, it is a matter of law, as previously
22 stated by DEP and by Mr. Hartman. Neither Mr.
23 Bidy nor Mr. Woelffer made any attempt whatsoever
24 to address the legal authority cited by Mr. Hartman
25 in his direct testimony. It is ridiculous to me

1 that this even an issue in this case. All prudent
2 investment in facilities required by rule or permit
3 to provide reuse must by law be considered 100%
4 used and useful, this would include all prudent
5 investment in facilities necessary for wet weather
6 discharge and storage of effluent, such as SSU's
7 percolation ponds for Marco Island and the wetlands
8 at Buenaventura Lakes.

9 **Q. DO YOU HAVE ANYTHING TO ADD TO CONCLUDE YOUR**
10 **TESTIMONY?**

11 A. Yes, I would like the Commission to know that SSU's
12 reputation with DEP for overall environmental
13 compliance, responsiveness, communication and
14 cooperation is very good. DEP is aware of SSU's
15 efforts as an advocate and leader in effluent
16 reuse, having converted or being in the process of
17 converting each of its largest plants to reuse.
18 SSU also has acquired facilities from other
19 utilities and made possible a new level of
20 cooperation with DEP and which did not exist with
21 the pre-existing owner.

MEMORANDUM OF UNDERSTANDING**FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION****AND****FLORIDA PUBLIC SERVICE COMMISSION**

The Florida Department of Environmental Regulation (DER) and the Florida Public Service Commission (PSC) recognize that water conservation and reuse of reclaimed water are key elements of Florida's long-term water management strategy. It is our joint goal and high priority to ensure that Florida water and wastewater utilities provide safe and efficient treatment and use of water and wastewater. This memorandum of understanding (MOU) formally establishes the policies and procedures to be followed by the DER and PSC to promote and encourage water conservation and reuse, and safe and efficient water supply and wastewater management services.

BACKGROUND**Water Supply**

The Federal Safe Drinking Water Act requires certain monitoring, testing, treatment, and reporting to ensure the quality of potable waters. The Florida Safe Drinking Water Act, contained in Chapter 403, Florida Statute (F.S.), outlines the basic requirements for Florida's water supply program. Chapters 17-550, 17-551, 17-555, and 17-560, Florida Administrative Code (F.A.C.), contain specific requirements governing water supply in Florida. The PSC's responsibilities for regulation of private water supply utilities are outlined in Chapter 367, F.S.

Wastewater Management

The Federal Clean Water Act requires effective treatment and management of wastewater in order to protect the nation's ground water and surface water resources. Florida's wastewater management and environmental control programs are contained in Chapter 403, F.S. Specific regulations governing domestic wastewater management are contained in Chapters 17-600, 17-601, 17-602, 17-604, 17-610, 17-611, 17-640, and 17-650, F.A.C. The PSC's responsibilities for regulation of private wastewater utilities are outlined in Chapter 367, F.S.

4. Provide assistance in review of water conservation rate structures within PSC jurisdiction.
5. Monitor abandonment and bankruptcy proceedings for private water utilities within PSC jurisdiction. Inform the DER of pending abandonment and bankruptcy cases.
6. If an applicant for a DER permit challenges the interpretation of Section 367.031, F.S., the PSC agrees to provide legal and technical support to the DER in any related administrative hearings or legal proceedings.

Wastewater Management

1. When appropriate, arrange for joint public meetings with customers to ensure that customers are aware of the need for wastewater management system improvement projects, and the potential impacts the projects will have on service rates.
2. Inform the DER of the PSC public meetings with customers and hearings in which wastewater management projects will be discussed.
3. Review proposed rate structures for private wastewater management utilities within PSC jurisdiction.
4. Monitor abandonment and bankruptcy proceedings for private wastewater utilities within PSC jurisdiction. Inform the DER of pending abandonment and bankruptcy cases.
5. If an applicant for a DER permit challenges the interpretation of Section 367.031, F.S., the PSC agrees to provide legal and technical support to the DER in any related administrative hearings or legal proceedings.
6. The DER has adopted rules requiring utilities to perform timely planning, design, and construction of expanded facilities to ensure that sufficient wastewater treatment, disposal, and reuse capacity is available. In light of DER rules, the PSC agrees to evaluate capacity constraints imposed by statute and rules on private utilities within PSC jurisdiction, by PSC's application of the "used and useful" concept. If justified, this evaluation shall include assessment of possible need for statutory or rule revisions.

Reuse

1. When appropriate, arrange for joint public meetings with customers to ensure that customers are made aware of the need for reuse system improvement projects, and the potential impacts the projects will have on service rates.

3. Notify the PSC of impending abandonment or bankruptcy cases involving water utilities and assist the PSC in such cases, as needed.
4. For utilities subject to Chapter 367, F.S., the DER shall verify the existence of a certificate of authorization or order indicating exempt status from the PSC before issuance of a construction permit for a new water system.

Wastewater Management

1. Review applications for construction and operation of domestic wastewater facilities.
2. Monitor compliance of domestic wastewater management facilities with applicable rules and effluent discharge limitations.
3. Monitor water quality in the State's ground waters and surface waters.
4. Notify the PSC of impending abandonment or bankruptcy cases involving wastewater utilities and assist the PSC in such cases, as needed.
5. For utilities subject to Chapter 367, F.S., the DER shall verify the existence of a certificate of authorization or order indicating exempt status from the PSC before issuance of a construction permit for a new wastewater facility.

Reuse

1. Administer the State's reuse program.
2. Review reuse feasibility studies required by Section 403.064, F.S., the Antidegradation Policy, or the Indian River Lagoon System and Basin Act.
3. Within five working days after receipt of a reuse feasibility study required by Section 403.064, F.S., the Antidegradation Policy, or the Indian River Lagoon System and Basin Act, the DER shall provide a copy of the reuse feasibility study to the PSC. This applies only to feasibility studies produced by private utilities located within counties regulated by the PSC.
4. Final determinations on the adequacy of reuse feasibility studies will be made by the DER. Comments and recommendations made by the PSC on the financial aspects of these reuse feasibility studies will be considered by the DER.

5. Participate in appropriate PSC public meetings with customers and hearings in which reuse issues raised by the DER are to be discussed. This may include, but is not limited to, expert witness testimony.

PROJECT COORDINATION

Water Supply

1. The PSC will designate a Water Supply Project Manager.
2. The DER's Drinking Water Section Administrator will serve as the DER's Water Supply Project Manager.
3. Exchange of information between the DER and the PSC shall be through the designated Water Supply Project Managers. Copies of pertinent correspondence related to water supply and water conservation issues shall be sent to the appropriate agency's Water Supply Project Manager.

Wastewater Management

1. The PSC will designate a Wastewater Management Project Manager.
2. The DER's Domestic Wastewater Section Administrator will serve as the DER's Wastewater Management Project Manager.
3. Exchange of information between the DER and the PSC shall be through the designated Wastewater Management Project Managers. Copies of pertinent correspondence related to wastewater management issues shall be sent to the appropriate agency's Wastewater Management Project Manager.

Reuse

1. The PSC will designate a Reuse Project Manager. All reuse feasibility studies provided to the PSC by the DER will be directed to this Project Manager.
2. The DER's Reuse Coordinator will serve as the DER's Reuse Project Manager for purposes of this agreement.
3. Reuse feasibility studies to be submitted to the PSC will be submitted over the signature of the DER Reuse Coordinator or over the signature of one of the six Water Facilities Administrators located in the DER district offices.

4. The DER Reuse Coordinator shall be copied on any correspondence between the PSC's Project Manager and the DER's Water Facilities Administrators regarding reuse feasibility studies.
5. Whenever a potential conflict regarding a specific project is identified, each agency will examine the alternative solutions available and then meet to discuss the issues involved and attempt to reach an agreement before announcing a position. If an agreement cannot be reached after due deliberations, several positions may be advocated. Such disagreements, if any, will not obviate this MOU.
6. Exchange of information between the DER and the PSC shall be through the designated Reuse Project Managers. Copies of pertinent correspondence between an agency and other parties concerning a reuse project shall be sent to the Reuse Project Manager of each agency until project completion.

Overall Coordination


The designated Water Supply, Wastewater Management, and Reuse Project Managers from the DER and the PSC shall meet as necessary, but at least annually, with the Director of the Water and Wastewater Division of the PSC and the Director of the Division of Water Facilities of the DER. The meetings will address and review progress on the water supply, wastewater management, and reuse programs in Florida and attempt to resolve any issues which may be identified by the staffs.

AMENDMENTS


This MOU may be amended by mutual agreement of the DER and PSC. It shall remain in effect until it is dissolved by mutual agreement among the agencies or terminated by an agency after giving written notice 30 days in advance to the other agency.

EFFECTIVE DATE AND SIGNATURES

This MOU will become effective after being signed by both parties.


Thomas M. Beard, Chairman
Florida Public Service
Commission

Date


Carol M. Browner, Secretary
Department of Environmental
Regulation

Nov 20, 92
Date

Lawton Chiles
GovernorFlorida Department of
Environmental ProtectionTwin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

July 14, 1993

Virginia H. Wetherell
Secretary

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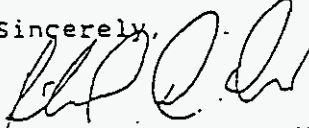
Mr. John Williams, Chief
Bureau of Certification
Florida Public Service Commission
101 East Gaines Street
Tallahassee, Florida 32399-0850Florida Public Service Commission
Division of Water and Wastewater

Dear Mr. Williams:

Thank you for the opportunity to review the draft version of Rule 25-30.432, Florida Administrative Code (F.A.C.), "Used and Useful in Rate Case Proceedings." This version was hand-delivered on June 18 by Patti Daniel. We commented on a previous draft of this rule by letter dated July 30, 1992. It appears that many of our previous comments were not incorporated into this version. Our general and specific comments on the wastewater portions are enclosed.

If you have any questions about our comments, please contact Elsa Potts, P.E., Administrator, Domestic Wastewater Section, at the letterhead address or at 904/488-4524.

Sincerely,


Richard D. Drew, Chief
Bureau of Water Facilities
Planning and Regulation

RDD/ra/btm

Enclosure

cc: Patti Daniel

Rule 25-30.432, F.A.C.
Used and Useful in Rate Case Proceedings

General Comments

1. Section 403.064(6), Florida Statutes, states "Pursuant to Chapter 367, the Florida Public Service Commission shall allow entities which implement reuse projects to recover the full cost of such facilities through their rate structure." The intent of this statutory provision was that the full cost of capital investments be included in the cost recoverable through a rate structure. In essence, the entire cost of a reuse project should be considered used and useful. We recommend that Chapter 25-30, F.A.C., include this provision.
2. A significant wastewater management problem in Florida involves overloaded wastewater treatment facilities. Rule 17-600.405, F.A.C., (copy attached) is a pollution prevention measure designed to ensure that the permittees conduct the planning necessary to allow for timely expansion of the wastewater facilities. This rule contains requirements for capacity analysis reports. The capacity analysis report is a detailed assessment of flow projections as they relate to future needs for expansion of domestic wastewater facilities. Time frames are established in the rule for submittal of the initial capacity analysis report, as well as for updates of the report and for the planning design, and construction of expanded facilities. This rule became effective in 1991 and has been well received by the regulated public, as well as the utilities. We believe that Chapter 25-30, F.A.C., should allow utilities to recover investment for timely expansion of needed wastewater treatment facilities consistent with our rule requirements.

Specific Comments

1. Rule 25-30.432(3)(a), F.A.C. - Design and construction requirements for collection systems and transmission facilities are contained in Chapter 17-604, F.A.C. We suggest including this chapter as a reference.
2. Rule 25-30.432(4), F.A.C. - The statement "To encourage long-term planning and least cost system design, the Commission, at at minimum, shall consider as used and useful the level of investment that would have been required had the utility designed and constructed the system to serve only its existing customer base" is unclear. This statement doesn't seem to promote long-term planning. Suggest deletion of "To encourage long-term planning and least cost system design."
3. Rule 25-30.432(5)(a)4, F.A.C. - The margin reserve for treatment facilities is 12 percent of the permitted or actual ERC capacity, whichever is greater. The previous draft we reviewed contained a 20 percent margin reserve. We agree that there is a need to balance a utilities' incentive for making plant investment and planning for future needs with some type of mechanism to control imprudent investments in order to protect existing ratepayers. How was the 12 percent derived? Have other mechanisms to achieve this balance been explored?



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

July 30, 1992

Caryl M. Browner, Secretary

Mr. Charles H. Hill, Director
Division of Water and Wastewater
Florida Public Service Commission
101 East Gaines Street
Tallahassee, Florida 32399-0873

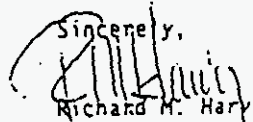
Dear Mr. Hill:

Thank you for the opportunity to review the draft version of Rule 25-30.432, Florida Administrative Code (F.A.C.), Used and Useful in rate case proceedings. Our specific comments are enclosed, but I would like to highlight two of our major concerns.

Section 403.064(6), Florida Statutes, states "Pursuant to Chapter 367, the Florida Public Service Commission shall allow entities which implement reuse projects to recover the full cost of such facilities through their rate structure." The intent of this statutory provision was that the full cost of capital investments be included in the costs recoverable through a rate structure. In essence, the entire cost of a reuse project should be considered used and useful. We recommend that Chapter 25-30, F.A.C., include this provision.

A significant wastewater management problem in Florida involves overloaded wastewater treatment facilities. Rule 17-600.405, F.A.C., (copy enclosed) is a pollution prevention measure designed to ensure that the permittees conduct the planning necessary to allow for timely expansion of the wastewater facilities. This rule contains requirements for capacity analysis reports. The capacity analysis report is a detailed assessment of flow projections as they relate to future needs for expansion of domestic wastewater facilities. Timeframes are established in the rule for submittal of the initial capacity analysis report as well as for updates of the report and for the planning design, and construction of expanded facilities. This rule became effective in 1991 and has been well received by the regulated public, as well as the utilities. We believe that Chapter 25-30, F.A.C., should allow utilities to recover investment for timely expansion of needed wastewater treatment facilities consistent with our rule requirements.

If you have any questions about our comments, please contact Robert Heilman, P.E., Chief, Bureau of Water Facilities Planning and Regulation, at the letterhead address or at 904/487-0563.

Sincerely,

Richard M. Harvey
Director
Division of Water Facilities

RMH/ra/btm

Enclosures

surcharges, bypasses, or poor treatment performance resulting from hydraulic overloading of the treatment works during storm events. You may want to consider this as an alternative to the Water Pollution Control Federation Manual of Practice No. 9.

8. Rule 25-30.432(5)(e), F.A.C. - It is suggested to add "inflow" in the first sentence of this section. Cost effective correction of inflow should be encouraged.
9. Rule 25-30.432(5)(f)2 ii, F.A.C. - We suggest that Number "2" be defined as the same time period as that used for Number "1" (capacity of the plant) in order for the formula to be consistent. The basis of design of a WWTP can be stated in various ways including, annual average daily flow, maximum monthly average daily flow, or three-month average daily flow. Also, we suggest that excessive "inflow" in Number "4" be added.

Commissioners:
 SUSAN F. CLARK, CHAIRMAN
 J. TERRY DEASON
 JULIA L. JOHNSON
 DIANE K. KIESLING
 JOE GARCIA



DIVISION OF WATER &
 WASTEWATER
 CHARLES HILL
 DIRECTOR
 (904) 488-8482

Public Service Commission

May 15, 1995

Ms. Elsa A. Potts
 P.E. Administrator
 Wastewater Section
 Department of Environmental
 Protection
 Twin Towers Office Building
 Tallahassee, Florida

Mr. Van Hoofnagle
 P.E. Administrator
 Drinking Water Section
 Department of Environmental
 Protection
 Twin Towers Office Building
 Tallahassee, Florida

VIA HAND DELIVERY

Re: Proposed Rulemaking, 25-30.432 F.A.C.

Dear Ms. Potts and Mr. Hoofnagle:

Enclosed is a revised version of the draft rules regarding used and useful adjustments in rate proceedings. Your input at the March meeting was very helpful, and you will note changes in the revised draft reflecting your comments. There are a few areas in which the staff engineers deviated from your suggestions, and these areas will be specifically addressed. It is staff's current goal to send this draft of the rules to all of the water and wastewater utilities under our jurisdiction as well as to the Office of Public Counsel, each Water Management District, and other parties who have expressed interest. Along with the draft will be a notice of workshop which would cover two days. As you suggested, we intend to cover water issues on one day and address wastewater issues on the next. It appears that the first two-day workshop will be held in July.

The items with which this rule draft differs from your recommendations are as follows. In asking for historical, reliable data, staff has kept the minimum of five years time frame, rather than change it to a longer time period. However, language has been added such that if the utility has a Capacity Analysis Report filed with DEP, a copy of such report should be part of its rate filing.

A question was raised at the March meeting as to the options for determining a utility's projected growth; staff has kept the linear regression language as this is a simple,

May 12, 1995
Department of Environmental Protection
Page 2

straightforward approach and achieves the level of accuracy needed for this particular projection.

For the "construction factors" for each margin reserve category, the following has been done. Staff has maintained the 3 year construction factor for the wastewater treatment and disposal but changed the water construction factor to mirror the wastewater factor as DEP's envisioned rules would do. The construction factor for lines has been kept as 1 year. Staff is concerned with asking the current customers of a utility to subsidize future growth for longer than the 3 years DEP states is necessary to construct new plant.

Infiltration and inflow definitions have been moved to the appropriate place. With respect to determining excessive infiltration, staff has maintained the language for 500 gpd/inch diameter/mile of pipe in order to assess infiltration with respect to lines rather than on a per capita basis. With respect to inflow, staff intends to review a utility's inflow problems on a case-by-case basis. Your comments that a utility has more control over inflow was a consideration in making this change.

With respect to the actual formulas, staff has incorporated the suggested changes with one exception. The high service pumping formulas have not been separated into two formulas which would depend on the storage type and location. Your point is well taken with this respect; however, for simplicity, the original formula has been maintained.

The time frame for determining a utility's maximum day demand or the wastewater "customer demand" has been kept to 5 years rather than change it to the past 12 months. It has been our experience that peak days have occurred prior to the past 12 months, and this allows the utility the opportunity to use such data. We would not want a situation where a utility is experiencing lower and lower peak days (perhaps due to conservation) so that the peak day from the recent 12 months is less than what the utility experienced, say, three years ago. The utility could conceivably receive a lower used and useful percentage based on this criteria.

Lastly, this draft includes the charts we obtained from Mr. Sowerby regarding instantaneous demands. It shows a smaller instantaneous demand than what the Ancien "Source Book..." provided. This will likely be an issue at workshop.

In addition to those changes, staff has changed the wording from "average annual daily demand" to "maximum day demand" for the definitions on emergency storage and equalization volume.

May 12, 1995
Department of Environmental Protection
Page 2

Please review the revised draft and be prepared to bring your comments or concerns to the workshops. If you have questions regarding the rule revisions, please contact Karen Amaya at (904) 488-8482. Again, thank you for your help and suggestions.

Sincerely,



Charles H. Hill
Director

CHH:ka
Enclosure

cc: John Sowerby, Richard Addison, Richard Drew (DEP)

B. Lowe, J. Williams, J. Chase, R. Crouch, K. Amaya, J. Starling, S. Rieger,
R. Von Fossen, N. Walker, L. Jaber, S. Edmonds (PSC)

D R A F T
5-12-95

1 25-30.432 Used and Useful in Rate Case Proceedings.

2 (1) Definitions - the following definitions apply to Rule 25-
3 30.432, F.A.C., for determining used and useful water and wastewater
4 facilities.

5 (a) Economies of scale - The decrease in unit cost of water or
6 wastewater plant that typically occurs with an increase in system
7 capacity. Economies of scale can be defined either in the context of
8 total system capacity or changes in a single component of the system.

9 (b) Effluent Disposal Facilities - this includes, but is not
10 limited to, the transmission lines, percolation and evaporation ponds,
11 sprayfields, irrigation systems, effluent pumping equipment, and deep
12 wells utilized in the disposal of effluent or reclaimed water, as required
13 to meet applicable federal, state and local requirements.

14 (c) Emergency Storage - that storage required by a water system to
15 meet the emergency-like demands of the customers. Typically, Emergency
16 Storage is made available when it is more cost effective to provide the
17 storage and pumping facilities than to add redundancy to the system for
18 emergency conditions. The quantity of Emergency Storage need is a
19 function of the duration of the emergency condition and is assumed to be
20 approximately one half of the maximum day demand.

21 (d) Equalization Volume - the quantity of storage in a water
22 system necessary to meet the customers' greatest demands which are beyond
23 the throughput capacity of the source of supply or water treatment

CODING: Words underlined are additions; words in
~~struck through~~ type are deletions from existing law.

D R A F T
5-12-95

1 equipment. The Equalization Volume is assumed to be approximately one-
2 quarter of the maximum daily demand.

3 (e) Equivalent Residential Connection (ERC) - 350 gpd per ERC for
4 water and 280 gpd per ERC for wastewater.

5 (f) Fire Flow Requirement - as defined in 25-30.432(5)(b), F.A.C.

6 (g) Firm Reliable Capacity - the capacity of a particular
7 component of a water facility in which at least the largest unit is
8 assumed to be out of service. If the used and useful category contains
9 several components, the Firm Reliable Capacity is assumed to be the
10 limiting component in that category with the largest unit out of service.
11 If there is only one component, then that component's capacity becomes the
12 Firm Reliable Capacity. For finished water storage, the Firm Reliable
13 Capacity excludes any unusable or dead storage (10% of ground storage
14 capacity).

15 (h) Infiltration - refers to those extraneous flows (usually from
16 groundwater sources) that enter the wastewater system through openings in
17 pipes that may be caused by normal deterioration, corrosion, or damage
18 from ground movement or structural overload.

19 (i) Inflow - refers to extraneous flows from sources other than
20 infiltration, such as surface water run-off into manholes or from
21 unauthorized connections to surface water sources.

22 (j) Instantaneous Demand - the greatest demand that a water system
23 attains. It is typically used only as a design criteria for small water

CODING: Words underlined are additions; words in
~~struck through~~ type are deletions from existing law.

D R A F T
5-12-95

1 systems with no storage and a small distribution system that does not have
2 the ability to absorb these instantaneous demands through depressurization
3 of the distributions system. The charts in Rule 25-30.432(7), F.A.C.,
4 shall be used to determine the instantaneous demand unless specific
5 quantitative information indicates greater demands.

6 (k) Large Water System - a system that has a firm reliable
7 capacity of 1 million gallons per day or greater. Staffing shall be as
8 mandated in Rule 62-699, F.A.C.

9 (l) Margin Reserve - as defined in 25-30.432(5)(a), F.A.C.

10 (m) Maximum Day Demand - the maximum daily demand that a water
11 system attained during the past 5 years of time, exclusive of emergency or
12 fire flow events.

13 (n) Other Wastewater Facilities - this includes, but is not
14 limited to, disinfection units, emergency generators, auxiliary engines,
15 customer service laterals, laboratory equipment, utility office and other
16 general plant and equipment used in the operation of a wastewater system.
17 Specifically excluded from this definition are a wastewater system's
18 pumping stations and collection mains (both gravity and force).

19 (o) Other Water Facilities - this includes, but is not limited to,
20 hydropneumatic tanks, disinfection facilities, emergency generators,
21 auxiliary engines, customer service lines and meters, laboratory
22 equipment, utility office and other general plant used in the operation of
23 a water system. Specifically excluded from this definition are a water

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5-12-95

1 the annual created or pumped flows for the system; and system peak day
2 flows for each year. The utility's most recent wastewater capacity
3 analysis report, if any, filed with DEP shall also be submitted as part of
4 the rate filing.

5 4. Unless otherwise justified, margin reserve shall be calculated
6 by applying linear regression to the utility's five years historical
7 growth data (in ERCs) so that a projected growth can be determined and
8 then multiplying that growth by the appropriate construction factor.

9 a. Water source and treatment facilities and wastewater treatment
10 and disposal facilities: the calculated growth (in ERCs) multiplied by the
11 following construction factors:

12 (i) water source, treatment facilities, and each water system
13 component have a construction factor of 3 years:

14 (ii) wastewater treatment and disposal facilities have a
15 construction factor of 3 years:

16 b. Margin reserve for transmission and distribution lines and
17 pumping stations and collection mains shall be the calculated growth
18 multiplied by a construction factor of 1 year.

19 (b) Fire Flow

20 1. Fire flow shall be considered in used and useful default
21 formulas for storage and high service pumping for any utility that
22 requests that fire flow be a consideration in its system requirements. If
23 the Commission determines that a utility can provide fire flow in a more

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1 economical manner than through storage and high service pumping, it may
2 allow fire flow to be considered in used and useful calculations for
3 components other than storage and high service pumping. However, any
4 utility that receives an allowance for fire flow in used and useful
5 calculations shall maintain the ability to provide adequate, reliable fire
6 flow at all times in the future, unless it meets the requirements in 25-
7 30.432(5)(b)2 for adding fire flow capacity. For a utility meeting the
8 requirements in 25-30.432(5)(b)2 for adding fire flow capacity, once the
9 ability to provide adequate, reliable fire flow has been achieved, such
10 ability shall be maintained from that point on. If a utility has
11 previously received fire flow consideration in used and useful
12 calculations but fails to maintain adequate, reliable capacity for fire
13 fighting (e.g. sells fire flow capacity), then the Commission may reduce
14 the utility's rate of return by up to 50 basis points until adequate fire
15 protection is once again maintained.

16 2. An allowance for fire flow shall be included in used and
17 useful calculations up to the capacity of the appropriate component. If
18 a utility cannot provide adequate, reliable fire flow and is requesting an
19 allowance for fire flow in used and useful calculations, the Commission
20 shall require the utility to take the steps necessary to provide such fire
21 flow capacity. In doing so, the Commission shall set a reasonable
22 timetable for compliance and may later reduce rates for that portion
23 associated with allowed fire flow capacity if such requirements are not

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1 exercise good operational and economic management toward preventing
2 depletion and wasteful use of this important natural resource. Good
3 modern water utility practice dictates that, wherever possible, all
4 customer services and plant output and plant uses be metered and
5 reasonable records be kept.

6 2. The Commission recognizes that some uses of water are readily
7 measurable and others are not. Each utility is encouraged to establish
8 procedures to measure or estimate the quantity of water used but not sold,
9 by cause, and to maintain documentation for those measurements and
10 estimates.

11 3. The Commission shall consider the amount of unaccounted for
12 water in determining used and useful plant percentages and shall allow the
13 American Water Works Association's (AWWA Manual M-8) design level of
14 leakage (2-3 percent plus the standard 10 percent for a maximum of 12.5
15 percent) without further explanation. The Commission may impute revenues
16 or reduce purchased power and chemical expenses where inadequate
17 explanation is given for unaccounted for water in excess of this amount.

18 (d) Infiltration and Inflow

19 1. The impact of infiltration and inflow on wastewater treatment
20 and collection systems shall be considered in determining both the
21 appropriate level of operation and maintenance expenses and used and
22 useful plant percentages.

23 2. The Commission recognizes as reasonable the Infiltration

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5-12-95

1 Specification Allowances set forth in Water Pollution Control Federation
2 (WPCF) Manual of Practice No. 9. Absent sufficient justification to the
3 contrary, excess infiltration is defined as flows in excess of 500 gallons
4 per day (gpd) per inch diameter of pipe per mile (gpd/in. diam./mile) for
5 all gravity lines, including service laterals. Excessive inflow will be
6 determined on a case-by-case basis if warranted.

7 (e) Cost/benefit Analysis - The Commission may order a utility to
8 perform a cost/benefit analysis to determine the amount of water losses or
9 wastewater infiltration and inflow that may be economically eliminated.
10 If the cost/benefit analysis is ordered by the Commission in the course of
11 evaluating a rate application, the actual or estimated prudent cost of the
12 analysis shall be recovered through the revenues authorized in that rate
13 proceeding, and the cost shall be amortized over five years. If the
14 analysis is ordered outside of a formal rate proceeding, the utility may
15 request the cost be recovered through a limited proceeding pursuant to
16 section 367.0822, F.S.

17 (f) Used and Useful Analysis

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

21 2. In lieu of presenting evidence in support of used and useful
22 percentages, the utility may elect to use the default formulas in Rule 25-
23 30.432(6), F.A.C., for calculating used and useful percentages for water

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5-12-95

(Maximum Day Demand + Margin Reserve - Excessive Unaccounted For Water)/Firm Reliable Capacity (gpd)

c. Finished water storage:

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

d. Water high service pumping:

(Peak Hour Demand + Margin Reserve - Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)

or, if the utility chooses:

Maximum Day Demand + Fire Flow Requirement + Margin Reserve - Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)

e. Other water facilities: 100 percent used and useful

2. Large water svstems with no storage facilities other than hvdropneumatic tanks or with insufficient 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:

(Peak Hour Demand + Margin Reserve - Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)

or, if the utility can show it is the most economical way to provide fire flow:

(Maximum Day Demand + Fire Flow Requirement + Margin Reserve - Excessive Unaccounted For Water)/Firm Reliable Capacity (gpm)

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manual

SMALL WATER SYSTEMS SERVING THE PUBLIC

correlated with

NATIONAL DRINKING WATER REGULATIONS

CONFERENCE OF STATE SANITARY ENGINEERS

FRANK R. LIGUORI, PE, Technical Writer

in cooperation with

OFFICE OF DRINKING WATER

U.S. ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

An example showing the method of using the tables and curves follows:

Example: Assume a 40 unit motel with a small coffee shop and small swimming pool. Water pressure assumed at 40 psi. Air conditioners are air cooled and require no water.

DATA TABULATION

Fixture	Fixture Value at 35 psi (Table 3-2)	No. of Fixtures in Use	Total Fixture Value
Water closets, tank	3	47	141
Urinals, wall	12	2	24
Lavatory: 3/8-in. connection	2	40	80
Lavatory: 1/2-in. connection	4	4	16
Bathrooms	8	40	320
Drinking Fountains	2	1	2
Kitchen sink, 3/4-in.	7	1	7
Dishwasher, 3/4-in.	10	1	10
Wash sink	4	1	4
Hose, 50 ft., 5/8-in.	9	3	27
Swimming pool	15 (estimated)	1	15
Service sink: 1/2-in.	3	1	3
			<u>649</u>

Combined Fixture Value - 649

From Figure 3-1, probably peak demand based on 35 psi = 55 gpm

From Table 3-3, adjusted multiplication factor for 40 psi delivery pressure = 1.07

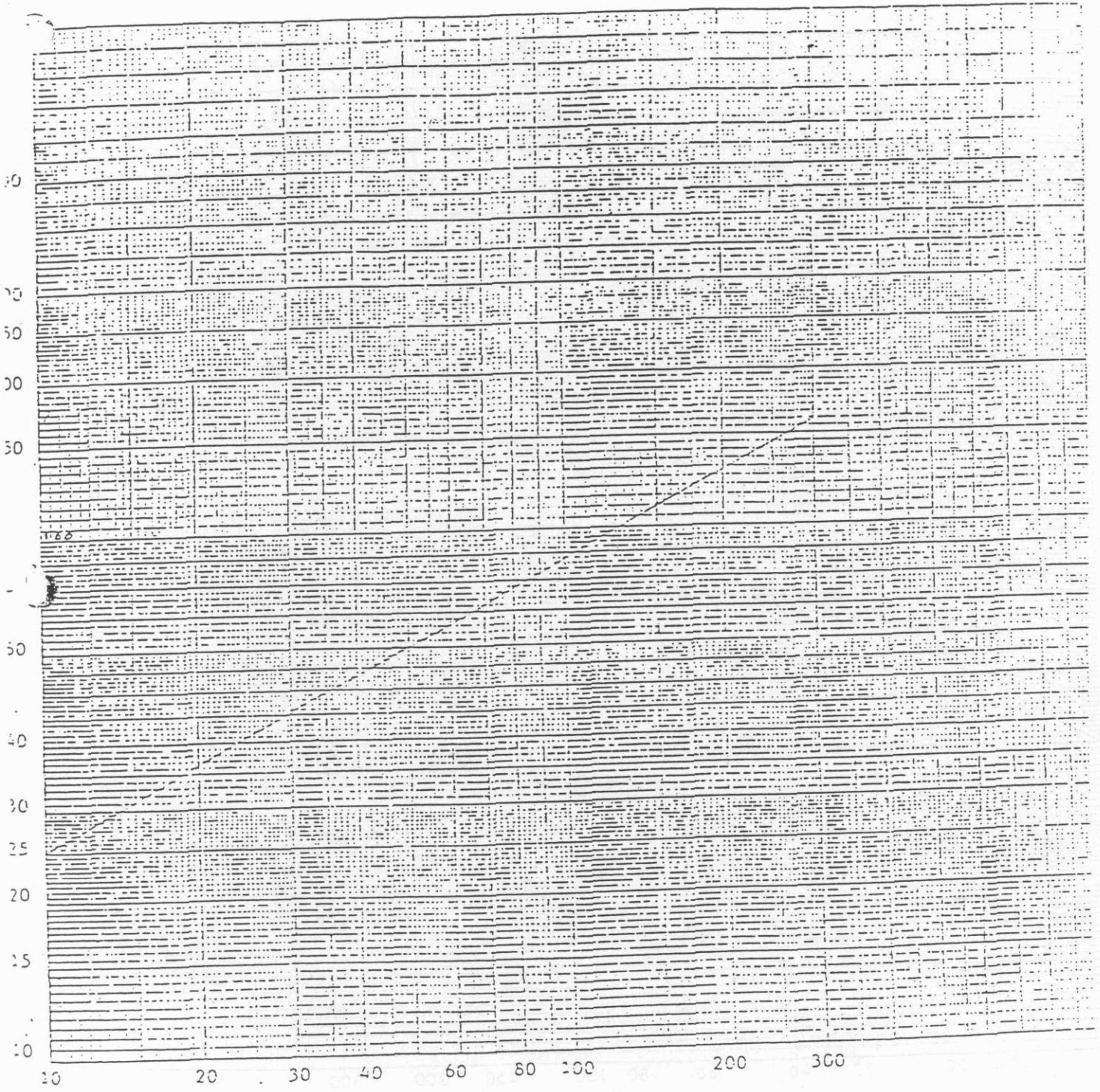
Adjusted (probably) peak demand = $55 \times 1.07 = 59$ gpm

Demand loads for lawn sprinkling systems or other special uses must be added as appropriate.

Peak Demand for Residential Communities and Mobile Home Parks

Figures 3-3 and 3-4, which follow, are curves developed from experience showing the instantaneous (peak) demands for various sizes of typical residential communities and mobile home parks.

PEAK DEMAND FOR MOBILE HOME PARK WATER SYSTEMS
(Number of Connections vs Gallons Per Minute)



Number of Connections

Source: Standards and Criteria for Design and Construction of Public Water Supply Systems to Serve Residential Communities, Division of Health Services-Sanitary Engineering Section, State of North Carolina, 1974



Mr. John Williams
Page Two
June 29, 1995

useful." We believe that this is clearly required by Section 403.064(6) of the Florida Statutes.

If you have any questions about the attached comments, please call John Sowerby, P.E., in the Drinking Water Section at 487-1762 or Richard Addison, P.E., in the Domestic Wastewater Section at 488-4524.

Sincerely,

Richard M. Harvey
Richard M. Harvey
Director
Division of Water Facilities

RMH/dgw/js
Enclosure

cc/enc.: Richard Drew
Mary E.S. Williams
Van R. Hoofnagle, P.E.
Elsa A. Potts, P.E.

THE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S (DEP'S) COMMENTS ON
THE PUBLIC SERVICE COMMISSION'S (PSC'S) MAY 12, 1995, DRAFT RULE
REGARDING "USED AND USEFUL" IN RATE CASE PROCEEDINGS

1. PAGE 1, LINES 2 THROUGH 4: We recommend that the PSC add to Rule 25-30.432(1) definitions of the following terms: "finished water storage," "pumping stations and collection mains," "transmission and distribution lines," "wastewater customer demand," "water high service pumping," "water source of supply," and "water treatment equipment." Is "wastewater customer demand" intended to mean the maximum average daily flow to a wastewater system over the same time frame as that associated with the permitted capacity (one year, one month, or three months) based on data for the past five years? Is it the PSC's intent to include booster pumping stations under "other water facilities," "transmission and distribution lines," or "water high service pumping"? Is it the PSC's intent to include booster disinfection facilities under "other water facilities," "transmission and distribution lines," or "water treatment equipment"?
2. PAGE 1, LINES 9 THROUGH 13: We recommend that the PSC exclude reclaimed water reuse facilities from the definition of "effluent disposal facilities" and that the PSC provide a separate definition for "reclaimed water reuse facilities." See Comment 19 for more details.
3. PAGE 1, LINES 18 THROUGH 20: The quantity of emergency storage needed is indeed a function of the duration of the emergency condition. Sometimes an emergency storage volume sufficient to last for several days may be necessary. Therefore, we recommend that the PSC revise the last sentence in Rule 25-30.432(1)(c) to read, "The quantity of Emergency Storage needed is a function of the duration of the emergency condition and, unless otherwise justified, is assumed to be approximately one half of the maximum day demand."
4. PAGE 2, LINES 1 AND 2: We recommend that the PSC revise the last sentence in Rule 25-30.432(1)(d) to read, "Unless otherwise justified, tThe Equalization Volume is assumed to be approximately one quarter of the maximum daily demand."
5. PAGE 2, LINES 3 AND 4: We recommend that the PSC clarify that the demand/flow rates of 350 gpd per ERC for water and 280 gpd per ERC for wastewater are annual average daily demand/flow rates.
6. PAGE 2, LINES 3 AND 4; AND PAGE 6, LINES 2 THROUGH 5: Rule 25-30.432(1)(e) defines ERC as a demand of 350 gpd for water and a flow of 280 gpd for wastewater. However, the second sentence in Rule 25-30.432(5) seems to be saying that ERC means the demand/flow per connection used for design/permitting or the historical demand/flow per connection if such data has been shown by the utility to be accurate and reliable. We recommend that the PSC resolve this apparent conflict between rules.

7. PAGE 2, LINES 12 THROUGH 14: We recommend that the PSC revise the last sentence in Rule 25-30.432(1)(g) to read, "For finished water storage, the Firm Reliable Capacity excludes any unusable or dead storage (which, unless justified otherwise, is assumed to be 10% of ground storage capacity)."
8. PAGE 3, LINES 3 THROUGH 5; PAGE 4, LINES 3 THROUGH 5; AND PAGE 17, LINES 1 THROUGH 6: There is an apparent conflict between the instantaneous demand charts in Rule 25-30.432(7) and the design criteria for peak hour demand in Rule 25-30.432(1)(p). For example, the instantaneous demand charts show that the instantaneous demand for 300 residential connections is 255 gpm or 0.85 gpm per connection, which is less than the specified design criteria of 1.1 gpm per ERC for peak hour demand. We recommend that the PSC resolve this apparent conflict between rules.
9. PAGE 3, LINES 6 THROUGH 8; PAGE 4, LINES 6 THROUGH 8; PAGE 12, LINES 15 AND 16; AND PAGE 14, LINE 16: For the purpose of the PSC's "used and useful" rule, small water systems are systems that can not absorb instantaneous demands through depressurization of their distribution systems, and large water systems are systems that can absorb instantaneous demands through depressurization of their distribution systems. Given this, we question the appropriateness of using a system capacity of 1 MGD as the dividing point between small and large water systems. Perhaps a system capacity of 0.25 to 0.5 MGD would be a more appropriate dividing point. Or perhaps the dividing point should be based on the design number of ERCs to be served, in which case perhaps 200 to 300 ERCs would be an appropriate dividing point.
10. PAGE 3, LINES 13 THROUGH 16; AND PAGE 4, LINE 23, THROUGH PAGE 5, LINE 3: There appears to be a conflict between the definition of "other wastewater facilities" and the definition of "wastewater treatment equipment." Rule 25-30.432(1)(n) states that "other wastewater facilities" includes disinfection units, while Rule 25-30.432(1)(u) states that "wastewater treatment equipment" includes chlorine contact equipment. We recommend that the PSC resolve this apparent conflict between rules.
11. PAGE 3, LINES 19 THROUGH 23: Rule 25-30.432(1)(o) states that disinfection facilities are included under "other water facilities," but one would think that disinfection facilities should be included under "water treatment equipment." We recommend clarification.
12. PAGE 4, LINES 3 THROUGH 5: We recommend that the PSC revise the last sentence in Rule 25-30.432(1)(p) to read, "Typical design criteria for a Peak Hour Demand of 2 times the maximum day demand or 1.0 ~~1-1~~ gpm per ERC can be used if historical flow data is not available." (Maximum day demand is typically two times annual average day demand, and the PSC is

BE ENCOURAGING UTILITIES TO BUILD THESE FACILITIES IN THREE-YEAR STAGES. AND BY ENCOURAGING UTILITIES TO BUILD WATER AND WASTEWATER TREATMENT FACILITIES IN THREE-YEAR STAGES, THE PSC WILL BE ENCOURAGING UTILITIES TO IGNORE ECONOMIES OF SCALE AND LONG-TERM ECONOMIC BENEFITS TO THEIR CUSTOMERS, WHICH IS EXACTLY THE OPPOSITE OF WHAT THE PSC WANTS TO ENCOURAGE. (THE PSC'S PROPOSED RULE 25-30.432(3) STATES, "UTILITIES ARE ENCOURAGED TO UNDERTAKE PLANNING THAT RECOGNIZES CONSERVATION, ENVIRONMENTAL PROTECTION, ECONOMIES OF SCALE, AND [THAT] WHICH IS ECONOMICALLY BENEFICIAL TO ITS CUSTOMERS OVER THE LONG TERM.")

FURTHERMORE, BY RECOGNIZING ONLY A THREE-YEAR RESERVE CAPACITY, THE PSC WILL BE PUTTING UTILITIES IN AN AWKWARD POSITION. THE DEP'S EXISTING RULE 62-600.405 REQUIRES UTILITIES TO BEGIN PLANNING AND DESIGNING THE EXPANSION OF WASTEWATER TREATMENT FACILITIES WHEN THERE IS FIVE YEARS OR LESS OF RESERVE CAPACITY AT THE FACILITIES. (NOTE THAT WE INTEND TO IMPLEMENT A SIMILAR RULE FOR COMMUNITY DRINKING WATER TREATMENT FACILITIES.) YET, UTILITIES WILL HAVE TO CONSTRUCT WATER AND WASTEWATER TREATMENT FACILITIES IN NO MORE THAN THREE-YEAR STAGES IF THEY WANT TO RECOVER THE FULL COST OF THE FACILITIES. THUS, UTILITIES THAT WANT TO RECOVER THE FULL COST OF THEIR WATER AND WASTEWATER TREATMENT FACILITIES WILL HAVE TO BE CONTINUOUSLY PLANNING AND DESIGNING THE NEXT THREE-YEAR EXPANSION OF THESE FACILITIES EVEN WHILE THEY ARE CONSTRUCTING THE PRESENT THREE-YEAR EXPANSION OF THESE FACILITIES.

WE STRONGLY RECOMMEND THAT THE PSC ALLOW AT LEAST A FIVE-YEAR RESERVE CAPACITY FOR WATER AND WASTEWATER TREATMENT FACILITIES. ALTHOUGH ALLOWING A FIVE-YEAR RESERVE CAPACITY MAY STILL NOT FULLY ENCOURAGE USE OF ECONOMIES OF SCALE, IT WILL MAKE THE PSC'S "USED AND USEFUL" RULE SOMEWHAT CONSISTENT WITH THE DEP'S RULE 62-600.405. (UTILITIES THAT WANT TO RECOVER THE FULL COST OF THEIR WASTEWATER TREATMENT FACILITIES WILL HAVE TO BEGIN PLANNING AND DESIGNING THE NEXT FIVE-YEAR EXPANSION OF THESE FACILITIES ONLY AFTER THEY HAVE COMPLETED CONSTRUCTING THE PRESENT FIVE-YEAR EXPANSION OF THESE FACILITIES.) IF THE PSC TRULY WANTS TO ENCOURAGE UTILITIES TO TAKE ADVANTAGE OF ECONOMIES OF SCALE, THE PSC SHOULD CONSIDER ALLOWING AT LEAST A TEN-YEAR RESERVE CAPACITY FOR WATER AND WASTEWATER TREATMENT FACILITIES. GUIDELINES DEVELOPED UNDER THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S OLD CONSTRUCTION GRANTS PROGRAM FOR WASTEWATER TREATMENT FACILITIES RECOMMENDED CONSTRUCTING WASTEWATER TREATMENT FACILITIES IN NO LESS THAN TEN-YEAR STAGES.

19. PAGE 7, LINES 14 AND 15; AND PAGE 16, LINES 20 THROUGH 22: SECTION 403.064(6) OF THE FLORIDA STATUTES STATES, "PURSUANT TO CHAPTER 367, THE FLORIDA PUBLIC SERVICE COMMISSION SHALL ALLOW ENTITIES WHICH IMPLEMENT REUSE PROJECTS TO RECOVER THE FULL COST OF SUCH FACILITIES THROUGH THEIR RATE STRUCTURE." THEREFORE, THE PSC'S "USED AND USEFUL" RULE SHOULD INDICATE THAT RECLAIMED WATER REUSE FACILITIES ARE 100 PERCENT "USED AND USEFUL."



Lawton Chiles
Governor

Department of
Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

EXHIBIT CRMH-5

PAGE 1 OF 2

February 20, 1996

Commissioner Susan F. Clark
Chairperson
Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Dear Commissioner Clark:

As you are aware, our agencies share regulatory responsibilities for many private water and wastewater utilities throughout the state. It has long been the practice of the Department of Environmental Protection to require advance planning and design for expansions and improvements identified as necessary through our various capacity analysis reviews.

Staff from both our agencies have been working together over the last several years to achieve enhanced understanding of the basis and application of our respective regulations and policies. This cooperative relationship was memorialized in the Memorandum of Agreement focusing on reuse which was signed in 1992, and continues with recurrent staff work groups which are designed to address common issues. The most recent topic under active discussion has been the proposed Used and Useful rule, and we have submitted comments to you as recently as June 29, 1995. The Department supports and encourages you to continue your efforts to finalize this rule as quickly as possible. It is my understanding that your staff anticipates re-initiating rulemaking within the next few months.

As your agency continues to address these issues of common concern, please remember that my staff is available to offer whatever technical support the Commission, individual commissioners, or your staff may require to ensure that the actions of our sister agencies are as complimentary and consistent as possible. I encourage you to encourage your staff to contact either Van Hoofnagle, Drinking Water Program Administrator, at 488-3601, or Elsa Potts, Domestic Wastewater Program Administrator, at 488-4524, for any direct assistance.

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

Commissioner Susan F. Clark
Page Two
February 20, 1996

If you have any questions or would like to discuss this issue further, please feel free to call my office, or you may call Mimi Drew, Director, Division of Water Facilities, at 487-1855.

Sincerely,

Virginia B. Wetherell
Secretary

VBW/mw/h

cc: Mimi Drew
Van Hoofnagle
Elsa Potts



Pipe repairs have added 40 mgd of capacity.

Fixing infiltration requires more expensive, longer-term projects—replacing and repairing pipe. The department is encouraging a full range of techniques: grouting, sliplining, resin-impregnated liners and pipe-bursting. Still, says Aguiar, "this country is way behind Europe in trenchless technology. We're just picking up on techniques they've had for 30 or 40 years."

Department crews handle trenching pipe of 20 in. diameter or less, and bid out the rest. Three projects totaling some \$64 million are under construction. They involve 17 miles of force main and interconnections of lines ranging from 60 to 72 in. in diameter.

Infiltration and inflow work has cut peak flow to the treatment plants by 40 mgd and eliminated proposed capacity upgrades for 90 pump stations,

saving \$10 million in construction, says Aguiar. But there is plenty of pump station work in the program. Within the next three years, 358 stations are scheduled for upgrading, along with construction of 60 miles of new force main. Estimated cost is \$195 million. All 874 pump stations will be equipped with remote monitoring equipment tied together in a Supervisory Control and Data Acquisition system.

The consent decree establishes a design criterion for the pump stations based on a net average pump operating time for each station as 10 hours a day. "EPA set forth the 10-hour criteria as a short-term fix," says Rosanne W. Cardoza, MW's deputy program manager. "The peak-flow study will show if 10 hours is correct, too much or too little."

No time. Post, Buckley, Schuh & Jernigan Inc., Miami, is developing a digitized model of the collection and transmission system, due next September, and will deliver the peak flow management study a year later. "Houston had the advantage of a detailed water quality study that guides the design of their whole program," says William M. Brant, sewer department deputy director. "We weren't given time to do that."

The study will extract data from the collection model to reach a single goal: "to develop a capital improvement plan that will mitigate storm-induced wastewater overflows in a feasible cost-effective manner," says Marc P. Walch, a PBJ engineer. The collection model will combine data from the pump stations and force mains to determine how much wastewater the system can store and transport. The peak flow study will factor in weather impacts. In a new

twist, officials will use a so-called Virtual Rain Gauge. This computer link to weather data from satellite and ground station reports can generate accurate storm event data every 15 minutes.

A geographic information system combines weather information and collection system data to forecast wastewater flow through the system in a 24-hour interval. As a design tool, it will yield data regarding transmission capacity, pressure levels at connection points and possible overflow points within the gravity system, says Walch.

Miami's upgrade concentrates on the system's weakest link, the collection system, but treat-

ment plants will also be rehabbed. The 40-year-old central district plant features two parallel process trains that de-water sludge before discharging treated wastewater 3 miles offshore through a 120-in.-dia. outfall. An 80-mgd pure oxygen activated sludge train will remain on-line, but a 60-mgd high-rate activated sludge train with open aeration tanks will be replaced by a second closed-tank pure oxygen unit for odor control. The other two plants are also slated for capacity expansions.

Despite all the work, Miami's troubles with regulators may not be over. They are now scrutinizing injection wells at the south district plant that are used for effluent reuse. The 1983-vintage plant, scheduled for upgrade from 100 mgd to 112.5 mgd, injects treated effluent about 3,000 ft deep into the Florida Aquifer's boulder zone. This lies several strata and hundreds of feet below the Biscayne Aquifer—source of Miami's drinking water. In 1994, a monitoring well in the Biscayne Aquifer detected ammonia, a possible indicator of treated effluent.

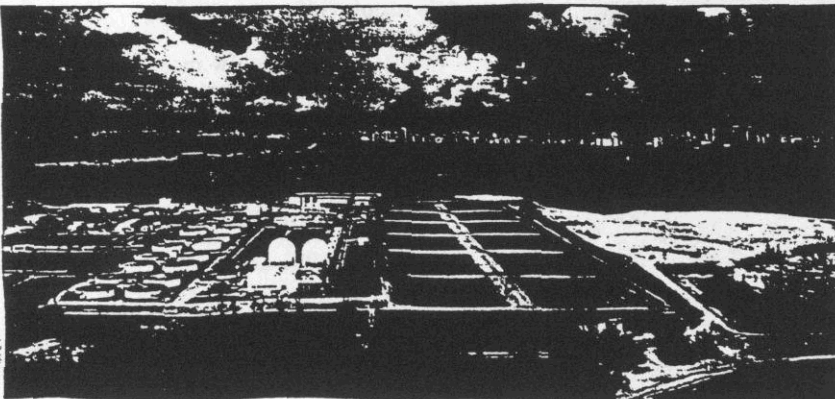
The department suspects a defective monitoring well. It was capped, but traces of ammonia have been detected at other points. The department is negotiating with regulators to develop a remediation program. "The burden of proof is on us to prove that we are not the source," says Brant.

The stakes are high, since the south district handles roughly one-third of the department's sewage. Any alternative to deep injection would be an expensive proposition for a city already on the hook for one of the most expensive wastewater treatment capital programs in the U.S.

By Andrew G. Wright in Miami



Brant fears aquifer contamination will trigger another decree.



Central district plant will replace activated sludge tanks with pure oxygen odor control.

PERMITTING AND CONSTRUCTION OF PUBLIC WATER SYSTEMS

DEP 62-555.335(3)

12/94

PART III: CONSTRUCTION, OPERATION, AND MAINTENANCE

U.S. Department of Commerce, National Technical Information Service, Springfield, VA 22161.

(4) "Treatment Techniques for Controlling Trihalomethanes in Drinking Water," 1982, American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235.

(5) "Disinfection By-Products: Current Perspectives," 1989, American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235.

(6) "Distribution System Maintenance Techniques," 1987, American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235.

(7) "Standard Methods for the Examination of Water and Wastewater, 17th Edition," 1989, American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235.

(8) "Activated Carbon for Water Treatment," 2nd Edition, 1988, American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235.

(9) "Manual of Small Public Water Supply Systems," May 1991, U.S. Environmental Protection Agency, Publication number EPA 570/9-91-003, Office of Water, Washington, D.C. 20020.

(10) "Air Stripping for Volatile Organic Contaminant Removal," 1989, American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235.

Specific Authority: 403.861(9), F.S.

Law Implemented: 403.861(9), F.S.

History: New 1-3-91, Amended 1-1-93, Formerly 17-555.335.

62-555.340 Cleaning and Disinfection. No supplier of water shall put into service or resume the use of any plant, pumping station, main standpipe, reservoir, tank, or other pipe or structure through which water is delivered to consumers for drinking and household purposes unless the plant, pumping station, main standpipe, reservoir, tank, or other pipe or structure has been effectively disinfected and approved for operation by the Department. This prohibition may not necessarily apply to mains, reservoirs, tanks, or other structures which contain water before it is treated.

Specific Authority: 403.861(9),(10), F.S.

Law Implemented: 403.852(12),(13), 403.853(1),(3), F.S.

History: New 11-19-87, Formerly 17-22.640, Amended 1-18-89, Formerly 17-555.340.

62-555.345 Certification Letter and Clearance for Public Water Systems. Upon completion of construction, the engineer of record or the system's professional engineer who was responsible for overseeing construction shall submit a certification of completion letter to the Department. When the letter of certification and a copy of satisfactory bacteriological