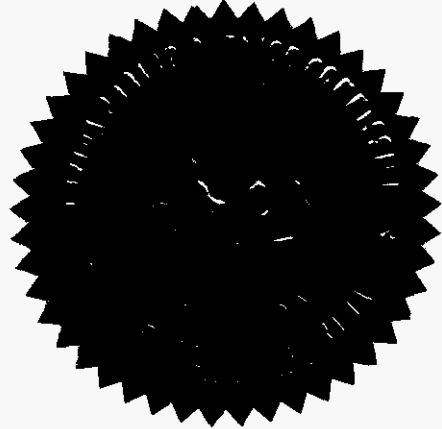


BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application by Southern) Docket No. 950495-WS
 States Utilities Inc. for rate)
 increase and increase in service)
 availability charges for Orange-)
 Osceola Utilities, Inc. in)
 Osceola County, and in Bradford,)
 Brevard, Charlotte, Citrus,)
 Clay, Collier, Duval, Hernando,)
 Highlands, Hillsborough, Lake,)
 Lee, Marion, Martin, Nassau,)
 Orange, Osceola, Pasco, Polk,)
 Putnam, Seminole, St. Johns,)
 St. Lucie, Volusia and)
 Washington Counties.)



EIGHTH DAY - LATE AFTERNOON SESSION

VOLUME 33

PAGES 3724 through 3833

PROCEEDINGS: HEARING

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

DATE: Wednesday, May 8, 1996

TIME: Commenced at 3:00 p.m.

PLACE: Betty Easley Conference Center
 Room 148
 4075 Esplanade Way
 Tallahassee, Florida

REPORTED BY: LISA GIROD JONES, RPR, RMR

APPEARANCES:

(As heretofore noted.)

DOCUMENT NUMBER-DATE

05242 MAY-96

FPSC-RECORDS/REPORTING

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I N D E X - VOLUME 33**WITNESSES**

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PROCEEDINGS

(Transcript continues in sequence from
Volume 32.)

CHAIRMAN CLARK: Call the hearing to order
again. Mr. Farrell.

MARK FARRELL

was called as a witness on behalf of Southern States
Utilities, Inc., and having been duly sworn, testified
as follows:

CHAIRMAN CLARK: You have been sworn in, have
you?

WITNESS FARRELL: I have, Madam Chairman.

CHAIRMAN CLARK: Good.

DIRECT EXAMINATION

BY MR. ARMSTRONG:

Q Mr. Farrell, good afternoon.

A Good afternoon.

Q Do you have before you 23 pages of prefiled
rebuttal testimony?

A I do.

Q Is that the 23 pages of rebuttal testimony
which was prefiled in this proceeding?

A It is.

Q If -- do you have any changes you would like
to make to that testimony?

1 A I do not.

2 Q If I were to ask you the questions contained
3 in that testimony, would your answers be the same?

4 A Yes.

5 MR. ARMSTRONG: Madam Chair, I request that
6 the 23 pages of prefiled rebuttal testimony of
7 Mr. Farrell be incorporated into the record as though
8 read.

9 CHAIRMAN CLARK: The prefiled rebuttal
10 testimony of Mark Farrell will be inserted in the record
11 as though read.

12 MR. ARMSTRONG: Thank you.

13 Q (By Mr. Armstrong) Mr. Farrell, you are
14 sponsoring three exhibits labeled MF-1 through MF-3; is
15 that correct?

16 A That is correct.

17 Q Do you have any changes you wish to make to
18 those exhibits?

19 A I do not.

20 Q Madam Chair, we request that those exhibits be
21 identified with the next available exhibit number.

22 CHAIRMAN CLARK: It will be identified as
23 Exhibit 200.

24 (Exhibit No. 200 marked for identification.)

25 MR. ARMSTRONG: Thank you very much.

1 Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

2 A. My name is Mark Farrell. My Business address is
3 2379 Broad Street, Brooksville, Florida 34609-6899.

4 Q. WHO IS YOUR CURRENT EMPLOYER AND WHAT IS YOUR
5 POSITION?

6 A. I am the Assistant Executive Director of the
7 Southwest Florida Water Management District
8 ("SWFWMD"). SWFWMD's mission is to manage and
9 protect water and related natural resources.
10 SWFWMD's Water Management Plan identifies the means
11 for accomplishing that mission in four major areas:
12 water supply, flood protection, water quality and
13 natural systems.

14 Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

15 A. I received a Bachelor's of Science in Civil
16 Engineering, and a Master's of Science in Civil
17 Engineering with an environmental specialty, both
18 from West Virginia University, in 1977 and 1978
19 respectively. I also have a Master's in Business
20 Administration from the University of Pittsburgh
21 which I obtained in 1983.

22 Q. WOULD YOU PLEASE DESCRIBE YOUR PRESENT DUTIES AS
23 ASSISTANT EXECUTIVE DIRECTOR.

24 A. Yes. I function essentially as Chief Operating
25 Officer of SWFWMD. All personnel report through

1 me, with the exception of the Legal Department and
2 the Internal Audit Department. My responsibilities
3 include providing recommendations to the Governing
4 Board regarding water management strategies and
5 ensuring that the Board's direction is implemented
6 throughout the 16 county area within SWFWMD's
7 jurisdiction.

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9 A. The purpose of my testimony is to rebut certain
10 portions of the Testimony of Kim Dismukes filed on
11 behalf of the Office of Public Counsel regarding
12 the appropriateness of SSU's conservation program
13 costs and to support the implementation of SSU's
14 proposed rate structure and the Weather
15 Normalization Clause. I will also discuss the
16 importance of reuse of reclaimed water.

17 **Q. WHAT ARE THE WATER MANAGEMENT DISTRICT OBJECTIVES
18 REGARDING WATER CONSERVATION?**

19 A. Ensuring adequate water supplies is central to the
20 mission of Florida's water management districts.
21 Based on information provided by water users
22 themselves, SWFWMD's Needs and Sources Plan
23 estimates that water demands will increase over 45%
24 from 1990 to 2020. The vast majority of these
25 needs are currently being met from ground water

1 supplies. We have already observed significant
2 stress to our water resources in certain areas of
3 the state and expect that these problems will
4 continue or worsen if groundwater pumpage in these
5 areas continues to increase at the predicted rate.
6 Furthermore, we expect that these same problems are
7 likely to occur in areas that are not presently
8 exhibiting problems as those communities grow and
9 place higher demands on the water resources. As a
10 result, SWFWMD has undertaken specific measures to
11 reduce existing groundwater withdrawals and to look
12 for alternative water supplies to meet future
13 needs. Alternative water supplies, including the
14 development of surface waters, desalination,
15 Aquifer Storage and Recovery (ASR), conservation,
16 and reuse of reclaimed water, are integral
17 components of meeting the state's future water
18 demands.

19 **Q. ARE THESE OBJECTIVES CONSISTENT WITH THE OBJECTIVES**
20 **OF THE FLORIDA PUBLIC SERVICE COMMISSION ("FPSC")?**

21 A. According to the Memorandum of Understanding
22 between the Florida Public Service Commission and
23 Florida's five Water Management Districts, it is a
24 common objective of both the FPSC and the Water
25 Management Districts to "foster conservation and

1 the reduction of withdrawal demand of ground and
2 surface water through, among other measures,
3 employment of conservation promoting rate
4 structures, through maximization of reuse of
5 reclaimed water, and through consumer education
6 programs." It is also a common objective to
7 "cooperatively participate in review and
8 implementation of alternative water source
9 development and FPSC rate case procedures related
10 thereto."

11 **Q. IS WATER CONSERVATION NECESSARY IN AREAS THAT ARE**
12 **NOT PRESENTLY EXPERIENCING WATER RESOURCE PROBLEMS?**

13 A. Although SWFWMD has established certain Water Use
14 Caution Areas, or "WUCAs," which have exhibited
15 critical water supply problems, no one is immune
16 from the need to practice water conservation. The
17 SWFWMD governing board is imposing tighter
18 monitoring requirements and conservation measures
19 on all permittees in an effort to prevent other
20 areas from experiencing the problems we have
21 observed in the WUCAs.

22 For example, in the most recent permits issued
23 to SSU and other utilities, we have included a
24 condition requiring permittees to implement a
25 District-approved water conservation plan and to

1 expand their water conservation programs to reduce
2 demands on the water resources of the region. To
3 monitor compliance with this requirement, SWFWMD
4 requires utilities to submit a report at the mid-
5 term and upon renewal of the permit describing
6 their accomplishments in this regard. Such
7 conservation program expansions include: plumbing
8 retrofit programs, rebates, more public education,
9 and reporting on the results of these efforts.

10 **Q. ARE THERE ANY RECENT TRENDS THAT EMPHASIZE THE**
11 **IMPORTANCE OF CONSERVATION?**

12 A. Yes, SWFWMD's recently proposed rules for the
13 "Southern Water Use Caution Area" ("SWUCA")
14 establish minimum groundwater levels for an eight
15 county area. SWFWMD took this action because we
16 found that the excessive withdrawals had resulted
17 in unacceptable stress to the groundwater system.
18 The 1996 legislature is considering statutory
19 changes to require all water managements districts
20 to set schedules for adopting minimum flows and
21 levels for all surface and ground water systems.
22 This effort recognizes the fact that water supplies
23 are limited and regulatory levels must be
24 established to prevent overuse of the resource.
25 Conservation is a key component of the statewide

1 strategy to protect these water resources and
2 prevent over-pumpage.

3 **Q. HOW IS CONSERVATION ADDRESSED IN SWFWMD'S**
4 **REGULATORY PROGRAM?**

5 To obtain a water use permit allocation from
6 SWFWMD, an applicant must demonstrate that the
7 proposed use is reasonable-beneficial, meaning that
8 the amount of water requested is necessary and
9 efficient for the proposed use. State Water Policy
10 set forth in Florida Administrative Code Chapter
11 62-40, requires SWFWMD to consider whether
12 available water conservation and reuse measures are
13 being incorporated when it evaluates whether a
14 proposed use is reasonable-beneficial, and
15 therefore entitled to a permit. In fact, Rule 62-
16 40.401(4), F.A.C. provides, "*Conservation of water*
17 *shall be required unless not economically or*
18 *environmentally feasible.*"

19 **Q. ARE THERE ANY SPECIFIC DISTRICT RULES THAT REQUIRE**
20 **UTILITIES TO IMPLEMENT CONSERVATION MEASURES?**

21 A. Yes, Chapter 40D-2, Florida Administrative Code
22 sets forth the requirements of the Southwest
23 Florida Water Management District and requires
24 water use permit applicants to incorporate water
25 conservation measures as a condition for issuance

1 of a permit. Permit applicants must submit a water
2 conservation plan before their application will be
3 considered complete. Once a permit is issued, it
4 contains standard conditions requiring permittees
5 to implement the provisions of their district
6 approved water conservation plan.

7 All public supply utilities applying for a
8 permit are required to develop and implement a
9 water conservation plan. The plan must also
10 outline an implementation schedule for each
11 element. Measures may include: ordinances limiting
12 hours of residential irrigation, xeriscape
13 ordinances, plumbing ordinances, conservation rate
14 structures, leak detection programs, retrofit
15 programs, and customer education. Because private
16 utilities do not have the authority to adopt local
17 ordinances, they must focus on public education,
18 rate structures, and retrofit programs to
19 accomplish these conservation objectives.

20 SWFWMD also requires certain permittees to
21 calculate per capita usage as a measure of average
22 water use per person. Generally speaking, the
23 number is determined by dividing the annual average
24 daily withdrawal by the service area population.
25 SWFWMD has established per capita limits in a

1 number of critical water supply areas. For
2 example, permittees in the Northern Tampa Bay Water
3 Use Caution Area must maintain per capita
4 consumption at or below 150 gallons per person per
5 day. In the SWUCA, SWFWMD has proposed a
6 requirement of 110 gallons per person per day by
7 the year 2004. Although limits have not been
8 established for all areas, all utility permittees
9 must currently report their per capita use. By
10 tracking this information, SWFWMD encourages all
11 permittees to reduce consumption over time through
12 their conservation program. SWFWMD is moving in
13 the direction of establishing per capita limits for
14 all utility permittees.

15 **Q. DOES SWFWMD HAVE ANY REQUIREMENTS FOR IMPLEMENTING**
16 **REUSE OF RECLAIMED WATER?**

17 A. Yes, SWFWMD's rules require permit applicants to
18 provide reasonable assurances that the water use,
19 "Will incorporate reuse measures to the greatest
20 extent possible." Section 7.0 of "SWFWMD's Basis
21 of Review for Water Use Permit Applications"
22 requires reuse in Water Use Caution Areas unless
23 the permit applicant demonstrates that its use is
24 not environmentally, economically or technically
25 feasible.

1 The Florida Legislature has recognized the
2 importance of reclaimed water in Florida Statute
3 Sections 403.064, and 373.250, which provide, "The
4 encouragement and promotion of water conservation,
5 and reuse of reclaimed water, as defined by the
6 department, are state objectives and are considered
7 to be in the public interest." According to Section
8 403.064, F.S., wastewater utilities operating
9 within water resource caution areas must provide a
10 reuse feasibility study with their consumptive use
11 permit application.

12 In 1994, the Legislature stressed the
13 importance of implementing reuse systems with the
14 enactment of Section 373.250, F.S., which requires
15 water management districts to submit an annual
16 report to the Legislature describing the district's
17 progress in promoting and increasing the reuse of
18 reclaimed water. This report must include the
19 number of permits requiring reuse of reclaimed
20 water, a comparison of the volume of reclaimed
21 water available in the district to the volume
22 required to be reused through consumptive use
23 permits, and a description of the district's
24 efforts to work with wastewater utilities to
25 increase the reuse of reclaimed water.

1 State Water Policy provided in Rule 62-40.416,
2 F.A.C. directs water management districts to
3 require a reasonable amount of reuse in water use
4 caution areas "unless objective evidence
5 demonstrates that such reuse is not economically,
6 environmentally, or technically feasible." Outside
7 of water use caution areas this directive is
8 permissive rather than mandatory.

9 SWFWMD has made every effort to carry out
10 these statewide directives to increase the reuse of
11 reclaimed water. Copies of these requirements are
12 attached as composite Exhibit 200 (MF-1).

13 **Q. DOES SWFWMD PROVIDE ANY INCENTIVES FOR APPLICANTS**
14 **TO IMPLEMENT REUSE PROJECTS?**

15 A. Yes. SWFWMD provides incentives for utilities to
16 implement reuse in at least two areas. SWFWMD's
17 Governing Board and Basin Boards have adopted the
18 goal of maximizing the use of reclaimed water as a
19 replacement for traditional water supplies. SWFWMD
20 has supplied approximately \$80 Million in matching
21 funds through its Cooperative Funding program and
22 its New Water Source Initiative Program for about
23 100 reuse projects since 1987.

24 Within the SWUCA, we are also proposing the
25 concept of reuse credits which would provide

1 allocation credits to water use permittees that
2 supply water to end users. For example, if a
3 utility provides 1 MGD of reclaimed water to an
4 existing ground water end user such as a golf
5 course and the golf course discontinues 1 MGD of
6 groundwater use, the utility would be eligible for
7 an additional .5 MGD allocation in their water use
8 permit. This incentive program is based on the
9 theory that since the utility is offsetting the
10 golf course ground water pumpage with reclaimed
11 water, the future demands of the utility may be met
12 with the water that was once used by the golf
13 course.

14 **Q. ARE THERE ANY OTHER SWFWMD INCENTIVES THAT PROMOTE**
15 **CONSERVATION?**

16 A. To assist permittees in meeting our requirement to
17 expand their conservation efforts, SWFWMD also
18 provides matching funds to utilities that propose
19 specific conservation retrofit and rebate programs.
20 This demonstrates our belief that conservation is
21 an important component of sound water management.
22 Since 1991, SWFWMD has co-funded 20 conservation
23 rebate and retrofit programs for approximately \$5.7
24 Million in matching funds. For a utility to be
25 eligible for District funds, the utility must

1 commit an equal amount of its own funds and
2 demonstrate its commitment to an aggressive
3 conservation program.

4 SSU has recently applied for \$100,000 of these
5 SWFWMD matching funds for an aggressive water
6 conservation program for Spring Hill in 1997. A
7 copy of their proposal is attached as Exhibit 200
8 (MF-2). The SSU proposal is consistent with other
9 conservation programs SWFWMD has approved under its
10 cooperative funding program. At the staff level,
11 we are pleased with the SSU proposal and will be
12 recommending approval to the Basin Board for 1997
13 funding.

14 **Q. HAVE YOU REVIEWED SSU'S WATER CONSERVATION PROGRAM**
15 **ENHANCEMENTS AS PROPOSED IN THIS RATE CASE?**

16 Y. Yes.

17 **Q. DOES SWFWMD SUPPORT SSU'S PROPOSED CONSERVATION**
18 **PROGRAM ENHANCEMENTS?**

19 A. Yes. The conservation efforts proposed by SSU in
20 its enhanced conservation program including public
21 education, retrofit programs, toilet rebates, and
22 rain-sensor rebates are exactly the kind of
23 programs contemplated by SWFWMD in our permit
24 condition requiring utilities to expand their
25 conservation program. Additionally, SSU is

1 proposing to monitor the results of these retrofit
2 programs. This will give us more information
3 regarding the effectiveness of these devices and
4 customer responsiveness to each component of the
5 program. SSU's program is comprehensive in that
6 each conservation element is designed to reach
7 customers in a variety of ways, rather than relying
8 on only one method of disseminating the
9 conservation message.

10 **Q. HOW DOES SSU'S PROPOSED CONSERVATION PROGRAM**
11 **COMPARE WITH CONSERVATION PROGRAMS OF OTHER**
12 **UTILITIES IN SWFWMD?**

13 A. The City of Tampa, which serves about 475,000
14 people, spent approximately \$780,000 in fiscal year
15 1995 on their conservation program. Hillsborough
16 County, which serves approximately 280,000 people,
17 spent about \$2 Million for their conservation
18 program in 1995. These programs include
19 distribution of retrofit kits, low-flow toilet
20 rebates, rain-sensor rebates, extensive public
21 education programs, and surveys to measure program
22 effectiveness. SSU serves approximately 300,000
23 people and is proposing to spend about \$500,000
24 annually on similar conservation efforts. SSU's
25 proposal is entirely reasonable and is totally in

1 line with the program costs of other utilities.

2 **Q. DO YOU HAVE ANY INFORMATION REGARDING THE BENEFITS**
3 **OF THESE KINDS OF CONSERVATION PROGRAMS?**

4 A. Yes, SWFWMD has prepared a report dated October 15,
5 1995, which describes the results of plumbing
6 retrofit projects cooperatively funded by SWFWMD.
7 A copy of this report is attached as Exhibit 201
8 (MF-3). Table 2 of the report shows that SWFWMD has
9 contributed about \$5.7 Million toward utility
10 retrofit and rebate programs since 1991 and has
11 estimated that more than 6.6 Million gallons of
12 water per day will be conserved as a result of
13 these programs. We believe these are worthwhile
14 programs with substantial water conservation
15 impacts.

16 **Q. WHAT IS YOUR OPINION REGARDING KIM DISMUKES**
17 **TESTIMONY THAT SSU'S CONSERVATION COSTS WHICH MAY**
18 **HAVE A POSITIVE PUBLIC RELATIONS EFFECT SHOULD BE**
19 **DISALLOWED?**

20 A. If SSU's conservation program incidentally has a
21 positive impact on SSU's image, it does not
22 diminish the importance of the conservation
23 message. We, at the water management district want
24 to do whatever we can to encourage utilities to
25 promote water conservation. If such programs also

1 result in reflecting a positive image for the
2 company, we see nothing wrong with that. To
3 disallow the costs associated with the conservation
4 program for this reason would be counterproductive
5 to the legislatively declared goal to promote water
6 conservation.

7 **Q. WHAT IS YOUR OPINION REGARDING KIM DISMUKES**
8 **TESTIMONY THAT SSU'S CONSERVATION COST OF \$20,000**
9 **FOR THE MARCO ISLAND WATER AUDITS SHOULD NOT BE**
10 **ALLOWED?**

11 A. Water Audits are an effective tool to educate
12 customers about how to maximize the efficiency of
13 their irrigation practices. The City of Tampa
14 implemented a Water Audit program in 1992 in which
15 they estimated an average 28% water savings per
16 customer as a result of implementing the
17 recommended changes to each customer's irrigation
18 practices. Similar to SSU's Marco Island program,
19 Tampa focused on high water use multi-family,
20 commercial and educational facility customers. It
21 is important to educate these high volume customers
22 about proper irrigation habits. This kind of
23 information can result in a permanent water savings
24 and will only serve to enhance customer
25 conservation awareness. A water audit program such

1 as SSU's is a worthwhile project that would be an
2 appropriate expenditure.

3 **Q. WHAT IS YOUR OPINION REGARDING KIM DISMUKES**
4 **TESTIMONY THAT SSU'S COST FOR CUSTOMER SURVEYS**
5 **SHOULD NOT BE ALLOWED?**

6 A. An important aspect of any kind of conservation
7 program is follow up to see how customers are
8 responding to each of the various components of the
9 program. SSU's proposal to survey its Marco Island
10 customers to identify which conservation practices
11 have been incorporated is a very good idea. It
12 will be useful to compare the results of the 1994
13 Marco Island conservation survey to see whether
14 these customers have been affected as a result of
15 the program. Costs for the Marco Island customer
16 surveys as well as the surveys for the targeted
17 communities would be an appropriate expenditure.

18 **Q. WHAT IS YOUR OPINION REGARDING KIM DISMUKES**
19 **RECOMMENDATION TO DISALLOW THE COSTS FOR SSU'S**
20 **CONSERVATION PROPOSAL FOR THE SIX TARGETED**
21 **COMMUNITIES?**

22 A. SSU should be allowed recovery of its projected
23 costs to pursue the conservation program for the
24 six targeted communities. Ms. Dismukes questions
25 the benefit of spending \$60,000 on plumbing

1 retrofit kits and suggests that because the Tucson,
2 Arizona retrofit kit program did not produce
3 significant results, that SSU's program will be
4 unsuccessful. This is not necessarily so. Even if
5 the success of the Tucson, Arizona program was
6 limited, this does not mean that retrofit programs
7 will not be effective in other communities. Rebate
8 and retrofit programs for low-flow plumbing devices
9 and irrigation shut-off devices have proven in the
10 past to be effective means of reducing consumption.
11 The program SSU has proposed is consistent with the
12 successful conservation programs we have seen
13 implemented in other communities within SWFWMD.
14 SSU's approach of focusing on the communities with
15 the highest water usage is an appropriate step
16 toward reducing overall water use of utility
17 customers.

18 **Q. WHAT IS YOUR OPINION REGARDING KIM DISMUKES**
19 **SUGGESTION THAT IRRIGATION SHUT-OFF DEVICES ARE NOT**
20 **EFFECTIVE?**

21 A. SWFWMD has been utilizing irrigation shut-off
22 devices in our xeriscape demonstration projects
23 since about 1988. We have 5 xeriscape
24 demonstration sites that are currently in operation
25 at our District Service offices, the Charlotte

1 County Vocational Center and the Florida House, in
2 Sarasota. There are several reputable
3 manufacturers of irrigation shut-off devices.
4 Three of our xeriscape sites utilize the "Mini-
5 Klik" product; the other two sites use devices made
6 by Toro Irrigation Company and Rainbird. Our staff
7 experience with these devices indicates that all of
8 them are effective in turning off the irrigation
9 systems when a specified amount of rainfall occurs.
10 Individuals may set these devices to break the
11 irrigation circuit after receipt of 1/8-inch, 1/4-
12 inch, 1/2-inch or 1 inch of rainfall. Our staff
13 recently met with irrigation contractors regarding
14 SWFWMD's cooperative funding project for Hernando
15 County's rain sensor rebate program. Those
16 irrigation contractors indicated a preference for
17 the Mini-Klik shut-off device, based on their
18 experience with its reliability.

19 **Q. DOES SWFWMD REQUIRE UTILITIES TO IMPLEMENT A**
20 **CONSERVATION RATE STRUCTURE?**

21 A. SWFWMD has encouraged utilities to explore all
22 measures that will effect conservation including
23 conservation rate structures. District-wide rules
24 do not contain requirements for adoption of a
25 specific rate structure. However, in the Northern

1 Tampa Bay, Highland Ridge and Eastern Tampa Bay
2 Water Use Caution Areas ("WUCAs"), SWFWMD requires
3 permittees to adopt a water conservation-oriented
4 rate structure by January 1, 1993. The proposed
5 Southern Water Use Caution Area ("SWUCA") rules
6 require permittees to adopt a water conservation-
7 oriented rate structure by 1997.

8 **Q. WHAT TYPES OF RATE STRUCTURES ARE CONSIDERED BY**
9 **SWFWMD AS CONSERVATION PROMOTING RATE STRUCTURES?**

10 A. According to the Brown and Caldwell study
11 commissioned by SWFWMD, (which was included as
12 Exhibit 200 (JBW-2) in the pre-filed Direct
13 Testimony of John B. Whitcomb, Ph.D.), a
14 conservation promoting rate structure is "one which
15 results in a net reduction of water use solely due
16 to the economic incentives contained therein, when
17 compared to other rate structure alternatives." At
18 SWFWMD, we believe that a conservation rate should
19 reinforce the concept of potable water as a scarce
20 resource. Based on that objective, we have taken
21 the position that an "inclining block" rate
22 structure is the most aggressive conservation rate
23 structure. "Uniform" rates can also promote
24 conservation, when applied under appropriate
25 circumstances. "Flat" rates and "declining block"

1 rates are not considered conservation promoting
2 rate structures. One of the key issues, from our
3 perspective, in determining whether a particular
4 rate promotes conservation, is whether the rate
5 sends a signal to the customers that, the more
6 water you use, the higher your bill will be. It is
7 also important that the rate structure be coupled
8 with an effective conservation education program to
9 inform utility customers that water is a limited
10 resource and providing them with the knowledge and
11 means of preserving it.

12 **Q. ARE YOU AWARE OF THE RATE STRUCTURE BEING PROPOSED**
13 **BY SSU IN THIS PROCEEDING?**

14 A. Yes, my understanding is that SSU is proposing a
15 rate structure which consists of a base facility
16 charge plus a uniform gallonage charge and that 40%
17 of the revenues will be derived from the base
18 facility charge. SWFWMD would classify this as a
19 "uniform" rate.

20 **Q. DOES THE SWFWMD CONSIDER SSU'S PROPOSED RATE**
21 **STRUCTURE A WATER CONSERVING RATE STRUCTURE?**

22 A. Yes, SWFWMD's economists have analyzed SSU's
23 proposed rate structure for consistency with the
24 Brown and Caldwell definition of a water conserving
25 rate structure and have determined that it meets

1 the criteria set forth in that document. SSU's
2 rate structure meets SWFWMD's requirements because
3 it sends a signal to the customers that the more
4 water consumed, the more you will pay.
5 Furthermore, SSU has an active conservation program
6 and is meeting our per capita requirements in most
7 of their service areas. In SSU service areas such
8 as Sugar Mill Woods in Citrus County and Marco
9 Island, in Collier County where water use is
10 excessive, SSU has developed conservation programs
11 to address this high use.

12 **Q. DO YOU AGREE WITH MS. DISMUKES TESTIMONY THAT**
13 **CONSERVATION RATE STRUCTURES BY THEMSELVES CAN**
14 **RESULT IN AN EFFECTIVE WATER CONSERVATION PROGRAM?**

15 A. No, in order for conservation rates to be
16 effective, they must be combined with a consumer
17 education program, otherwise the customers will not
18 understand how they can lower their water use or
19 their bill.

20 **Q. ARE YOU FAMILIAR WITH SSU'S RATE PROPOSAL REGARDING**
21 **THE WEATHER NORMALIZATION CLAUSE?**

22 A. Yes, I have a general understanding. Having
23 followed hydrologic conditions and water use
24 patterns within the SWFWMD over the last 11 years,
25 I have seen that weather can have a significant and

1 measurable impact on the amount of water used by
2 utility customers. Because of a utility's need to
3 minimize its financial risk that occurs due to
4 variations in consumption, SSU's Weather
5 Normalization provision allows the utility to
6 adjust its charges upward in a rainy year, to make
7 up for lower than anticipated consumption, or to
8 adjust its charges downward if consumption is
9 higher than anticipated in a dry year.

10 **Q. DOESN'T THAT SEND THE WRONG CONSERVATION MESSAGE TO**
11 **THE WATER CUSTOMERS?**

12 A. No. Our staff review of the SSU proposal indicates
13 that the Company will recover only 1/12 of the
14 necessary adjustment in each billing cycle,
15 therefore the monthly adjustment should be minimal
16 and will not dilute the conservation message. The
17 benefit to the customer is that the high and low
18 bill extremes related to weather will be
19 "levelized." This gives the customers a clearer
20 picture of their long term water use patterns. For
21 example, during a rainy period, customers may look
22 at their bill and falsely assume they have been
23 conserving water. Under the SSU proposal,
24 particularly with the historical use information
25 being reported on the bill, customers will get a

1 conservation signal based on their levelized
2 consumption.

3 **Q. WHAT IS SWFWMD'S POSITION REGARDING THIS MECHANISM?**

4 A. SWFWMD believes that the WNC is an effective tool
5 to remove the disincentive for utilities to
6 aggressively promote conservation. Rarely is a
7 business told to sell less of their product without
8 providing a mechanism for recovery of their
9 revenues. With this adjustment mechanism in place,
10 a utility would have greater assurance that it will
11 recover its revenues and will therefore be more
12 inclined to diligently promote conservation to its
13 customers. This is consistent with the goals of
14 the WMDs.

15 **Q. DOES THAT CONCLUDE YOUR PRE-FILED TESTIMONY?**

16 A. Yes, it does.

1 Q (By Mr. Armstrong) Mr. Farrell, do you have a
2 summary of your testimony?

3 A I do.

4 Q Could you present that at this time, please?

5 A Madam Chairman, members of the Commission, my
6 name is Mark Farrell. I'm the Assistant Executive
7 Director for the Southwest Florida Water Management
8 District, otherwise known as SWFWMD. I have been with
9 the district almost 12 years at this point. Prior to
10 the district I was in private consulting for a few years
11 and then before that worked for a major industrial firm
12 in Pennsylvania.

13 I have been involved with water policy and
14 implementation of water policy on the state of Florida
15 level very intensely for the last five years, nationally
16 and even in some cases have some international work I
17 have done in the Middle East, on water policy, water
18 conservation programs.

19 What I would like to do in my summary, and it
20 is really the point of my testimony, is to discuss water
21 supply issues in Florida as seen through the Water
22 Management District's eyes and how that then would apply
23 to any utility, and specifically in this case SSU.

24 Right now in Florida we have what we're
25 calling and seeing regional overdrafting of our fresh

1 water supplies in Florida. What that means,
2 overdrafting means, we're taking more out of the system
3 than can be replenished naturally by rainfall. We're
4 seeing that most notably in our water management
5 district, who has been embroiled in water controversies
6 now for many years. As a result of that, we have
7 regional cases of salt water intrusion, lowering of lake
8 levels, wetlands drying up, et cetera, a lot of
9 environmental degradation going on. Specifically, we
10 have an area in our district known as the Southern Water
11 Use Caution Area, sometimes known as SWUCA, where we
12 have put in a minimum level in the past year that is
13 currently in challenge right now.

14 The point of that is that we have found out by
15 now doing the analysis in that particular area, and
16 another area we call Northern Tampa Bay, that we have
17 overpermitted the system and now we are relying heavily
18 in those areas on conservation and the development of
19 alternative sources to try to relieve the environmental
20 degradation ongoing and to provide for sustainable
21 growth in the future.

22 In addition to dealing with the situation of
23 overdrafting, which we consider to be a chronic
24 situation where water is being taken out on a daily
25 basis, regardless of hydrologic conditions, regardless

1 of rainfall being -- degradating to the natural system,
2 we also in Florida have to deal with droughts, periodic
3 droughts, which overcome the system, and again put the
4 state of water supply in even a further state of
5 distress.

6 Within the state of Florida we have some major
7 regulatory initiatives going on that the water
8 management districts must deal with now. One is state
9 water policy, which in the last two years has gotten
10 very active in the area of water supply. We are getting
11 some very clear directives from the Department of
12 Environmental Protection, via the Governor's Office, to
13 be very aggressive in the areas of conservation and the
14 development of alternative sources, requiring them
15 through rule criteria, also developing programs where we
16 are taking our ad valorem tax base and developing grant
17 programs to match local governments, to develop these
18 sources and implement conservation programs.

19 Another major issue is that approximately
20 three to four years ago each of the districts was
21 required to identify what is known as water resource
22 caution areas in the state of Florida. A water resource
23 caution is an area that is currently exhibiting adverse
24 impacts, environmental impacts, on the water supply or
25 water resource system -- could be from flooding or water

1 supplies -- or is projected to experience those
2 unacceptable impacts in the future, relatively near
3 future, next ten to 15 years.

4 Based on that, each of the districts was then
5 to go back and delineate these areas and set up such
6 special rule criteria to try to handle those
7 situations. In our district we have identified four
8 such areas, which encompasses -- approximately 80
9 percent of our district falls under those water resource
10 cautionary areas at this point. We are doing rulemaking
11 for each of those areas, have done rulemaking and are
12 continuing to do rulemaking. South Florida has a major
13 portion of their district, and the entire St. Johns
14 Water Management District is under a water resource
15 caution area designation. So you can see, if you think
16 of the jurisdictions of the South Florida District,
17 Southwest and St. Johns, all of those areas, probably --
18 and I'm just estimating now -- probably in the
19 neighborhood of 70 to 80 percent of those districts
20 collectively are now designated as water resource
21 caution areas, predominantly because of water supply or
22 water quality issues.

23 In addition to that, in the Florida Water
24 Resources Act of 1972, a requirement was put on the
25 water management districts to establish what is known as

1 flows and levels. And very simply, minimum flows and
2 levels is to go into each water body in the state,
3 that's ground water system and surface water system,
4 lakes and streams, and establish how much water is
5 necessary to stay in the natural system before you will
6 experience unacceptable environmental impacts. How much
7 water in a stream must go to an estuary on an ongoing
8 basis, how much water must stay in the groundwater
9 system to prevent salt water intrusion, et cetera.

10 The water management districts have not really
11 moved forward with that effort, for a number of
12 different reasons, for the last 20 years -- cost, data,
13 a lot of different issues. But now in the state there
14 is a mandate coming down to do this. Our district alone
15 has an order from the Governor and Cabinet to have those
16 established over the next five years within our district
17 because of the overdrafting problems that we have. This
18 year in the legislature it was a very hotly debated
19 issue as to how that would be implemented across the
20 state. Legislation only passed this year with regards,
21 again, to our district, giving us more schedules to do
22 things in our district and to expedite those minimum
23 flows and levels.

24 But we believe you will see from the
25 Governor's Office and others that those minimum flows

1 and levels requirements will be required of all the
2 districts to be done over the next five years. And what
3 that means, and why I bring that up is, when those
4 levels are set, when the districts go out and do the
5 data and do the analysis in the groundwater systems, in
6 the surface water systems, and their boards establish
7 what is acceptable and unacceptable environmental
8 degradation, you're going to see more regional shortages
9 in the state, or you're going to see areas that may not
10 be in a shortage today but would have a futuristic
11 permitting life, if you will, of additional withdrawals
12 that will end much more abruptly than people thought
13 they would, five or ten years of supplies left. And
14 when that happens then, you're going to see even more
15 pressure put on conservation and development of
16 alternative sources across the state of Florida.

17 Each water management district now is being
18 guided on its own, and by the legislature, to adopt a
19 two-prong approach to handling water supply issues in
20 Florida. The first prong and the baseline is
21 conservation of existing and future supplies. Makes
22 absolute sense for us to take what we have in the system
23 already and conserve it as best we can so we do not have
24 to go continually back into that fresh water system, for
25 a number of different reasons -- cost, preservation of

1 the resource, et cetera. And secondly, to develop
2 alternative supplies. And when I use the word
3 "alternative supplies," what I'm talking about is the
4 nontraditional sources. Traditional sources being fresh
5 groundwater and fresh surface water. But to move into
6 alternative sources, like the reuse of wastewater for
7 irrigation purposes, for drinking water purposes in some
8 cases, a variety of different uses; also moving more
9 into desalination processes of brackish water and sea
10 water in some cases; aquifer storage and recovery,
11 taking water off river systems, depositing it
12 underground, holding it there for drier periods,
13 bringing it back out again, and any other things we
14 could find a viable, sustainable way of developing water
15 and using it more than once. Those two prongs will show
16 that Florida has a long life ahead of it in terms of
17 sustainable water supplies.

18 The issue is and will continue to be the cost
19 associated with those. It does cost to develop
20 alternative supplies. That's why we haven't gone to
21 them in the future -- in the past, because they do cost
22 more than continually to develop fresh water supplies.

23 On conservation specifically, though, one of
24 the reasons, from the standpoint that we favor
25 conservation to the extent that it can put off the

1 development of fresh water development, it is truly the
2 most cost-effective way of meeting our water supply
3 needs. Analysis shows that the cost of educating the
4 public and making them aware and providing them with the
5 tools to implement conservation programs is far less in
6 cost than going out and developing alternative sources,
7 building more water treatment plans, more wastewater
8 treatment plants, et cetera.

9 It is clearly the most expeditious way for us
10 to develop water supply. It takes -- in our district
11 alone, it takes between eight to ten years to bring on a
12 new fresh water source, between the permitting and the
13 infrastructure, et cetera, the financing, et cetera.
14 Alternative supply sources take about the same time
15 frame. It takes a long time to develop those sources.
16 Conservation -- properly implemented conservation
17 program can see impacts almost immediately within the
18 system and grow over time. So very expeditious, and
19 very sustainable. A properly implemented conservation
20 program is sustainable. That water that the public
21 learns to live without in doing their everyday
22 activities now becomes available, if properly educated
23 and properly followed up, because water is now available
24 to be left in the natural system or to be utilized to
25 offset future demand.

1 I was going to say a few things more about
2 conservation, but Mr. Adams spoke about those. I think
3 there's a number of elements that do go into a properly
4 implemented conservation program. With the three things
5 that he spoke of -- awareness, education and
6 implementation -- each of those are very, very critical
7 to a properly implemented program. Follow-up is very,
8 very important. That's the key to sustainability. And
9 I'll answer any questions you have on that later. But
10 with that, I'll end my comments.

11 MR. ARMSTRONG: Thank you, Mr. Farrell. The
12 witness is available for cross.

13 CHAIRMAN CLARK: Mr. McLean.

14 MR. McLEAN: Thank you, ma'am.

15 CROSS EXAMINATION

16 BY MR. McLEAN:

17 Q Mr. Farrell, I have it then that your district
18 endorses a very strong and aggressive conservation
19 program; is that correct?

20 A We endorse conservation programs, correct.

21 Q And you aggressively do so?

22 A As a district, we are aggressively pursuing
23 conservation programs, that's correct.

24 Q All right, sir, would you turn to Page 20 of
25 your rebuttal testimony, please?

1 A Yes.

2 Q There is, at Line 14, a discussion about the
3 rate design of this particular utility, which is
4 suggesting 40 percent recovery of revenue requirement
5 through base facility charge and 60 percent through
6 gallonage charge; are you aware of that?

7 A That's correct.

8 Q And you endorse that?

9 A Our position is that that meets our definition
10 of a water conserving rate structure.

11 Q What was their split before this case? What
12 is their split as we speak?

13 A I don't have knowledge that have.

14 Q Would you endorse a change to make it better?

15 A I'm not sure what your definition of better
16 is.

17 Q Well, one that gave the customers a -- one
18 that loaded more of the revenue requirement into the
19 gallonage charge.

20 A Rate structures is not really my field of
21 expertise and I would yield that to Mr. Yingling or
22 someone else at this point, but I would say as a general
23 note that we're always interested in rate structures
24 that are effective. And we have minimum criteria for
25 effectiveness. If that's met, our burden -- or their

1 burden with us is over with at that time. If they find,
2 as an operational standpoint that they could do
3 something better to go beyond our goals, that's fine
4 also.

5 Q I read your testimony at that identified place
6 to say that you are supporting what they're asking for
7 because you believe it to be a conservation rate,
8 correct?

9 A We believe they are proposing -- our
10 guidelines suggest this is a conservation rate.

11 Q Do you understand that the entire gist of this
12 case is such that it is the applicant before the
13 Commission asking to make a change in its rates?

14 A I believe that's part of it, that's correct.

15 Q Generally, a rate increase. Now -- do you
16 accept that?

17 A I'm not here to testify on that. I'm not
18 really -- quite honestly, I'm not that interested in the
19 rate itself beyond the fact that we -- they have met our
20 burden for a water conserving rate structure.

21 Q But you're interested enough to say that
22 whatever they're asking for with 40 percent should be
23 supported, and you don't oppose it?

24 A All we're saying is -- I think it's very clear
25 here -- SWFWMD would classify this as a uniform rate,

1 which meets our criteria.

2 Q If you were to learn that it is a change and
3 represents a change in what their existing program was,
4 or their existing rate design, and if you were to learn
5 that their rate design split, the revenue requirement 37
6 percent -- I'm sorry, 33 percent for base facility
7 charge, 67 percent for gallonage charge, would you
8 agree -- do you accept -- would you accept that for the
9 purposes of this question?

10 A If that information was turned over to our
11 Staff who reviews those rates and it said that it met
12 our criteria, we would accept that.

13 Q So your concern is whether it falls within a
14 range, as opposed to what direction it moves within the
15 range?

16 A That's correct.

17 Q Okay. If you discovered, for example, that it
18 moved mid range to the very least score that it could
19 possibly have and still qualify as conservation, would
20 you still support it?

21 A That's very difficult to answer in that
22 context. I think we would have to see all the
23 information proposed with that. Possibly.

24 Q And I know you've said that you're not a rate
25 design expert, but I would like to ask you one question

1 on it, and since it comes from me, it certainly won't be
2 that sophisticated. I'll ask you, given two identically
3 situated customers, one faces a rate design wherein he
4 or she pays his or her part of the revenue requirement
5 by means of 33 percent base facility charge and 67
6 percent gallonage charge. Consider that customer in
7 contrast with the second customer who pays 40 percent of
8 the base facility charge and the rest of the revenue
9 requirement, namely 60 percent, through his gallonage
10 charge. Which of those two customers has a better voice
11 in controlling -- which of those two customers receives
12 a stronger signal with respect to a conservation
13 signal? Do you understand that question?

14 A Yes, I do.

15 Q Thank you, sir.

16 A I would say most likely the former.

17 Q The former, in which the gallonage charge is
18 more heavily loaded; is that correct?

19 A Yes, that's correct.

20 Q The City of Tampa is within the jurisdiction
21 of your water management district?

22 A It is.

23 Q If you learned that their split was roughly --
24 was roughly 70/30, would you believe that to be a --
25 send a stronger conservation signal than the one that

1 Tampa has?

2 A Again, I don't know all the details of their
3 rate and I really can't comment to that.

4 Q Who would you assume, all else equal, sir?

5 MR. ARMSTRONG: Objection, Madam Chair. I
6 don't believe we have anything in the record as to the
7 split of Tampa.

8 Q (By Mr. McLean) Well, we may have, and that's
9 why I structured it as a hypothetical question. I'm
10 asking him about the theory, about the split between the
11 BFC and the gallonage charge. He's already answered
12 that at one point. And I will tie it up later in the
13 respect to show that what Tampa's split actually is, but
14 I'm asking him as a hypothetical at this point.

15 MR. ARMSTRONG: On the representation he can
16 show what it actually is, that's fine with me, thanks.

17 WITNESS FARRELL: Could you repeat the
18 question, please?

19 Q (By Mr. McLean) I was interested in whether a
20 70/30 split was a stronger conservation signal to a
21 customer than whether a 60/40 split was, and if you wish
22 you can forget the reference to the City of Tampa.

23 A I would think so, yes.

24 Q On Page 19 of your rebuttal testimony.

25 A Yes.

1 Q You do have it, sir?

2 A Yes, I do.

3 Q Line 21. There is a brief discussion of the
4 inclining block rate. Do you see it, sir?

5 A I do.

6 Q Now on several occasions in your responses to
7 my question you have referred to your staff. And of
8 course your staff isn't here. When you answer for your
9 staff, are you answering for yourself? Your views
10 coincide with your staff's views, generally speaking?

11 A Yes.

12 Q Now, the inclining block rate, I take it, by
13 your testimony here, is one which the district very
14 heavily favors, all else equal?

15 A We believe it's the most aggressive
16 conservation and, yes, all else equal, we would favor
17 that.

18 Q Do you know whether Southern States has
19 inclining block rate?

20 A Do I know if they do?

21 Q Yes, sir.

22 A I believe that they don't, but I'm not sure.

23 Q There are three rate designs in this context
24 which come immediately to mind, if you will: A
25 declining block rate; the district opposes those,

1 correct?

2 A Correct.

3 Q A flat rate in the sense of -- perhaps I
4 should say uniform, at some considerable risk -- a
5 uniform rate, which has neither inclining blocks nor
6 declining blocks?

7 A When you said flat and uniform, there's a
8 difference in my mind between flat and uniform.

9 Q Flat is absolutely nonuseage sensitive,
10 correct?

11 A That's correct.

12 Q I don't mean that. I mean one which does
13 not -- which the rate of the water -- the unit cost of
14 the water does not vary with consumption. I mean to
15 describe that as the second scenario.

16 A It's a linear relationship. It's X dollars
17 per unit price, and the more units you use, you multiple
18 that times the unit price. That's a uniform rate.

19 Q Yes, that's the one -- that's what y'all call
20 a uniform rate?

21 A That's correct.

22 Q And that's one Southern States has now; is
23 that correct?

24 A That may be, yes. I'm not intimately familiar
25 with their rate system.

1 Q But of the three ones we've identified, namely
2 declining block, uniform rate and inclining block, the
3 district favors inclining block?

4 A Not in all cases, but in most cases, yes.

5 Q Well, in the cases where you do not favor
6 them, what are the circumstances which bring that about?

7 A I'm not intimately aware of those, but I know
8 my staff has expressed to me in the past, but there may
9 be opportunities or times when uniform rates are more
10 appropriate than inclining block rates, and I'm not I'm
11 not versed enough to speak on that issue.

12 Q So your staff may have brought you the
13 justification for that; you simply don't recall?

14 A That's correct.

15 Q Do you know whether the -- you reference, if
16 I'm not mistaken, the conservation programs which are
17 currently in effect in both Tampa and Hillsborough
18 County?

19 A That's correct.

20 Q And with respect to those two programs, do you
21 know whether they have inclining block rates?

22 A I know that Hillsborough County has an
23 inclining block rate. I believe Tampa does. I believe
24 Tampa does also.

25 Q The gentleman who preceded you spoke at some

1 length about the district's participation and inquiry,
2 if any, into the area of cost-effectiveness. Were you
3 in the room during that discussion?

4 A Part of it, yes.

5 Q And I believe the chairman probably put it
6 most succinctly in her question to the gentleman, and
7 I'll try to paraphrase her question. It was: Is it not
8 true that the district's real inquiry is something of a
9 threshold determination of cost-effectiveness, a general
10 inquiry as to whether they believed that the program was
11 effective, but not a baseline -- I'm sorry, not a line
12 item analysis of the cost-effectiveness of the various
13 aspects of the program?

14 A I would agree with that, yes.

15 Q You'd agree that that is in fact the focus of
16 the district?

17 A Yes.

18 Q Okay. Now Mr. Armstrong asked a few questions
19 of that witness as well, which were designed to discover
20 whether that district approved given conservation
21 programs on the strength of their similarity to other
22 programs. Do you remember that discussion?

23 A I don't recall. I might have been out of the
24 room at that time.

25 Q Let me ask you about your district. When you

1 make this -- I'm going to characterize it as cursory.
2 You can correct that if you care to. When you make this
3 cursory inquiry of cost-effectiveness, do you look to
4 the similarity of other utilities similarly situated,
5 both in terms of government and private ownership? Do
6 you look to similarly situated utilities and what
7 programs they have in effect? Does that aid you in
8 that, again, cursory look at the cost-effectiveness of
9 the programs?

10 MR. ARMSTRONG: Madam Chair, I'm going to
11 object to the use of the word "cursory." I don't think
12 the witness has agreed to it. Since the witness has
13 never testified before, I don't think he would
14 understand the ramifications of agreeing to accept the
15 characterization.

16 MR. McLEAN: May I respond?

17 CHAIRMAN CLARK: Yes.

18 MR. McLEAN: I gave the witness adequate
19 opportunity to take issue with that. I'm not trying to
20 characterize his program. I want him to characterize it
21 for us.

22 WITNESS FARRELL: That's fine. As a matter of
23 looking at a conservation put forth to the district for
24 a regulatory action of one nature or other, we look
25 primarily at the effectiveness of that program, not so

1 much the cost-effectiveness of that program. Primarily
2 we only get into the cost-effectiveness of that if the
3 applicant is making some type of charge, if you will,
4 that they are unable to implement this program because
5 of a cost program, or a cost issue. But normally we're
6 just primarily interested in the effectiveness of what
7 they're proposing to do and how they're proposing to do
8 it.

9 Q (By Mr. McLean) I see. So I take your
10 testimony to be that occasionally you may want a
11 particular conservation measure which the utility comes
12 to you and says, this is not economically feasible?

13 A We've never had that happen. We've had these
14 regulations since 1989, and to my knowledge we have
15 never had a permittee ever say that a cost -- a
16 conservation requirement that we've required of their
17 permit has been -- they've been unable to do it because
18 of cost considerations.

19 Q Do you believe it's a legitimate inquiry by
20 this particular organization, namely the Commission, to
21 inquire whether these programs are cost-effective?

22 A Certainly. I think it all depends what your
23 definition of cost-effective is, but certainly I believe
24 they should look into the costs and determine that it's
25 an appropriate cost, and again what your definition is

1 and how you characterize cost-effective, but yes, I
2 believe that's a fair analysis.

3 Q And I take it that you've -- and you've had
4 both education and experience in business; have you not?

5 A I have.

6 Q So the question of cost-effectiveness, one has
7 normally to agree that cost-effectiveness is a good
8 idea, but in fact the debate ensues over what
9 methodology is to be used to determine
10 cost-effectiveness, right?

11 A Methodologies and what the alternatives are, I
12 think is what it comes -- is the stronger point. What
13 is the alternative if this program is not done and what
14 are those alternatives and the cost of those
15 alternatives.

16 Q If the program is cost-effective, then
17 presumably customers won't waste water, correct?

18 A Well, I'm not sure in that particular case.
19 Again, it depends what your definition of cost-effective
20 is. It really comes down to a lot parameters. Yes, the
21 answer to your question may be yes and it may be no,
22 depending on how we do that.

23 Q Sure. My question was probably too strong.
24 If it is cost-effective, then at least we do know that
25 the customers who choose to waste will have to pay the

1 freight?

2 A I don't know that I would characterize it that
3 way either. They're generalizations. It's really hard
4 to say yes or no to.

5 Q I understand. Let's look at it a slightly
6 different way. If it's not cost-effective and if the
7 program is enforced by your -- not enforced by your
8 agency -- suggested by your agency, adopted by the
9 utility and approved by this Commission in the absence
10 of a cost-effective inquiry, well then how do we know
11 the customers aren't wasting their dollars instead of
12 water?

13 A Well, I believe a cost-effective analysis is
14 prudent, as I said in those cases. I have no issue with
15 that, because you may not know if the customer is
16 wasting her dollars, but it all depends on your
17 definition of cost-effective.

18 Q All right, sir, now, returning back a little
19 bit just to this notion of comparing one utility's
20 program to another -- strike that.

21 Again, I take it that the district does not
22 look -- I hate to be repetitive, let me ask you again.
23 The district doesn't look to line item analysis of
24 whether a particular program is cost-effective or not;
25 am I right?

1 A As part of a regulatory action, we do not. We
2 have other programs in the district, grant programs,
3 where an applicant would make a grant application for a
4 program that they would wish to cost share with us. In
5 that particular case we would get down into line items,
6 yes.

7 Q When they cost share with you -- when this
8 utility cost shares with you, sir, don't the ratepayers
9 of this utility, from the perspective of ratepayer, and
10 from the perspective of taxpayer -- you say the word
11 "sharing," I would like to observe that the people that
12 I have the honor to represent pay on both sides of that
13 equation. Would you agree with that?

14 A Yes, they do.

15 Q So when you talk about spending water
16 management dollars, district dollars, you are talking
17 about spending customer's dollars through the taxing
18 authority that your district happens to have?

19 A Well, again, with the grant and the way the
20 ad valorem structure is set up, not only are those
21 customers paying, but people who are not being served by
22 that system are also paying to offset the cost to those
23 customers.

24 Q Sure. And I have no argument with that. I
25 just want to make sure that we both understand that the

1 dollars that the water management district spends are
2 raised by taxing their constituents.

3 A Yes, if those customers -- yes, if those
4 customers being served are ad valorem taxpayers, they
5 will pay an ad valorem tax to us, which will
6 ultimately -- a portion of that will go back into this
7 grant.

8 Q One aspect of your grant program is that you
9 do take, what I gather from your testimony to be, a
10 closer look at the particular conservation program
11 proposed by the utility to discover whether it warrants
12 your spending the district funds on that particular
13 program; is that right?

14 A That's correct.

15 Q What is the nature of that inquiry? What is
16 the level of the inquiry with respect to
17 cost-effectiveness?

18 A Well, as part the proposal, there is a number
19 of criteria that must be put forth in any grant proposal
20 we get -- how much you're going to spend, in this
21 particular case how you're going to spend it. Are you
22 going to use in-staff? Are you going to use contractors
23 to do it? What are your expected goals for this? In
24 the case of a water conservation or reuse project, would
25 be gallons generated for that particular project and all

1 the different circumstances to go into that. So we
2 would look at all of that and then we would look at
3 that, say, in comparison to a number of different
4 analysis we may do, depending on the situation. We may
5 compare it to similar situations elsewhere where they've
6 done similar programs and yielded certainly similar
7 results and see if they're in line, if the dollars are
8 in line, et cetera. It's a very difficult analysis
9 because it's never apples and apples. One community is
10 never identical to another. They all vary. But to the
11 extent that you can, you look for areas of
12 reasonableness in terms of that grant proposal.

13 Q In the course of that inquiry, have you ever
14 formed an opinion, or has your staff ever advised you as
15 to the relative cost of a utility's transition from
16 uniform rates, in the sense that you use the term, to
17 inclining block rates?

18 A No, not to my knowledge.

19 Q Do you have any intuitive opinion as to
20 whether that is expensive or inexpensive with respect to
21 other programs?

22 A No, I don't.

23 Q Has the city of -- I'm sorry, has the City of
24 Tampa, County of Hillsborough, been the beneficiary
25 of -- strike that. Have they been the successful

1 applicant for any matching funds from the district?

2 A They have.

3 Q Has Southern States?

4 A As a reuse project, we have cofunded a reuse
5 project, and we have a project with Southern States
6 right now. They have an application in for a
7 conservation program currently that has received a
8 tentative approval, to date, in the process. It's not
9 been approved yet. The budget won't be approved until
10 September, but tentatively it has gotten approvals, to
11 date.

12 Q For what particular system or facility?

13 A I believe it's the Spring Hill system, and I
14 believe it's a total grant of 200,000 something. Our
15 end is about 100- to \$110,000.

16 Q The conservation program which they put before
17 the Commission, I believe which you support, has
18 ramifications, at least financial ramifications, for
19 customers living well outside both Spring Hill, and for
20 that matter, SWFWMD; is that correct?

21 A I'm not that familiar with the application.

22 Q If that be true, and I ask that you take it as
23 true for the purposes of my question, were any of the --
24 were the programs as applied to any of those other areas
25 subject to any sort of scrutiny, the sort of which

1 accompanies the scrutiny that you make when someone
2 applies for matching funds?

3 A I can't tell you that. I wasn't involved with
4 the analysis myself. That's done further down in the
5 organization, so I'm not privy to that at this point.

6 Q Isn't it reasonable to infer that if they
7 should happen to apply -- or if they -- that their
8 Spring Hill application for matching funds -- is that an
9 appropriate term to use? Their Spring Hill application
10 for matching funds?

11 A That's close enough. It's cooperative
12 funding, but that's fine.

13 Q Did they have to bring you any of the -- any
14 cost-effective data for their program in Marco Island?

15 A No.

16 Q How about Amelia Island?

17 A I don't believe so.

18 Q Probably not. All right. I think that may
19 conclude. Let me just take a quick look. (Pause)

20 Oh, yes just one line. From your Page 13,
21 Mr. Farrell, Line 24, continuing on to the next page.

22 A Yes.

23 Q Do you have it?

24 A I have it.

25 Q You say that, "SSU's proposal is entirely

1 reasonable and totally in line with the program costs of
2 other utilities." And of course that's your cite to
3 Tampa and Hillsborough. That's your testimony, right?

4 A That's correct.

5 Q Now I want to characterize your testimony
6 here, and please correct me if I err, and that is that
7 what you have done is simply look at the population,
8 compare it to the expense, and that leads you to the
9 conclusion that the expenses are totally in line; is
10 that correct?

11 A Well, that's a -- no, I would not say --
12 that's a gross simplification of what was done here.
13 Actually the 500,000, the staff had looked at the
14 500,000. They are talking about -- again, part of that
15 comes from the grant application that we have, where we
16 have some very intimate information about what they're
17 spending, and looked at those different elements and
18 compared those to elements that we have seen, not only
19 in Tampa, Hillsborough, but we have a lot of information
20 from grant programs we have all over our district. And
21 on the basis of that, it is considered to be reasonable
22 and in line.

23 Q When -- on Line 21 when you say, "surveys to
24 measure program effectiveness," has SSU laid any
25 information before your agency to suggest that their

1 conservation proposals are effective? Have they brought
2 you results and said, this is how many gallons of water
3 we have saved?

4 A I believe they have brought that to staff. I
5 have not seen that. I've seen some generalized
6 information, but I don't recall it specifically. I have
7 seen some of that. But they have brought some to the
8 district. They have to file -- as part of the reports
9 to the district, as part of their permit condition, they
10 do have to file reports on their conservation programs
11 with us.

12 Q So you invite the Commission to infer that
13 since they must have brought this information to the
14 district, that it must have been valid and the
15 Commission should thus accept it as true?

16 A Well, I don't know that I'm saying what the
17 Commission should do at this point. I'm just saying
18 that I would expect that we would have information at
19 the district right now. I can't tell you what state
20 that information is in or the quality of that
21 information at the time. So to say that the Commission
22 should consider it as is, I think is going a little bit
23 farther than what I would go.

24 Q On Page 14 you address -- I'll read you the
25 question your attorney asked. "What is your opinion

1 regarding Kim Dismukes' testimony that SSU conservation
2 costs which may have a positive public relations effect
3 should be disallowed?" Do you see that?

4 A Yes.

5 Q Now you and I can probably agree that
6 virtually any advertising, irrespective of how well-
7 intentioned, has an incidental public relations effect;
8 is that right?

9 A I would expect so, yes.

10 Q You're not testifying to the Commission, and
11 you're not rebutting testimony, are you, that stands for
12 the notion that irrespective of the substance of its
13 conservation content, that the advertising should be
14 disallowed for its incidental effect on public
15 relations, are you, sir -- or public image, I'm sorry?

16 A Could you rephrase the question again?

17 Q I'll try to. Do you rebut any notion -- well,
18 let me ask you this. Did Ms. Dismukes say, in your
19 estimation, that advertising should disallowed for its
20 incidental effect on public relations or public image?

21 A In my opinion, yes. My opinion was that
22 Ms. Dismukes came to the conclusion that any costs
23 associated with education that had an ancillary effect
24 of a public relations aspect to it, in terms of
25 improving the image of SSU, should be disallowed. And

1 my concern with that is that education programs in
2 themselves always -- almost always have some aspect of
3 image enhancing. And to segregate that out, I think,
4 provides a disincentive and also would compromise the
5 message that goes out as part of the education program,
6 and therefore I felt it was improper.

7 Q If a witness appeared before the Commission,
8 such as Ms. Dismukes, who suggested instead that
9 image -- the expenses associated with image promotion
10 should be disallowed when there is no attending -- when
11 there is no attending conservation message, would you
12 file a rebuttal to that? Would you care to rebut that
13 notion?

14 A Well, if -- in its absolute sense, I might
15 not. If you could show me that there is absolutely no
16 relation between the image of the utility and the
17 conservation message, I would accept that premise. I
18 would find it very hard to accept the fact that the
19 image of the utility is not going to have an impact on
20 the education message for conservation.

21 Q Sure. And I don't think I'll try and meet
22 that burden that you set because it's too steep for me.
23 But would you join me in thinking of a continuum where
24 the one ad is solely to promote the image of the utility
25 on the one hand, and on the other end the spectrum is

1 the message which is designed, at least, as was the
2 first example, to promote exclusively the notion of
3 conservation. We know that the last one that I
4 mentioned is permissible, do we not, the purely
5 conservation, at least intended to be purely
6 conservation?

7 A That's correct.

8 Q Okay. And the one which is intended to be
9 purely image building ought to be disallowed; should it
10 not?

11 A Again, education -- the elements of educating
12 people is to educate them to make a change. If the
13 change agents, those instituting the change, do not have
14 a positive image with those asking to be changed,
15 there's going to be a problem. It's going to affect the
16 change, which is going to affect the education message.
17 So again, I come back to the point, if in fact -- and I
18 don't know how this could be worked out with the
19 utility, or it could be proven, that the image of the
20 utility is totally separate from that same utility
21 giving an education message to change the habits of its
22 consumers. Yes, you could -- in my mind you could
23 segregate those costs. I just don't think you can break
24 that linkage.

25 Q I see. I don't think we're communicating.

1 There is a message in my mind, and it says, "Please
2 conserve water" and that's what it's intended to say,
3 and it incidentally enhances the image of SSU.

4 Now, the notion that that -- the expense
5 associated with that message should be disallowed is one
6 which you rebut?

7 A Correct.

8 Q There is another message I'm thinking of. It
9 says, "Think very warm thoughts about SSU, please, and
10 by the way, conserve water." Do you think that that
11 latter one -- given that, let me ask you further, to
12 assume further, that it is intended by the utility and
13 discussed by the utility itself to be image enhancing,
14 and that the conservation effect, if any, is
15 incidental. What about that? Would you choose to rebut
16 the disallowance of those expenses?

17 A Would you say that one more time, please?

18 Q I don't think I can. The point is we're
19 talking about the tail and the dog. In the one instance
20 the dog is the permissible message and the tail is the
21 impermissible message, and neither one of us would think
22 that that should be disallowed. But what about the
23 instance in which the dog is the impermissible message
24 and the tail is not, what do you do in that case?

25 CHAIRMAN CLARK: I think he's asking you

1 should the dog wag the tail or the tail wag the dog.

2 MR. McLEAN: Thank you, Madam Chairman.

3 That's what I was looking for.

4 WITNESS FARRELL: I think that -- and I'm
5 sorry, but I keep coming back to this point. I don't
6 think when you're talking about education you can
7 separate the tail from the dog. And that's what you're
8 asking to do. And I have a very difficult time doing
9 that, because I can understand that if the utility in
10 this case has an image, for whatever reason, that the
11 consumers absolutely 100 percent don't care what they
12 say, don't want to hear what they say, in fact may do
13 the opposite of what they say, that that then is going
14 to impact the education message, period. And therefore
15 to the extent that that needs to be addressed or may be
16 addressed, or would be addressed, as part of a message,
17 I think impacts the education. If in fact that could be
18 shown that that had no impact on the education, then I
19 think you should segregate those costs out. But I just
20 don't know how you segregate the image of the person who
21 is instituting the change message from the change
22 message itself.

23 Q All right, sir, I think I understand your
24 testimony. But let me put this to you, that no rational
25 witness would appear before this Commission, least of

1 all Ms. Dismukes, to suggest that the whole thing should
2 be disallowed because of its incidental message; would
3 you agree with that?

4 A I understand. I understand. Yes, I agree.

5 Q And you wouldn't choose -- you don't offer in
6 rebuttal -- you don't offer rebuttal to a witness who
7 would say that if the whole intent and effect of the
8 message were public relations, you don't offer any
9 rebuttal to the disallowance of expenses such as that;
10 do you?

11 MR. ARMSTRONG: Objection. Madam Chair. I
12 think we've gone through this about five times now. I
13 think we have a dog that doesn't even have a tail at
14 this point. That's what the witness has said a number
15 of times.

16 CHAIRMAN CLARK: Mr. McLean, I do think we're
17 covering the same ground.

18 MR. MCLEAN: I do too.

19 Q (By Mr. McLean) One last question, I promise
20 Mr. Farrell -- one last line of questions, and that is
21 on Page Line 22, you say, dealing with the weather
22 normalization --

23 A Excuse me, what page, sir?

24 Q I'm sorry, let's deal with Page 21.

25 A Page 21, line?

1 Q Line -- at the bottom of the page. You're
2 dealing with the weather normalization clause there, and
3 you offer the observation on Page 22, "Because of a
4 utility's need to minimize its financial risk that
5 occurs due to variations in consumption, SSU's Weather
6 Normalization provision allows the utility to adjust its
7 charges in a rainy year," et cetera.

8 Now I want to ask you, what is the source of
9 your concern about the utility's need to minimize its
10 financial risk?

11 A Well, I think the point of the matter is we
12 want the utilities to be -- how do I phrase this? -- to
13 be viable, to be a public supply or to be a private
14 concern. If in fact they are unable to put in a water
15 conserving rate structure because it impinges on their
16 financial stability, they are, one, going to resist our
17 regulations to do so, and therefore, if it is a
18 legitimate -- if it's a legitimate aspect of private
19 business to have an acceptable rate of return, and that
20 certainly is associated with the risk factor, that it
21 would seem to us that that would be a reasonable thing
22 to have in any type of rate structure that they're
23 setting up. Again the word here is "reasonable."

24 Q Are you urging this Commission to ensure that
25 this monopolistic utility remains financially viable?

1 A No, I did not say that. I just said that if
2 in fact we are going to have rules at the district, and
3 we impose rules at the district, we have to understand
4 and accept the economic viability of those rules. And
5 the economic viability of rules are that our rules need
6 to allow private sector, be it utilities or any group
7 that we regulate out there, to deal with the risks of
8 business and acceptable risks of business, and that our
9 rules have to understand those if we put those forward.
10 And for them to then put in a rate structure that
11 minimizes their risk to keep their organization viable,
12 to us is acceptable. And we utilize that same standard,
13 be it a utility, be it a mining operation, be it a
14 development operation.

15 Q When you say that you hold out as
16 justification for the weather normalization charge, on
17 your very last page, the notion that a utility will be
18 more inclined to promote conservation if it's made whole
19 by the effects of the conservation it inspires -- it's a
20 very rough paraphrase, but would you accept the notion?

21 A Well, I think it's a very rough paraphrase and
22 I'm not sure I accept your paraphrase on it.

23 Q Let's go with what you say. I think it would
24 be better. "With this adjustment mechanism in place,
25 the utility would have greater assurance that it will

1 recover its revenues and therefore will be more inclined
2 to diligently promote conservation to its customers."
3 That's what the utility -- you're suggesting that as an
4 acceptable and good goal, one that you recommend to the
5 Commission?

6 A Yes.

7 Q Now, let me ask you this, and it relates back
8 to some earlier questions I asked you. To the extent
9 that that weather normalization clause takes place, to
10 the extent that its accepted and enacted by the
11 utility -- accepted by the Commission and enacted by the
12 utility -- is it not true that to the extent a customer
13 does conserve because of one of the variety of
14 conservation programs, that the customer will see less
15 impact on his or her bill than that customer would see
16 in the absence the weather normalization charge --
17 clause?

18 A Would you say that one more time?

19 Q Let me set it up differently. Two identically
20 situated customers.

21 A Okay.

22 Q One -- all else equal. However, one is
23 affected by a weather normalization clause and the other
24 unaffected.

25 A Okay.

1 Q As each customer decides whether to vary his
2 or her bill or whether to buy the next gallon of water,
3 the customer with the weather normalization clause will
4 see less variation in his or her bill than the
5 customer -- I'm sorry, the customer with the WNC will
6 see a lesser variation and thus a lesser conservation
7 signal in their bill than that which will be seen by the
8 other customer I described. Is that true?

9 A No, I don't believe so. I will see that the
10 person -- the individual who has the weather -- excuse
11 me, what is the right word? -- Weather normalization
12 clause, excuse me. Brain lapse there -- will see less
13 fluctuation in a bill. Now in that itself -- and the
14 other person will see wider fluctuations. The issue
15 with the person who sees wider fluctuations you might
16 think would have a greater incentive or a greater
17 message to them, but that message could be masked by
18 several things, and that's the issue at hand, because
19 that decline in that one month for that individual could
20 be solely due to rainfall. In fact, their usage could
21 have gone up dramatically in that month.

22 Q Similarly situated customers, all else equal
23 in my example, they both get the same amount of rain; do
24 you agree with that?

25 A Yes.

1 Q So what you're saying is one of those
2 customers will read the signals more clearly than the
3 other; is that your testimony?

4 A Well, the problem is the person may get mixed
5 signals. He may look -- that individual who does not
6 have the weather normalization clause may look at his
7 bill and say, "My goodness, look how much I've conserved
8 this month, I've done everything right," when in fact he
9 really did not conserve anything more than he did in the
10 month before, but there's a great deal of rainfall that
11 has gone on in the system, because it may be in the
12 month of June, and he's not irrigating his property.
13 The person who gets the weather normalization clause
14 will not see severe fluctuations in their bill, minor
15 fluctuations.

16 However, the other key element that's in that
17 bill is the historical usage information, which is very
18 key. It's the coupling of that historic use information
19 with the normalization clause that sends a message to
20 that individual, conserve, and levelizes out that
21 financial incentive or disincentive that that person
22 sees every month.

23 Q Mr. Farrell, is it your testimony that the
24 clever folks I represent can't come to the same
25 determination you just came to? Are they not clever

1 enough to read and perceive exactly as you just did?

2 A I would suggest the average person does not
3 come to that conclusion. We have situations over and
4 over and over again, and I can go into detail, about
5 people who have absolutely no idea what generates their
6 bill, how much usage they have, how much impact rainfall
7 has on it, irrigation, or any sort of those features.

8 Q Do you believe that materiality, income,
9 property and those things might be variables in what you
10 just said?

11 A Sometimes, yes, sometimes no. I've seen it in
12 all classes of education.

13 Q But you can make the -- but you can make that
14 calculation, right?

15 A I can make that calculation?

16 Q Well you just did; am I right? You can
17 perceive what the correct signals are, but the people I
18 represent can't. Is that your testimony?

19 A I'm not going to generalize it that way. What
20 we're saying is that when someone gets a bill for a
21 month and in itself it has a pricing issue on it, in one
22 month its high, in one month it's low, the average
23 person has no idea why it's high one month and low the
24 next month, with respect to those things, because they
25 do not know -- and the average person does not know

1 where the consumption in their home is.

2 Q The number of gallons or the --

3 A The number of gallons, in many cases, or how
4 that gallonage is broken down. As an example, most
5 people don't realize that 50 percent of their use in
6 their home is irrigation. People are shocked when we
7 tell them that. They don't realize that 50 percent goes
8 to irrigation in a home. So a bill in itself that says
9 here's how many gallons you have, or doesn't say that in
10 many cases, or does not provide historical information,
11 can send a very mixed message from month to month when
12 it's high or when it's low.

13 Q And thanks to us government folks, they'll
14 soon be able to understand; is that right?

15 A Excuse me?

16 Q I'll withdraw the question. And I thank you
17 for your on-point answers. Thank you very much, sir. I
18 have no further questions.

19 CHAIRMAN CLARK: Mr. Jacobs.

20 MR. JACOBS: Madam Chairman, I was going to
21 ask Mr. Farrell if he knew where Nassau County was, but
22 I was fearful of his response, so I'm not going to ask
23 him and I have no further questions. It wouldn't be a
24 fair test because he's been sitting here and he heard
25 the answer earlier.

1 CHAIRMAN CLARK: That's true. Mr. Twomey.

2 MR. TWOMEY: Yes, ma'am, thank you.

3 CROSS EXAMINATION

4 BY MR. TWOMEY:

5 Q Good afternoon, Mr. Farrell.

6 A Good afternoon.

7 Q I only want to touch on a couple areas. The
8 first one I'm curious about, though, is I thought I
9 heard you saying to Mr. McLean that in the dog/tail
10 deal, that image enhancing by a utility may be a
11 legitimate conservation expense because customers have
12 to trust the utility before conservation can work. Are
13 you saying that, or did I just read that in there?

14 A No, I believe that's a fair assessment of what
15 I said.

16 Q So the -- would you agree that the worse the
17 current image of any given company, the more expense to
18 repair the image?

19 A I wouldn't say that per se. I'm not a
20 marketing person. I'm not a public relations person. I
21 don't know what it costs to improve an image or not
22 improve an image.

23 Q I just mean, wouldn't you intuitively know
24 that it would cost more to improve a real bad image as
25 opposed to just a modestly-impaired image?

1 A Sir, I really don't have an opinion on that.
2 I'm sorry.

3 Q Okay. Mr. McLean asked you about the rate
4 structure, and you said that -- you say at Page 19 that
5 uniform rates can also promote conservation when applied
6 under appropriate circumstances, right?

7 A Would you tell me what -- excuse me, Page 19,
8 what line are we talking about?

9 Q 19, starting at Line 23. See it?

10 A Yes, sir.

11 Q Would the converse of that be that -- and let
12 me ask you, because you have uniform rates in quotes,
13 right?

14 A Yes, sir.

15 Q Why do you have that -- what do you mean by
16 uniform rates in quotes? What do you mean by uniform
17 rates?

18 A Well, uniform rates basically has, again, a
19 linear relationship -- again, I'm not a rate expert on
20 this, but my understanding is that a uniform rate has a
21 linear relationship between units consumed or sold and a
22 price. In other words, X price per unit, multiply the
23 number of units times price and you have a uniform rate.

24 Q Now, do you understand that in this case that
25 SSU is asking for what I think is most appropriately

1 technically titled "single tariff rates," whereby it is
2 asking for the same base facility charge and the same
3 gallonage charge to be charged for all of its water
4 systems in the state, with the exception of two RO
5 plants, irrespective of the costs of providing service
6 at those locations? Did you understand that to be the
7 case?

8 A I'm aware of that. I'm not providing
9 testimony, nor do I have any expertise in that area.

10 Q Right. But I just only asked it because, are
11 you aware that that concept in these proceedings has
12 been commonly referred to as uniform rate structure?

13 A I am aware of that, sir.

14 Q But in contrast to that, by uniform, you mean
15 the linear relationship with the charge for gallonage?

16 A Yes, sir.

17 Q So you're not in any respect supporting,
18 through your testimony, their single tariff rate
19 proposal?

20 A That is correct, I am not testifying about
21 that.

22 Q Now -- and you apparently endorse the Brown &
23 Caldwell study that was commissioned by your agency?

24 A That's correct.

25 Q On Page 20 -- and I'll only go into this

1 briefly because Mr. McLean has touched on it. You
2 believe that the base facility gallonage rate structure
3 is or can be considered a conservation rate structure,
4 right?

5 A That's the opinion of my staff and therefore
6 it's my opinion, that's correct.

7 Q And apparently you believe that, because on
8 Page 21, starting at Line 1, you say, "SSU's rate
9 structure meets SWFWMD's requirements because it sends a
10 signal to the customers that the more water consumed,
11 the more you'll pay," correct?

12 A That's correct.

13 Q And that's because there's -- that's because
14 there is a part of the revenue responsibility and the
15 gallonage charge with the notion that the more gallons
16 you consume, the more price or cost that's reflected in
17 the bill, correct?

18 A That's correct.

19 Q Now, Mr. McLean asked you some questions about
20 which was the most economically efficient and the most
21 cost-effective, I suppose, more effective in
22 conservation terms on the split, that is the revenue
23 assignment to the base facility charge on -- and the
24 gallonage charge. Do you recall that?

25 A Yes.

1 Q Now, I think you agreed with him -- let me ask
2 you this way. Don't you agree that the more revenue
3 that's assigned to the gallonage portion, vis-a-vis the
4 base facility charge, that the more of a conservation
5 message you send -- is sent?

6 A In and of itself, yes.

7 Q So if you compared the -- if the utility in
8 fact is charging rates now that have a -- have only 63
9 percent -- I'm sorry, 67 percent of the revenue
10 responsibility assigned to gallonage, and they want to
11 reduce that to 60 percent, all things other held equal,
12 doesn't that reduce the conservation value of the split?

13 A I believe I've already answered this question,
14 and I believe I said all things being equal, the answer
15 is yes.

16 Q I'm sorry, I didn't mean to ask you these
17 questions twice. Now, the Brown & Caldwell study says
18 that a rate structure has to be equitable. Do you --
19 and if you need, I can cite you to the page, but would
20 you -- are you in agreement with the notion that a rate
21 structure has to be equitable?

22 A I think if we're getting into the Brown &
23 Caldwell study, I think we're getting out of my level of
24 expertise with this. I would yield that to Mr. Yingling
25 who is going to testify on our behalf on that issue.

1 Q Okay. Do you know enough about rate
2 structure, Mr. Farrell -- and you have, as you said, a
3 great many years of experience, both state, national and
4 internationally in this area -- would you agree with me
5 that a water rate that is below the cost of providing
6 the water service, cannot be considered a water
7 conservation rate structure?

8 A Again, we're talking about rates, and I may
9 have experience in a lot of issues, but I do not have a
10 great deal of experience in rate structures, and
11 therefore I would feel uneasy answering that question.

12 Q Would you agree with me that when you sell
13 anything at a price that is below the incremental cost
14 of providing it, that you encourage consumption of that
15 product or service?

16 A That -- in itself, that answer -- we could
17 talk for an hour over that question. Depending on what
18 the demand is for that. There's a lot of factors that
19 come into that. Just selling something below the
20 incremental cost of what it's worth does not necessarily
21 instill demand in that particular product. You
22 understand there's more to it than just the price.

23 Q If a -- you spoke about -- what are they
24 called, WUCAs, or what is it, the --

25 A Water resource caution areas?

1 Q Yes, sir. So those are areas that you have
2 recognized have special need for conservation more than
3 other areas in your district, right?

4 A Well, they have need for a number of different
5 things. In our particular district, as an example, we
6 have conservation measures across the entire district,
7 even outside of water resource caution areas, but we do
8 have some additional efforts in the areas of
9 conservation going on within those particular areas.

10 Q Do you know enough about rate structures and
11 economics generally, Mr. Farrell, so that if I told you
12 that if it occurred that a utility within one of your
13 water caution areas, customers there had their rates
14 being subsidized by monies coming in from other areas so
15 that they -- their rates were below the cost of
16 providing service, would that cause you any concern,
17 vis-a-vis conservation?

18 A Not in and of itself. Again, there could be
19 other issues in there. As an example, within those
20 areas, if there is a permit associated with that, we
21 have per capita rates in there. And the per capita
22 rates, from our perspective, are irrespective of price.
23 They're required to use so much water regardless what
24 the price may be, what the water requirement needs in
25 those areas are, and there's a whole lot of aspects in

1 there that we could look at.

2 Our first and fundamental issue is, are they
3 conserving the water that they have? Regardless of the
4 pricing structure or the mechanisms going on in there,
5 are they conserving the water? That's our first and
6 foremost concern. Beyond that, the permittee, be it the
7 utility or otherwise, really determines the mechanisms
8 in many cases to do that. So I don't know if I've
9 answered your question or not, but the answer to your
10 question is, no, in and of itself, I would not be
11 concerned with that. However, I would be concerned with
12 that if there was issues about not meeting per capita
13 regulations that we have put on the permittee.

14 Q But your testimony, just so I understand it
15 correctly, is that vis-a-vis conservation, you are not
16 concerned -- your district is not concerned with
17 utilities within your jurisdiction being subsidized,
18 having rates subsidized at below cost levels by revenues
19 coming in from other areas; is that correct?

20 MR. ARMSTRONG: Object, Madam Chair. How many
21 times are we going to go through this question?

22 MR. TWOMEY: I'm just making sure that --
23 well, he gave me a long answer -- that his answer to
24 that is that they're not concerned with subsidies coming
25 in from other systems.

1 CHAIRMAN CLARK: Would you restate your
2 question, please?

3 Q (By Mr. Twomey) I want to make sure I get the
4 correct notion that I understand you to say that you and
5 SWFWMD aren't concerned if it can be demonstrated that
6 utilities in your district, particularly in your water
7 conservation areas, are receiving subsidies from other
8 systems, other SSU systems, such that they are consuming
9 water at rates that are below the cost to provide
10 service. And I heard you say you're not concerned with
11 that.

12 A In and of itself we are not concerned with
13 that particular aspect, that's correct.

14 MR. TWOMEY: Fine. Thank you very much.
15 That's all I have.

16 CHAIRMAN CLARK: Staff

17 CROSS EXAMINATION

18 BY MS. CAPELESS:

19 Q Thank you. Good afternoon, Mr. Farrell.

20 A Afternoon.

21 Q Are you aware that the water management
22 districts are not charged with the statutory authority
23 to set water rates?

24 A Yes.

25 Q Are you aware that the statutes provide the

1 Public Service Commission with exclusive jurisdiction
2 over each utility it regulates with respect to its
3 authority, service and rates?

4 A I am.

5 Q Would you agree that an important aspect of
6 setting rates is to ensure that utility customers do not
7 pay for unnecessary or imprudently incurred expenses?

8 A Yes.

9 Q Did your review of SSU's proposed water
10 conservation program enhancements consist of a review of
11 the elements of those programs?

12 A In a general way, yes.

13 Q But your review did not include a review of
14 the itemized expenses that SSU attributed to its
15 conservation programs; is that right?

16 A That is correct.

17 Q Starting at the bottom of Page 13 of your
18 testimony and continuing on to Page 14, pardon me, you
19 state that SSU's proposal is entirely reasonable and is
20 totally in line with conservation program expenses of
21 other utilities, correct?

22 A That is correct.

23 Q Do you have any knowledge of whether SSU paid
24 too much for any specific itemized expense?

25 A No, I do not.

1 Q So your testimony is that SSU's programs
2 themselves are valid and needed, correct, but you don't
3 testify as to how much the programs should cost; is that
4 right?

5 A Well, I'm not sure I would characterize it
6 that way. I would say that yes, they are valid and
7 needed, and what I am testifying to is, is that the
8 gross costs that you see here, the 500,000 for those
9 populations served and the major breakdown elements
10 within that \$500,000 are considered to be reasonable and
11 in line with what other people are using, other
12 utilities are using within our district, and therefore
13 my determination was they are reasonable.

14 Q Thank you. With regard to the Marco Island
15 water audits project, again, you reviewed the elements
16 of that project, right?

17 A No, I did not.

18 Q Are you familiar at all with the Marco Island
19 water audits project?

20 A Generally. We have some information, but not
21 the cost elements, per se, other than the gross cost
22 element.

23 Q Thank you. Do any of the water use caution
24 areas presently have perc ponds as a means of effluent
25 disposal?

1 A First of all, water resource caution areas. I
2 think you said water use caution areas.

3 Q Water resource caution areas, thank you.

4 A Excuse me, could you repeat?

5 Q As a means of effluent disposal.

6 A Yes.

7 Q In your opinion, are perc ponds an effective
8 method of conservation?

9 A They're an element of a reuse -- are you
10 talking about perc ponds in relationship to using
11 reclaimed water?

12 Q I guess what I'm saying is, do they cause a
13 reduction of demand from the water supply? In that
14 sense, are they an effective means of conservation?

15 A Well, again, it depends how you utilize a perc
16 pond in a situation. Could you be more specific?

17 Q Could you define what you mean by perc pond?

18 MR. ARMSTRONG: Objection. Madam Chair, I
19 don't know what this has to do with this witness's
20 testimony.

21 MS. CAPELESS: We're trying to get a feel for
22 what the Water Management District's definition is of
23 reuse.

24 CHAIRMAN CLARK: I think the objection is it's
25 outside the scope of his testimony.

1 MS. CAPELESS: Okay. Thank you.

2 Q (By Ms. Capeless) On Page 5 of your
3 testimony -- I'll move on then -- starting at Line 14,
4 you state that SWFWMD recently proposed rules for the
5 Southern Water Use Caution Area establishing minimum
6 groundwater levels for an eight-county area; is that
7 right?

8 A That's correct.

9 Q What is the eight-county area that you're
10 referring to?

11 A Starting at the north, the southern portion of
12 Hillsborough County, Manatee, Sarasota, parts of
13 Charlotte, parts of Highlands, all of DeSoto, all of
14 Hardee, parts of Polk.

15 Q Okay, now you say that stress to the
16 groundwater system has occurred. That's on Page 3 of
17 your testimony, right?

18 A Let me just see. Could you give me a line,
19 please?

20 Q Lines 1 and 2.

21 A That's correct.

22 Q Would you agree that the presence of perc
23 ponds has not contributed to water conservation in that
24 area?

25 A Again, when we talk about perc ponds, you have

1 to help me here. I mean there's different -- there's
2 perc ponds for storm water, perc ponds for wet weather
3 discharge, perc ponds for normal season discharge. Perc
4 ponds is not a very identifiable term in itself.

5 Q How about for disposal ponds?

6 MR. ARMSTRONG: Objection. Madam Chair, the
7 same objection. How is this relevant to this witness's
8 testimony? We're trying to get the agency witnesses on
9 and off today, and some of them have some constraints
10 I've just been made aware of, Madam Chair.

11 CHAIRMAN CLARK: We are not going late
12 tonight, just for your information. Go ahead.

13 MS. CAPELESS: Madam Chairman, the witness
14 testifies that there is stress to the groundwater
15 system. We're just trying to develop what he means by
16 that.

17 CHAIRMAN CLARK: What was your question?

18 Q (By Ms. Capeless) Are the presence of
19 disposal ponds -- has the presence of disposal ponds
20 contributed to water -- to the lack of water
21 conservation in those areas?

22 A I'm not sure I understand the question.

23 Q Would you agree that the presence of perc
24 ponds or disposal ponds has not contributed to water
25 conservation in that eight-county area?

1 A Perc ponds have contributed to conservation in
2 that eight-county area. They have contributed.

3 Q If that's true, then what is the purpose for
4 reuse?

5 A The purpose of reuse is to take previously
6 unusable water, wastewater discharge, and taking that
7 water now and taking it and cleaning it up to higher
8 standard and moving it back into the system to offset
9 potable -- in some cases potable water quality needs.

10 Q Would you agree that if a user, such as a golf
11 course, has a consumptive use permit and its own well,
12 it is placing a separate demand on water supply sources?

13 A That's correct.

14 Q Does the state of Florida need a method of
15 conservation which will cause a reduction in the demand
16 for water taken from the aquifers and other supply
17 sources?

18 A Where indicated, yes, which is what we've done
19 in the Southern Water Use Caution Area.

20 Q Would you agree that a customer who has his
21 own water supply, or who has a consumptive use permit
22 from a water management district, who agrees to use
23 treated effluent in place of pumping water from his own
24 wells, that that would cause a reduction in the demand
25 on water supply sources?

1 A Yes.

2 Q Okay. And then on Page 6 of your testimony,
3 starting at Line 15, you cite to Rule 62-40.401(4)
4 Florida Administrative Code, and you say that it
5 provides that conservation of water shall be required
6 unless not economically or environmentally feasible,
7 correct?

8 A That's correct.

9 Q When is conservation not environmentally
10 feasible?

11 A I don't know. I can't think of an example of
12 that. This language appears in almost all regulatory
13 rules that we see. The language goes in, "economically
14 or environmentally feasible." I haven't seen a case
15 presented to us where conservation was considered to be
16 not environmentally feasible. I will also tell you that
17 this language does not appear in district rules. We do
18 not allow for the infeasibility to address economics or
19 the environmental issue.

20 Q Thank you. On Page 8 of your testimony,
21 starting at Line 5, you state that SWFWMD has proposed a
22 requirement of 110 gallons per day per person by the
23 year 2004 in the Southern Water Use Caution Area, right?

24 A That's correct.

25 Q Does the Water Management District have rules

1 or laws in place to effect that goal?

2 A The 110?

3 Q Yes, sir.

4 A No. That is a proposed rule that is currently
5 in the Department of Administrative Hearings for a final
6 order, ruling.

7 Q With respect to the proposed 110 gallons per
8 day per person consumption requirement, do you know
9 whether an investor-owned utility would have any means
10 of regulating customer water consumption?

11 A Could you restate that, please?

12 Q Maybe -- let me rephrase it. By what means
13 does the Water Management District propose enforcement
14 of this consumption requirement by the private
15 utilities?

16 A In the proposed Southern Water Use Caution
17 Area rules, we have a requirement for all permittees
18 over certain thresholds, as we do an existing rule, that
19 says your permit will be restricted to 110 gallons per
20 capita by the Year 2004. It's the same rule language we
21 have now in existing rule at 150 gallons per capita.
22 That is all the permit allowances that will be given on
23 per capita base. And beyond that, if the utility uses
24 beyond that amount, they will be in violation of the
25 permit and the permit can have enforcement action up

1 unto revocation.

2 Q Do you know whether an investor-owned utility
3 would have any means of regulating customer water
4 consumption under those proposed rules?

5 A Would have any means of doing that?

6 Q Yes, sir.

7 A I'm assuming that they would -- you know,
8 investor-owned utility would, again, put into place the
9 conservation elements that are required by the district
10 in terms of rate structures, conservation programs,
11 et cetera, and again, work those issues out with the PSC
12 to effect those changes.

13 MS. CAPELESS: Thank you, sir. No further
14 questions.

15 CHAIRMAN CLARK: Redirect?

16 MR. ARMSTRONG: No redirect. Thank you.

17 CHAIRMAN CLARK: Exhibits?

18 MR. ARMSTRONG: The Company moves Exhibit 200,
19 I believe it is.

20 CHAIRMAN CLARK: That is the number. It will
21 be entered in the record without objection.

22 (Exhibit No. 200 received into evidence.)

23 CHAIRMAN CLARK: Mr. Farrell, I probably
24 neglected to say this to the other DEP witnesses, and
25 other water management witnesses. I just wanted to say

1 to you on behalf of the Commission, I appreciate you
2 appearing, and likewise the DEP witnesses. I think all
3 parties have found it helpful. I know we've called
4 some -- asked some people to testify. The utility has
5 asked people to testify, and likewise, Mr. Twomey has
6 asked people to testify. I know these aren't always the
7 most pleasant circumstances to convey information to
8 each other, and I certainly appreciate your taking the
9 time to come here and provide that information to us.

10 WITNESS FARRELL: Madam Chairman, it's our
11 pleasure to always cooperate on these issues. Please
12 feel free to call us in the future. Thank you.

13 CHAIRMAN CLARK: Thank you. Mr. Armstrong,
14 who is next?

15 MR. ARMSTRONG: Madam Chair, if we could,
16 we've requested the parties to allow John Sowerby to
17 take the stand.

18 CHAIRMAN CLARK: Is there any objection to
19 that? I've heard no objection. We can go with
20 Mr. Sowerby?

21 MR. RILEY: I have one question. Was Sowerby
22 going to be -- and then you said you wanted Potts the
23 last time I heard.

24 MR. ARMSTRONG: Potts was supposed to be next,
25 but I guess Matt spoke with you about putting Sowerby

1 ahead of Potts.

2 MR. RILEY: It's been switched twice now.

3 That's fine.

4 CHAIRMAN CLARK: So you're prepared for
5 either, is that right, Mr. Riley?

6 Go ahead, Mr. Armstrong.

7 MR. ARMSTRONG: I've just been notified he
8 hasn't been sworn. He came in late, Madam Chair.

9 CHAIRMAN CLARK: Would you stand and raise
10 your right hand?

11 JOHN SOWERBY

12 was called as a witness on behalf of Southern States
13 Utilities, Inc., and having been duly sworn, testified
14 as follows:

15 DIRECT EXAMINATION

16 BY MR. ARMSTRONG:

17 Q Could you please state your name and business
18 address?

19 A My name is John Sowerby. Business address is
20 2600 Blair Stone Road, Tallahassee, Florida.

21 Q And by whom are you employed?

22 A Florida Department of Environmental
23 Protection.

24 Q Would you please provide your educational
25 background and work experience?

1 A I have a bachelor of civil engineering degree
2 from the University of Delaware, a master of science and
3 environmental engineering degree from the Johns Hopkins
4 University. I've worked in the fields of water and
5 wastewater engineering for approximately 19 years, and
6 I'm a member of the American Waterworks Association and
7 the Water Environment Federation.

8 Q Okay, thank you. Are you a registered
9 professional engineer in Florida?

10 A Yes, I am.

11 Q Could you tell us your current position with
12 DEP?

13 A I'm a Professional Engineer III in the
14 drinking water section.

15 Q Could you briefly describe your duties in that
16 position?

17 A My main duties are involvement in rulemaking
18 concerning drinking water -- concerning the drinking
19 water program in public water systems. I also get
20 involved in providing technical assistance to our
21 district offices and our approved county public health
22 units concerning permitting and compliance activities,
23 and I work on special projects from time to time.

24 Q Have you ever testified in that capacity
25 before?

1 A No.

2 Q Could you briefly state the purpose of your
3 testimony today?

4 A As I understand it, it is to provide testimony
5 concerning the DEP rules, positions and correspondence
6 as they relate to used and useful.

7 Q Have you been involved with the development of
8 the FPSC's used and useful policies or rules?

9 A I have participated in a number of workshops
10 involving the used and useful rulemaking. I have
11 prepared written comments concerning the used and useful
12 rule, proposed rules.

13 Q And you are familiar, are you not, with the
14 letter dated June 29th, 1995 from Richard Harvey to
15 Mr. John Williams at the Commission?

16 A Yes, I am.

17 Q Did you in fact draft that letter?

18 A I was the principal drafter of that letter,
19 yes, I was.

20 Q Could you please explain the circumstances
21 under which that letter was prepared?

22 A It was prepared in response to a request for
23 comments on a draft rule concerning used and useful, a
24 request from the PSC. I, once again, was the principal
25 writer of that letter. I incorporated comments that

1 were given to me from the domestic wastewater section.
2 The letter was discussed with the administrator of the
3 drinking water section, the administrator of the
4 domestic wastewater section, and to the best of my
5 recollection it was reviewed by the chief of the Bureau
6 of Drinking Water and Groundwater Resources, the chief
7 of the Bureau of Water Facilities Planning and
8 Regulation, and by staff in the division director's
9 office, director of the Division of Water Facilities.

10 Q And for the convenience of the parties and the
11 Commission, that is a letter that has been identified --
12 it was previously identified as RMH-4, and it's an
13 eight-page -- it consists of eight pages.

14 In paragraph 2 of that letter, Mr. Sowerby, it
15 states --

16 MR. RILEY: Madam Chairman, could I object to
17 this line of questioning? And the reason for the
18 objection is I am sure that Mr. Sowerby is very familiar
19 with the letter and the memo attached to it, but I
20 believe that this witness is giving testimony to
21 buttress the prefiled rebuttal testimony of Southern
22 States' witness as opposed to rebutting the direct
23 testimony of our witness. And if in fact he's being
24 offered to rebut specific testimony of our witness, I
25 would like for Mr. Armstrong to suggest what language in

1 our testimony he is rebutting.

2 MR. ARMSTRONG: Madam Chair, he's here to give
3 the DEP's presentation, or position, on used and
4 useful. Mr. Riley's witnesses have proposed a zero
5 margin reserve for water and wastewater plant. This
6 witness is responsible for having participated in
7 workshops with this Commission, having drafted this
8 letter. We wanted to make sure that we brought to this
9 Commission those people at DEP that had the
10 responsibilities for the preparation of this letter. He
11 is here to offer the DEP's position and to rebut the
12 recommendation made by Public Counsel for a zero margin
13 reserve.

14 CHAIRMAN CLARK: I'll allow the question.

15 MR. RILEY: Madam Chairman, could I make one
16 point? We've already been through extensive questioning
17 that these witnesses do not understand our terms of
18 margin reserve, and in fact when they use the term
19 "reserve capacity," they are not referring to margin
20 reserve. And I suggest that this letter and the memo
21 attached to it that is speaking of reserve capacity in
22 no way rebuts the -- Mr. Bidy's request for a margin
23 reserve. We're talking about two completely different
24 concepts.

25 CHAIRMAN CLARK: Thank you, Mr. Riley. I'll

1 allow the question.

2 MR. ARMSTRONG: Thank you, Madam Chair.

3 Q (By Mr. Armstrong) If you refer to paragraph
4 2 of that letter, Mr. Sowerby, it states, "As you can
5 see, we have a substantial number of comments. We
6 consider two of these comments, Comments 18 and 19, to
7 be especially significant." Now referring to those
8 comments, why do you consider those comments especially
9 significant?

10 A With regard to Comment 18, the -- it was
11 considered especially significant because it -- we
12 believe it conflicts with our domestic wastewater rules
13 concerning capacity analysis reports. With regard to
14 Comment 19, we believe the proposed used and useful
15 rules conflicted with statutes related to reuse.

16 Q Thank you. Regarding Comment 18, could you
17 please briefly describe the PSC's position concerning
18 the appropriate margin reserve proposed in that comment?

19 A Could you repeat the question? You want me to
20 explain the PSC's position?

21 Q DEP's, I'm sorry, Mr. Sowerby. I guess what I
22 would like you to do, if you could, is summarize the
23 DEP's position reflected in that letter at Comment 18
24 regarding the margin reserve.

25 A The department's position is the domestic

1 wastewater rules, we believe, implicitly require a
2 five-year reserve capacity or a margin reserve, and --
3 which conflicts with, as I recall, a three-year margin
4 reserve proposed in the PSC's proposed used and useful
5 rule.

6 Q Do you believe that a five-year margin reserve
7 would promote environmental protection and public
8 health?

9 A Yes, I do.

10 Q Do you believe a five-year margin reserve
11 would also have -- would also present administrative
12 efficiencies for the agencies?

13 A It certainly could in some circumstances.

14 Q Do you believe that a five-year margin reserve
15 would promote economies of scale?

16 A To some degree, yes.

17 Q Can we summarize your testimony,
18 Mr. Sowerby -- and if you don't agree with the summary,
19 please let the Commission know -- but would you agree
20 that a five-year margin reserve would make the
21 Commission's policy on margin reserve --

22 MR. RILEY: Excuse me, I object to this
23 question. I think this -- he is seriously leading this
24 witness, and I appreciate him just posing the question
25 and allowing him to answer it.

1 MR. ARMSTRONG: This is not leading. He has
2 already testified as to the statement I made in my
3 question and I'm trying to expedite the questioning.

4 CHAIRMAN CLARK: Rephrase the question,
5 Mr. Armstrong.

6 Q (By Mr. Armstrong) Do you believe a five-year
7 margin of reserve would be consistent with DEP's
8 policies for proper planning for water and wastewater
9 facilities?

10 A Yes, I do.

11 Q Do you believe a five-year margin reserve
12 would also be an assistance in achieving consistency
13 between the DEP's rules and the Commission's margin
14 reserve rule?

15 A Yes.

16 MR. ARMSTRONG: I have nothing further.

17 COMMISSIONER DEASON: Mr. Armstrong, let me
18 ask you -- oh, you're finished?

19 MR. ARMSTRONG: I have nothing further.
20 Sorry.

21 CHAIRMAN CLARK: Mr. Riley.

22 CROSS EXAMINATION

23 BY MR. RILEY:

24 Q Mr. Sowerby, as to this June 29 letter and
25 attached comments, both use the term "reserve capacity";

1 is that correct? That utilities require certain reserve
2 capacities to meet DEP requirements, and both in terms
3 of reporting and other environmental requirements?

4 A The term "reserve capacity" is used in that
5 letter, yes, if that was the question.

6 Q And that term does not in any way suggest
7 which customer groups, either current or future, will
8 bear the cost of that reserve capacity that DEP feels is
9 appropriate; is that correct?

10 A No, I do not believe that's correct.

11 Q Would you say how it is not correct?

12 A The term "reserve capacity" as used in this
13 letter was probably somewhat carelessly used as an
14 interchangeable word for margin reserve.

15 Q Do you realize that your testimony is
16 different than Mr. Hoofnagle's earlier today?

17 A No, I do not.

18 Q When I asked him did it matter to DEP, so long
19 as the reserve capacity was compensated, as to whether
20 it would be compensated by current or future ratepayers,
21 I believe he answered that question that DEP would not
22 care. Would you suggest a different answer?

23 A I don't believe I said anything to contradict
24 that statement you just made.

25 Q Okay, so it wouldn't matter to DEP then which

1 customer group would bear the cost of this needed
2 reserve capacity; is that correct?

3 A I don't believe that's entirely correct, no.

4 Q Explain how it is not correct.

5 A We -- I believe -- it's important that the
6 utility comply with DEP rules, and compliance with those
7 rules would require some degree of reserve capacity.
8 And the reserve capacity is used and useful, and because
9 it's used and useful, it would seem from -- seem to me
10 that PSC's rules are implying that the current customers
11 should pick up at least some of that cost. But you're
12 asking me to interpret their rules and I would prefer
13 not to do that any further.

14 Q I'm not asking you to interpret any PSC
15 rules. I'm just asking you why -- did I understand you
16 to say that DEP does not care which customer group
17 contributes to this reserve capacity? Was that your
18 answer?

19 A Our rules do not directly dictate who is going
20 to pay for this capacity, that's correct.

21 Q And this comment section memo attached to the
22 June 29 letter, neither the letter or this comment
23 section suggests which customer group should pay; is
24 that correct?

25 MR. ARMSTRONG: Objection. The letter speaks

1 for itself. The letter and the comments referred to the
2 proposed used and useful rules, which is the topic of
3 this witness's discussion.

4 MR. RILEY: That's the whole reason for the
5 question.

6 CHAIRMAN CLARK: I'm going to allow the
7 question. Go ahead.

8 WITNESS SOWERBY: Can you repeat the question,
9 please?

10 Q (By Mr. Riley) The question is that neither
11 the letter or the attached comments section, with the
12 use of the word "reserve capacity," suggest which
13 customer group should bear the cost of that needed
14 reserve capacity?

15 A Once again, I believe the comments are on the
16 proposed used and useful rule and on the proposed margin
17 reserve -- and we are suggesting that the margin reserve
18 be set at five years -- be consistent with our rules.
19 So if they are -- if the PSC is saying that margin
20 reserve is to be paid for by existing customers, I guess
21 indirectly we are commenting on that.

22 Q In what way does the term "reserve capacity"
23 imply who should pay, to you?

24 A The term "reserve capacity" does not imply,
25 the term in and of itself.

1 Q It does not imply that. Okay, now that we've
2 established that, what other words in this comments
3 section or in the letter would suggest that current
4 ratepayers should pay for this reserve capacity, if this
5 term "reserve capacity" does not suggest that?

6 A Once again, as I mentioned earlier, the term
7 "reserve capacity," as used in this letter, is
8 interchangeably used with margin reserve.

9 Q Do you understand that the term "margin
10 reserve" is a capacity which is borne completely by
11 current ratepayers?

12 A Yes, I do.

13 Q Do you understand the other concepts that we
14 were discussing earlier today of other means that the
15 Commission uses to collect for excess capacity?

16 A No. I wasn't aware that there were other
17 means discussed today.

18 Q Are you familiar with the term AFPI?

19 A No, sir.

20 Q Or guaranteed revenues that utilities collect
21 to help pay for nonused and useful plant?

22 A No, sir.

23 Q Or other forms of contributions in aid of
24 construction?

25 A No, sir.

1 Q How can you then recommend, without knowing
2 all these other mechanisms, that current ratepayers bear
3 the cost, 100 percent, since you say those terms are
4 interchangeable, margin reserve and reserve capacity,
5 without your even knowing the other mechanisms available
6 to this commission for paying for that reserve capacity?

7 MR. ARMSTRONG: Objection. I think this is
8 harassment of a witness. He's testified that he is
9 aware that margin reserve makes the property used and
10 useful, that current customers would pay for that margin
11 of reserve, and I think if the implication is being
12 drawn that any of those methods that have been discussed
13 take care of the used and useful problem for the
14 utility, that it's an inaccurate representation of the
15 facts in this case under oath.

16 MR. RILEY: I think it's critical for this
17 commission to understand the basis for this expert
18 witness's testimony.

19 CHAIRMAN CLARK: Mr. Riley, I agree, but I
20 think you've established that he is not aware of what
21 those other terms mean.

22 Q (By Mr. Riley) And my question was, since he
23 does not know the other mechanisms available, how can he
24 recommend to the Commission that only this one group of
25 customers bear the full cost of the needed capacity?

1 MR. ARMSTRONG: And my objection is that is a
2 fallacy in the question of itself. Nobody can testify
3 under oath that any of those methods allow the Company
4 to recover the costs, and that's what's under oath.
5 It's a true fallacy -- no, it's a real fallacy.

6 MR. RILEY: Well, thank you for additional
7 testimony.

8 MR. ARMSTRONG: You're welcome.

9 MR. RILEY: But I think that it's important to
10 know what forms the basis of this man's opinion, and I'm
11 looking for your ruling.

12 CHAIRMAN CLARK: Ask your question again.

13 Q (By Mr. Riley) How can you recommend that the
14 current ratepayers bear the full cost of this needed
15 reserve capacity when you are not aware of the other
16 mechanisms available for collecting from other customer
17 groups for this reserve capacity?

18 CHAIRMAN CLARK: I'll allow the question.

19 WITNESS SOWERBY: The comments in question
20 here were offered in response to a proposed used and
21 useful rule and were made based on that proposed rule.
22 There was no mention of other possible means of
23 collecting the money in that proposed rule.

24 Q So you're aware of no other methods that
25 the -- that this Commission can employ to collect and

1 reimburse companies for nonused and useful plant, other
2 than from current ratepayers?

3 A That's correct.

4 Q Okay. We'll leave that subject and move on to
5 the subject of just what -- forgetting now who is going
6 to pay for this capacity, let's talk about what is the
7 appropriate capacity. It's my understanding your
8 testimony and suggestion here in this memo attached to
9 the letter is that we strongly recommend that the PSC
10 allow at least a five-year reserve capacity, and is it
11 my understanding that your basis for this requirement is
12 this Rule 62-400 -- 62-600.40(5)?

13 A That's correct.

14 Q And that, of course, applies to only the
15 wastewater systems; is that correct?

16 A That's correct.

17 Q And there is no applicable rule currently in
18 effect for the water systems?

19 A No, sir, not currently in effect.

20 Q And can you direct me to this rule that
21 suggests that utilities must maintain this five-year
22 reserve capacity?

23 A I believe you just quoted the rule.

24 Q I quoted the rule, but where in the rule
25 supports this statement, that to meet DEP requirements

1 you're recommending to this commission that they must
2 have a five-year reserve capacity? I've read the rule
3 and I don't see it in here, and I want you to direct my
4 attention to language in the rule that requires this
5 five-year reserve capacity.

6 A The intent of the rule is that they have
7 five-year reserve capacity. If they do not have a
8 five-year reserve capacity, they have to be engaging in
9 other activities, i.e., the planning, designing and
10 construction of additional facilities.

11 Q So that means that the rule allows for a
12 utility not to have a five-year capacity so long as they
13 are doing certain other things; is that correct?

14 A At any given moment, yes, that's correct.

15 Q And those certain other things are to initiate
16 planning processes; is that correct?

17 A That's correct.

18 Q Now that's as to the five years. And
19 that's -- is that not correct, that that's (8)(a) found
20 on Page 2 of 3 of RMH-7?

21 MR. ARMSTRONG: Madam Chair, since we went
22 through this with Mr. Harvey, the Company would be
23 willing to say that the rule says what it says in the
24 parentheses A, B, C and D.

25 MR. RILEY: I tried to spare the Commission

1 from going through this again, but I was not --

2 MR. ARMSTRONG: The rule speaks for itself,
3 doesn't it?

4 MR. RILEY: It apparently doesn't.

5 CHAIRMAN CLARK: Mr. Armstrong, the point
6 that's being made is we have covered some of the same
7 ground with another witness, and I certainly hope we are
8 not going to have yet another witness on this same
9 subject.

10 Mr. Riley, if you want to conclude your
11 cross-examination.

12 Q (By Mr. Riley) Is it true there is no
13 requirement in the four corners of this rule that a
14 utility have a five-, a four- or even a three-year
15 reserve capacity, in express terms, of this rule?

16 A No, I do not agree with that statement.

17 Q And why not?

18 A I believe it's implicit in this rule that they
19 have a five-year reserve capacity.

20 Q I didn't ask you what was implicit. I said
21 expressly, expressly in the rule. You can imply what
22 you want to from this rule, but I'm asking you, where is
23 it expressly in this rule that this capacity is
24 required? Please point the language out to me.

25 A There is no express statement that says, "Thou

1 shalt have five years of reserve capacity."

2 Q Thank you. Thank you.

3 CHAIRMAN CLARK: Do you have anymore
4 questions, Mr. Riley?

5 MR. RILEY: I don't believe so. I think
6 it's --

7 CHAIRMAN CLARK: Mr. Jacobs.

8 MR. JACOBS: I have no questions of this
9 witness.

10 CHAIRMAN CLARK: Staff?

11 MS. O'SULLIVAN: Just a couple of brief
12 questions.

13 CROSS EXAMINATION

14 BY MS. O'SULLIVAN:

15 Q During your questioning by Mr. Armstrong, did
16 you mention the reuse being 100 percent used and
17 useful?

18 A I'm sorry, can you repeat the question?

19 Q Certainly. During your questioning by
20 Mr. Armstrong, did you address the used and useful
21 percentage for reuse?

22 A During my testimony -- I quite honestly don't
23 recall specifically addressing that.

24 MS. O'SULLIVAN: Staff has no questions.

25 CHAIRMAN CLARK: Commissioners? Redirect?

1 MR. ARMSTRONG: No redirect.

2 CHAIRMAN CLARK: Thank you. Thank you,
3 Mr. Sowerby.

4 (Witness Sowerby excused.)

5 * * *

6 MR. JACOBS: Madam Chairman, believe it or
7 not, the lawyers have been talking amongst themselves as
8 to how shorten this proceeding, and I know you find that
9 difficult to believe, but it's true, and if you would
10 give us about ten minutes, we could probably cut down
11 this list of witnesses that's still remaining.

12 CHAIRMAN CLARK: I'm going to give you more
13 than ten minutes. We are going to break for the day and
14 we will reconvene tomorrow at 9 a.m.

15 And Mr. Armstrong, who do we need to start
16 with tomorrow?

17 MR. ARMSTRONG: Madam Chair, I've just been
18 informed that Mr. Wilkening cannot be here tomorrow.
19 That might be one of the -- maybe that will be one of
20 the areas for stipulation that we can reach.

21 CHAIRMAN CLARK: Okay. Well, Mr. Armstrong,
22 we're not going to go any further tonight. I had
23 indicated to the other commissioners we would not go
24 late tonight. I cannot go late tonight, so we are going
25 to conclude now.

1 MR. ARMSTRONG: Okay.

2 COMMISSIONER GARCIA: Madam Chairman, you're
3 not going to let them out of the room until they
4 stipulate these things in? We're all leaving.

5 MR. JACOBS: I was going to suggest you lock
6 the door on the way out.

7 CHAIRMAN CLARK: I had -- since you indicated
8 that there were possibilities of stipulation, I was
9 simply going to adjourn the hearing and allow you to use
10 that time to reach those stipulations and announce them
11 tomorrow morning.

12 MR. JACOBS: Very good.

13 MR. FEIL: But we're not going to go past 8:00
14 tonight.

15 CHAIRMAN CLARK: We're concluded now.

16 MR. FEIL: No, I meant on working out the
17 stipulations.

18 CHAIRMAN CLARK: We'll keep the lights on as
19 long as you need to reach some more stipulations.
20 That's up to you, Mr. Feil.

21 All right. With that, the hearing today is
22 concluded. I will see you -- we will see you tomorrow
23 at 9 a.m.

24 (Thereupon, the hearing adjourned at
25 4:40 p.m., to reconvene at 9:00 a.m., on May 9, 1996 at

1 the same location.)

2 (Transcript continues in sequence in

3 Volume 34.)

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DOCKET 950495-WIS
EXHIBIT NO. 200
CASE NO. 96-04227

EXHIBIT _____ (MF.1)
PAGE 1 OF 84

7.0 WATER USE CAUTION AREAS

7.1 HIGHLANDS RIDGE WATER USE CAUTION AREA

The Governing Board declared portions of Polk and Highlands Counties a Water Use Caution Area (WUCA) on June 28, 1989. The area designated is shown in Figure 7.1-1; the legal description is provided in Rule 40D-2.801(3)(a). As of the effective date of this rule, all existing water use permits within the Water Use Caution Area are modified to incorporate the applicable measures and conditions described below. Valid permits, legally in effect as of the effective date of this rule, are hereafter referred to as existing permits. Applicable permit conditions, as specified below, are incorporated into all existing water use permits in the Water Use Caution Area and shall be placed on new permits issued within the area. However, both the language and the application of any permit conditions listed may be modified when appropriate.

These portions of the Basis of Review for the Highlands Ridge Water Use Caution Area are intended to supplement the other provisions of the Basis of Review and are not intended to supersede or replace them. If there is a conflict between requirements, the more stringent provision shall prevail.

1. Public Supply

A wholesale public supply customer shall be required to obtain a separate permit to effect the following conservation requirements unless the quantity obtained by the wholesale public supply customer is less than 100,000 gallons per day on an annual average basis and the per capita daily water use of the wholesale public supply customer is less than the applicable per capita daily water use requirement outlined in Section 7.1 1. 1.1

The following water conservation requirements shall apply to all public supply utilities and suppliers with Permits that are granted for an annual average quantity of 100,000 gallons per day or greater, as well as wholesale customers supplied by another entity which obtain an annual average quantity of 100,000 gallons per day or greater, either indirectly or directly under water use permits within the Water Use Caution Area, regardless of the name(s) on the water use permit.

1.1 Per-Capita Use

Per-capita daily water use is defined as population-related withdrawals associated with residential, business, institutional, industrial, miscellaneous metered, and unaccounted uses. Permittees with per-capita daily water use which is skewed by the demands of significant water uses can deduct these uses provided that these uses are separately accounted.

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 950495 EXHIBIT NO. 200
COMPANY/ DSU/ Farred
WITNESS: 4/29/96
DATE: 4/29/96

B7.1-1

DOCUMENT NUMBER-DATE

0339 | MAR 21 96

FPSC-RECORDS/REPORTING

Generally, the formula used for determining gallons per day per capita is as follows: total withdrawal minus significant uses, environmental mitigation, and treatment losses, divided by the population served (adjusted for seasonal and tourist populations, if appropriate). For interconnected systems, incoming transfers and wholesale purchases of water shall be added to withdrawals; outgoing transfers and wholesale sales of water shall be deducted from withdrawals.

A significant use, which may be deducted, is defined as an individual non-residential customer using 25,000 gallons per day or greater on an annual average basis, or an individual non-residential customer whose use represents greater than five percent of the utility's annual water use.

Any uses which are deducted from the per-capita daily water use based on the above guidelines shall be supported with documentation demonstrating that they are significant uses, and shall include documentation of usage quantities. Additionally, all deducted uses must be accounted for in a water conservation plan developed by the applicant/permittee which includes specific water conservation goals for each use or type of use. Environmental mitigation quantities permitted by the District and treatment losses such as desalination reject water and sand-filtration backwash water shall be identified and reported separately, and shall not be included in the calculation of per-capita use. Water supplied to wholesale public supply customers shall be identified and reported separately, with a separate per-capita use calculated for each customer in addition to the wholesaler.

All permittees shall calculate and report gross per-capita water usage as outlined above. However, for purposes of compliance with per-capita requirements, a permittee may also calculate and report a per-capita use rate that reflects incentives for reuse and the use of desalination sources.

For compliance purposes, a permittee may deduct the quantity of reclaimed water delivered for uses not served by the permittee's water utility. Allowable deductions shall be limited to those quantities that would normally be permitted for the activity (e.g. if reuse is supplied for golf course irrigation, the acreage of greens, tees, and fairways must be submitted, and the quantity of potable water that would be permitted for that use would be deducted from the total quantity used for compliance with the per-capita requirement). Reclaimed water is wastewater that has received at least secondary treatment and is reused for a beneficial purpose. A permittee may deduct only the quantity of reclaimed water under the control of the utility, supplier, or governmental unit holding the water use permit. This deduction may include water reclaimed by wholesale customers based on the percentage

of total water used (e.g., a utility supplying 50% of a wholesale customer's potable water may claim up to 50% of the reclaimed water generated by the customer).

For compliance purposes, a permittee may deduct 50% of the quantity of finished water from desalination sources. A desalination source is a plant which removes or reduces salts and other chemicals from highly mineralized water of greater than 500 mg/l Total Dissolved Solids.

Acceptable data sources for service area population and seasonal/tourist population adjustments are described in section 3.6 of the Basis of Review. If the service area population is developed using a person per unit factor, then calculation of the factor must be documented indicating that the factor is reasonable for the service area. In cases where seasonal adjustment is appropriate and the service area is smaller than the area covered by the applicable comprehensive or regional plan, then the same seasonal adjustment factors used to adjust the permanent population of the planning area may be applied to the permanent population of the service area. Other methods of calculating service area population may be used provided that the methodology is accepted by the District as appropriate for the service area. Estimates of population shall be based on information developed or reported no more than twelve months prior to the applicable management period.

When reporting per capita rates, the service area of a permitted public supply utility or supplier shall consist of the area which the permittee exerts management control for public water supply.

These water conservation requirements shall apply to all public wholesale customers supplied by the holder of a Water Use Permit. Failure of a wholesale customer to comply may result in modification of the wholesaler's permit to add a permit condition limiting or reducing the wholesale customer's quantities, or other actions by the District.

January 1, 1993 Management Period

Public Supply uses within the Water Use Caution Area shall meet, at a minimum, an overall maximum per capita water use rate of 150 gallons per day for the January 1, 1993 management period. This standard shall remain in effect until modified by rule. However, for planning purposes, also listed are per-capita goals for future management periods. Public supply permittees shall also document the quantities supplied to deducted uses, and the water conservation measures employed for these uses.

January 1, 1997 Management Period

Based on information collected for the period 1990-1992, the per-capita rate will be developed for the January 1, 1997 management period and adopted by rule with sufficient time for permittees to prepare for the 1997 management period. Based on current information, the per capita water use rate goal would be 140 gallons per day.

January 1, 2001 Management Period

Based on information collected for the period 1993-1996, the per-capita rate will be developed for the January 1, 2001 management period and adopted by rule with sufficient time for permittees to prepare for the 2001 management period. Based on current information, the per capita water use rate goal would be 130 gallons per day.

January 1, 2011 Management Period

Based on information collected for the period 1997-2000, the per-capita rate will be developed for the January 1, 2011 management period and adopted by rule with sufficient time for permittees to prepare for the 2011 management period. Based on current information, the per-capita water use rate goal would be 130 gallons per day.

This requirement shall be implemented by applying the following permit conditions to all existing and new public supply permits:

1. By January 1, 1993, the Permittee shall achieve a per capita water rate equal to or less than 150 gpd; This standard shall remain in effect until modified by rule.

For planning purposes, listed below are per-capita goals for future management periods. These goals may be established as requirements through future rulemaking by the District:

- a. By January 1, 1997, the District may establish a new per capita water use standard. Based on current information, the per capita water use goal may be established by rule at 140 gpd;
- b. By January 1, 2001, the District may establish a new per capita water use standards. Based on current information, the per capita water use goal may be established by rule at 130 gpd; and,
- c. By January 1, 2011, the District may establish a new per capita water use standard. Based on current information, the per capita water use goal may be established by rule at 130 gpd;

2. By April 1 of each year for the preceding calendar year, the permittee shall submit a report detailing:
- a. The population served;
 - b. Deducted uses, the associated quantity, and conservation measures applied to these uses;
 - c. Total withdrawals;
 - d. Treatment losses.
 - e. Environmental mitigation quantities.
 - f. Sources and quantities of incoming and outgoing transfers of water and wholesale purchases and sales of water, with quantities determined at the supplier's departure point.

As of January 1, 1993, if the permittee does not achieve the specified per capita rates, the report shall document why these rates and requirements were not achievable, measures taken to attempt meeting them, and a plan to bring the permit into compliance. This report is subject to District approval. If the report is not approved, the Permittee is in violation of the Water Use Permit.

3. The District will evaluate information submitted by Permittees who do not achieve these requirements to determine whether the lack of achievement is justifiable and a variance is warranted. Permittees may justify lack of achievement by documenting unusual water needs, such as larger than average lot sizes with greater water irrigation needs than normal-sized lots. However, even with such documented justification, phased reductions in water use shall be required unless the District determines that water usage was reasonable under the circumstances reported and that further reductions are not feasible. For such Permittees, on a case-by-case basis, individual water conservation requirements may be developed for each management period.

Prior to the 1997, 2001, and 2011 management periods, the District will reassess the per-capita and other uses conservation goals. As a result of this reassessment, these goals may be adjusted upward or downward through rulemaking and will become requirements.

1.2 Water Conserving Rate Structure

Each water supply utility within the Water Use Caution Area shall adopt a water-conserving rate structure by January 1, 1993. This requirement shall be implemented by applying the following permit condition to all existing public supply permits:

The Permittee shall adopt a water conservation oriented rate structure no later than January 1, 1993. If the Permittee already has a water conservation oriented rate structure, a description of the structure, any supporting documentation, and a report on the effectiveness of the rate structure shall be submitted by January 1, 1993. Permittees that adopt a water conservation oriented rate structure pursuant to this rule shall submit the above-listed information by July 1, 1993.

New public supply permits shall receive the following permit condition:

The Permittee shall adopt a water conservation oriented rate structure no later than two years from the date of permit issuance. The Permittee shall submit a report describing the rate structure and its estimated effectiveness within 60 days following adoption.

1.3 Water Audit

All water supply utilities shall implement water audit programs by January 1, 1993. A thorough water audit can identify what is causing unaccounted water and alert the utility to the possibility of significant losses in the distribution system. Unaccounted water can be attributed to a variety of causes, including unauthorized uses, authorized unmetered uses, under-registration of meters, fire flows, and leaks.

This requirement shall be implemented by applying the following permit condition to all existing Public Supply permits:

The permittee shall conduct water audits of the water supply system during each management period. The initial audit shall be conducted no later than January 1, 1993. Water audits which identify a greater than 12 percent unaccounted for water shall be followed by appropriate remedial actions. Audits shall be completed and reports documenting the results of the audit shall be submitted as an element of the report required in the per capita condition to the District by the following dates: February 1, 1993; February 1, 1997; February 1, 2001; and

February 1, 2011. Water audit reports shall include a schedule for remedial action if needed.

Large, complex water supply systems may conduct the audit in phases, with prior approval by the District. A modified version shall be applied to new permits, replacing the initial audit date with a date two years forward from the permit issuance date. Prior to each management period, the District will reassess the unaccounted-for water standard of 12%, and may adjust this standard upward or downward through rulemaking.

1.4 Residential Water Use Reports

Beginning April 1, 1993, public supply permittees shall be required to annually report residential water use by type of dwelling unit. Residential dwelling units shall be classified into single family, multi-family (two or more dwelling units), and mobile homes. Residential water use consists of the indoor and outdoor water uses associated with these classes of dwelling units, including irrigation uses, whether separately metered or not. The permittee shall document the methodology used to determine the number of dwelling units by type and their quantities used. Estimates of water use based upon meter size may be inaccurate and will not be accepted.

This requirement shall be implemented by applying the following permit condition to all public supply permits:

Beginning in 1993, by April 1 of each year for the preceding calendar year, the permittee shall submit a residential water use report detailing:

- a. The number of single family dwelling units served and their total water use,
- b. The number of multi-family dwelling units served and their total water use,
- c. The number of mobile homes served and their total water use.

Residential water use quantities shall include both the indoor and outdoor water uses associated with the dwelling units, including irrigation water.

2. Agriculture

2.1 Irrigation Water Use Allotments

The District allocates agricultural irrigation-related water use based on a modified Blaney-Criddle model and other methods as described below. For each individual crop type, the

permittee shall not exceed the quantity determined by multiplying the total irrigated acres by the total allocated inches per irrigated acre per season. Allocated inches per irrigated acre per season are determined separately for three major categories of water use, and the sum equals the total allocated inches per irrigated acre per season. An irrigated acre, hereafter referred to as "acre," is defined as the gross acreage under cultivation, including areas used for water conveyance such as ditches, but excluding uncultivated areas such as wetlands, retention ponds, and perimeter drainage ditches. Other non-irrigation related water uses shall be permitted in accordance with section 3.3, Basis of Review.

As a guide for permit applicants and permittees, total allocated inches per acre per season for citrus in the Highlands Ridge WUCA are listed in tables provided in Design Aid 4, Part C, Water Use Permit Information Manual. For crops, soil types, planting dates, and length of growing season not listed in those tables, an applicant or permittee may obtain the total allocated inches per acre per season utilizing procedures described in Design Aid 4 or complete the Agricultural Water Allotment Form and submit it to the District. The District will complete and return the form calculating total allocated inches per acre per season per crop based on the information provided. A permit applicant or permittee may use alternative methods for calculating water use needs subject to District approval.

A key component in calculating total allocated inches per acre per season is the assigned "irrigation water use efficiency," hereafter referred to as "efficiency". Efficiency is defined as the ratio of the volume of water beneficially used to the volume delivered from the irrigation system. For many crops, it is common for different irrigation systems and practices to be employed for different water uses (e.g. a tomato grower may use seepage irrigation for field preparation and drip irrigation for supplemental irrigation). In recognition of these differences, the District applies separate assigned efficiencies to different water irrigation-related water uses.

The three major categories of agricultural irrigation-related water use are: 1) supplemental irrigation (the water delivered to satisfy the evapotranspirational need of the crop); 2) field preparation/crop establishment (the water delivered for tilling, bedding, fumigation, and planting); and 3) other water uses (i.e. frost and freeze protection, heat stress relief, chemical application, irrigation system flushing and maintenance, and leaching of salts from the root zone). The District has assigned minimum efficiency standards for supplemental and field preparation/crop establishment irrigation requirements. These standards are listed later in this section. Design Aid 4, Part C, Water Use Permit Information

Manual, describes in detail a methodology for calculating allotted inches per acre per season for supplemental irrigation (supplemental irrigation requirements divided by the assigned efficiency standard) and the allocated inches per acre per season for field preparation/crop establishment (field preparation/crop establishment irrigation requirements divided by the assigned efficiency standard). As specified in section 3.3 of the Basis, other information and methods may be considered as supported by the facts in individual cases.

Other water uses are permitted on an individual basis as follows:

1. Chemigation, irrigation system flushing and maintenance, heat stress relief, and leaching of salts - the total allocated inches per acre per season for these uses is equal to ten (10) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with a micro irrigation system, and five (5) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with all other irrigation systems.
2. Frost/freeze protection - The District allows irrigation for frost/freeze protection provided that: 1) the maximum daily quantity listed on the permit is not exceeded; 2) irrigation for this purpose will not cause water to go to waste; and, 3) permittees whose annual average daily permitted water use is equal to or exceeds 100,000 gpd shall document and report the beginning and ending hours and dates, and inches per acre applied for such purpose.

The allocated inches per acre per season per crop for supplemental and field preparation/crop establishment for the January 1, 1993, management period will be based on the following minimum assigned efficiency standards. These standards shall remain in effect until modified by rule. However, for planning purposes, also listed are assigned efficiency standard goals for future management periods.

January 1, 1993 Management Period

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 75 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 75 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total

allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 75 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for both field preparation/crop establishment and supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent.

These minimum assigned efficiencies shall remain in effect, until modified by rule.

January 1, 1997 Management Period

Based on information collected for the period 1990-1992, different efficiency standards may be developed for the January 1, 1997 management period. These efficiencies may be adopted by rule with sufficient time to allow users to prepare for implementation. The following efficiency goals are based on current information.

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 80 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 80 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 80 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for field preparation/crop establishment irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent, and for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 65 percent.



January 1, 2001 Management Period

Based on information collected for the period 1993-1996, different efficiency standards may be developed for the January 1, 2001 management period. These efficiencies may be adopted by rule with sufficient time to allow users to prepare for implementation. The following efficiency goals are based on current information.

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 85 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 85 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 85 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for field preparation/crop establishment irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent, and for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 70 percent.

January 1, 2011 Management Period

Based on information collected for the period 1996-2005, different efficiency standards may be developed for the January 1, 2011 management period. These efficiencies may be adopted by rule with sufficient time to allow users to prepare for implementation. The following efficiency goals are based on current information.

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 85 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental

irrigation shall be based on a minimum assigned efficiency standard of 85 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 85 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for field preparation/crop establishment irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent, and for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 70 percent.

These requirements shall be implemented by applying the following permit conditions to all agricultural permits, as applicable:

Effective January 1, 1993, the Permittee shall not exceed the quantity determined by multiplying the total irrigated acres by the total allocated inches per irrigated acre per season for each crop type. An irrigated acre, hereafter referred to as "acre," is defined as the gross acreage under cultivation, including areas used for water conveyance such as ditches, but excluding uncultivated areas such as wetlands, retention ponds, and perimeter drainage ditches.

Allocated inches per irrigated acre per season are determined separately for three major categories of water use: field preparation/crop establishment; supplemental irrigation; and, other uses (i.e., frost/freeze protection, heat stress relief, chemical application, irrigation system flushing and maintenance, and leaching of salts). Once these three separate quantities are calculated, they are added and the sum equals the total allocated inches per irrigated acre per season, for each individual crop type.

These allocated inches per acre per season per crop for field preparation/crop establishment and supplemental irrigation (excluding nurseries, which are permitted on a case-by-case basis) are based on the minimum assigned efficiency standards listed in Table 7.1-1 below. These minimum standards shall remain in effect until modified by rule. However, for planning purposes, also listed are assigned efficiency goals for future management periods.

Table 7.1-1. Minimum Assigned Efficiency Standards and Goals.

Crop Type	Supplemental Irrigation				Field Preparation/ Crop Establishment			
	Eff. Req.	Efficiency Goals			Eff. Req.	Efficiency Goals		
	1993	1997	2001	2011	1993	1997	2001	2011
Citrus								
Existing Permits	75%	80%	85%	85%	na	na	na	na
New Permits	80%	80%	85%	85%	na	na	na	na
Strawberries								
Existing Permits	75%	80%	85%	85%	na	na	na	na
New Permits	80%	80%	85%	85%	na	na	na	na
Row Crops (with drip or unmulched, non-seepage irrigated)								
Existing Permits	75%	80%	85%	85%	60%	60%	60%	60%
New Permits	80%	80%	85%	85%	60%	60%	60%	60%
Other Crops								
Existing Permits	60%	65%	70%	70%	60%	60%	60%	60%
New Permits	70%	70%	70%	70%	60%	60%	60%	60%

In addition to the allotted quantities for field preparation/crop establishment and supplemental irrigation requirements, the Permittee's total allotted inches per acre per season per crop will include the following quantities for other water uses:

1. Chemigation, irrigation system flushing and maintenance, heat stress relief, and leaching of salts - the total allocated inches per acre per season for these uses is equal to ten (10) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with a micro irrigation system, and five (5) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with all other irrigation systems.
2. Frost/freeze protection - Although there are no specific quantities permitted for frost/freeze protection, the District allows irrigation for frost/freeze protection provided that: 1) the maximum daily quantity listed on the permit is not exceeded; 2) irrigation for this purpose will not cause water to go to waste; and, 3) permittees whose annual average daily permitted water use is equal to or exceeds 100,000 gpd shall document and report the beginning and ending hours and dates, and inches per acre applied for such purpose.

measures taken to attempt meeting the allocated quantities, and a plan to bring the permit into compliance. Reports for Permittees not achieving the allotted quantities are subject to District approval. If the report is not approved, the Permittee is in violation of the Water Use Permit.

2. All Permittees whose average daily permitted use is equal to or exceeds 100,000 gpd shall record the following information on an annual basis for all perennial crops (example: citrus):
 - a. crop type;
 - b. irrigated acres per crop;
 - c. the dominant soil type; and,
 - d. irrigation method(s);

Irrigation for field preparation/crop establishment and supplemental irrigation shall be documented separately by noting the beginning and ending dates for these activities. Additionally, quantities for frost freeze protection shall be documented separately by noting the beginning and ending hour and date. The permittee shall note whether tailwater recovery is used. This information shall be submitted to the District by March 1 of each year. Following December 31, 1992, if the Permittee exceeds the allocated quantities, which are determined by multiplying the total irrigated acres by the total allocated inches per acre per season per crop, the permittee shall submit a report to the District which shall include reasons why the allotted quantities were exceeded, measures taken to attempt meeting the allocated quantities, and a plan to bring the permit into compliance. Reports for Permittees not achieving the allotted quantities are subject to District approval. If the report is not approved, the Permittee is in violation of the Water Use Permit.

3. The District will evaluate information submitted by Permittees who exceed their allocated quantities to determine whether the lack of achievement is justifiable and a variance is warranted. Permittees may justify lack of achievement by documenting unusual water needs, such as unusual soil or weather conditions creating greater irrigation needs than normal. However, even with such documented justification, phased reductions in water use shall be required unless the District determines that water usage was reasonable under the circumstances reported and that further reductions are not feasible. For such Permittees, on a case-by-case basis, individual efficiency criteria may be developed for each management period.

4. Compliance with allocated quantities shall be determined by comparing actual use to the calculated quantities for each individual crop on a per season basis. Seasonal crops will be compared on a seasonal basis (e.g. spring tomato requirements based on the calculated inches per season), and perennial crops will be compared on an annual basis (e.g. citrus requirements based on the calculated inches per year).

The District will reassess the efficiency goals prior to implementation. As a result of this reassessment, these goals may be adjusted upward or downward through rule-making.

2.3 Other Agricultural Water Uses

Quantities for other uses not related to plant preparation and irrigation demand shall be documented separately. Such uses may include filling of spray tanks, livestock needs, cleaning, and frost freeze protection.

3. Recreational, Industrial, and Mining

3.1 Conservation Plan

All permit applicants for recreational/aesthetic, industrial/commercial, and mining/dewatering uses are required to submit a water conservation plan specifically addressing recycling, reuse and landscaping to the District at time of application. Existing permittees shall submit a conservation plan by July 31, 1992. The following condition shall be placed on all appropriate permits, and the elements listed in the condition below shall be addressed in all new applications:

The permittee shall submit to the District a conservation plan by July 31, 1992. This plan shall include documentation and assessment of current and potential internal reuse, as well as external reuse sources. This plan shall also address reducing irrigation withdrawals through evaluation of the use of drought tolerant landscaping for landscaped areas, where present.

3.2 Golf Courses Conservation Plan

All permit applicants for golf course irrigation are required to submit a water conservation plan specifically addressing conversion to low volume irrigation methods, increased system management, limiting frequent irrigation to water-critical areas, and limiting irrigation of other areas, to the District at time of application. Existing permittees shall submit a conservation plan by July 31, 1992. In addition to the permit condition listed in 3.1, above, the following permit condition

shall be applied to all existing golf course permits, and the elements listed in the condition below shall be addressed in all new golf course permit applications:

The permittee shall submit a report to the District by July 31, 1992, detailing how and when the following items shall be implemented, and the expected reduction in withdrawals to be achieved through implementation:

1. Increasing efficiency of water application through conversion to low-volume irrigation methods
2. Increased system management, including the use of devices such as tensiometers to determine application frequency and duration, and measures to eliminate overspray.
3. Limiting high-frequency irrigation to water-critical areas, such as tees and greens.
4. Reducing the frequency of irrigation for fairways.
5. Elimination of irrigation of roughs.

4. Augmentation

Augmentation means using one source of water to supplement another. Typically, augmentation involves using ground water to supplement the surface water levels of lakes, ponds and wetlands. Augmentation may be required by the District to mitigate the impacts of withdrawals, or it may be requested by an applicant who wishes to raise surface-water levels. Augmentation is permissible provided that the benefits outweigh any adverse impacts to ground- or surface-water resources, depending on the specific situation.

Augmentation for maintenance of lake and wetland natural habitat can be permitted as long as no significant adverse impacts result from the withdrawal. Augmentation may be allowed provided that (1) alternative solutions have been addressed, (2) the need for such augmentation has been established, (3) withdrawals for augmentation do not cause significant adverse impacts, and (4) measures are taken to allow the surface water level to fluctuate seasonally as described in Section 4.12.2.d. of the Basis of Review. Augmentation above District-established applicable minimum water levels is prohibited. Maximum ground-water augmentation levels for lakes currently below established minimum water levels will be based on recent historical levels.

Augmentation for purely aesthetic purposes, such as for creating and maintaining water levels in constructed ponds

shall not be permitted. Existing permits which include aesthetic augmentation may be renewed only if the criteria of Section 4.12.2.c. through i. are implemented. Reuse of water through tail-water recovery ponds in efficiently managed systems is encouraged and is not considered augmentation.

5. Lake Impacts

A stressed condition for a lake is defined to be chronic fluctuation below the normal range of lake level fluctuations. For lakes with District-established management levels, a stressed condition is a chronic fluctuation below the minimum low management level. For those lakes without established management levels, stressed conditions shall be determined on a case-by-case basis through site investigation by District staff during the permit evaluation process. The District maintains a list of lakes within the WUCA which have been determined to be stressed.

5.1 Stressed Lakes - New Withdrawals

Due to cumulative ground water and surface water withdrawal impacts, new withdrawals from stressed lakes shall not be permitted.

5.2 Stressed Lakes - Existing Withdrawals

Existing permitted surface withdrawals from stressed lakes shall be abandoned or replaced with an alternate source by September 30, 1993. Existing and new permitted withdrawals from lakes which are determined by the District to be stressed following the implementation of the Highlands Ridge WUCA Rule shall abandon or replace these withdrawals with alternate sources within three years of the designation of the stressed lake.

This requirement shall be implemented for all existing permits which include surface water withdrawals from stressed lakes by applying the following permit condition:

All existing surface water withdrawals from stressed lakes shall be abandoned or replaced with a surficial or Floridan aquifer ground-water source, or a reuse source, by September 30, 1993. Such replacement shall require a modification of the Water Use Permit.

This requirement shall be implemented for all existing and new permits which include surface water withdrawals from lakes that may be designated stressed in the future by applying the following permit condition to all permits within the WUCA which have surface water withdrawals from lakes:

Within 3 years from notification by the District that the lake from which the Permittee is withdrawing is stressed, all surface water withdrawals from this lake shall be abandoned or replaced with a surficial or Floridan aquifer ground-water source, or a reuse source. Such replacement shall require a modification of the Water Use Permit.

Water users with existing surface withdrawals on stressed lakes shall be allowed some impact on the lake from the proposed replacement well as long as the quantities withdrawn do not increase.

5.3 Stressed Lakes - New Ground-water Withdrawals

New ground-water withdrawals which adversely impact stressed lakes, or which would cause a lake to become stressed, shall not be permitted.

6. Well Construction

The District shall require new wells to be located and constructed so that the effects of ground-water pumpage on lake levels is minimized. New deep wells shall be constructed into the highly-productive Floridan aquifer, with sufficient casing to reduce drawdown impacts on overlying aquifers and lakes. Surficial aquifer wells shall not breach confining units. Special consideration shall be given to wells which replace existing legal surface-water withdrawals. If a ground-water source would not be permitted because it would cause adverse impacts to the lake, but the proposed ground-water withdrawal is a replacement for an existing surface withdrawal from the lake, the ground-water source may be permitted because it will result in a net decrease in lake impact. These items shall be accomplished by evaluating well construction during the permit application process to ensure that the well location, casing depth, and total depth will result in minimal lake impacts. The following condition on all applicable water use and well construction permits within the WUCA:

The location(s) and construction characteristics of proposed well(s) shall be in accordance with the following table, to limit impacts to lakes to the greatest extent practicable:

District I.D. No.	Permittee I.D. No.	Casing Diameter	Casing Depth	Total Depth	Latitude/ Longitude

Casing and total depth may vary up to 10 percent from these specifications. Any further deviation shall require prior written approval from the District.

7. Alternative Sources

7.1 Critical Water Supply Problem Area Designation

The Highlands Ridge Water Use Caution Area is hereby declared a critical water supply problem area pursuant to Chapter 17-40, Florida Administrative Code.

7.2 Reuse

Investigation of the feasibility of reuse may be required for all appropriate uses, and reuse shall be required where feasible. Reuse of treated wastewater as an alternate, replacement, or supplemental water source for irrigation, industrial process, cleaning, or other non-potable use shall be investigated by all appropriate applicants or permittees. This item shall be implemented through inclusion of the following condition on all applicable permits with agricultural irrigation, recreational or aesthetic irrigation, industrial or commercial, or mining or dewatering uses:

The Permittee shall investigate the feasibility of using reuse as a water source and submit a report describing the feasibility to the District by (date specified). The report shall contain an analysis of reuse sources for the area, including the relative location of these sources to the Permittee's property, the quantity and timing of reuse water available, costs associated with obtaining the reuse water, and an implementation schedule for reuse. Infeasibility shall be supported with a detailed explanation.

7.3 Reporting Reuse Quantities

1. Reclaimed Water Generators

Governmental or other entities holding Water Use Permits and which generate treated wastewater effluent shall submit an annual report listing the disposition of the effluent. This report shall list the number of homes, golf courses, industrial, commercial, and landscaping users supplied with effluent, and the total annual average daily quantity supplied as reuse. This report shall also list the annual average daily quantity of treated wastewater effluent disposed, and the methods and locations of disposal. This requirement will be implemented by applying the following condition to all applicable permits:

The Permittee shall submit an annual report listing the disposition of the effluent. This report shall list the number of homes, golf courses, industrial,

commercial, and landscaping users supplied with effluent, and the total annual average daily quantity supplied as reuse. This report shall also list the annual average daily quantity of treated wastewater effluent disposed, and the methods and locations of disposal. This report shall be an addendum to the annual per-capita and other supplied uses report.

2. Reclaimed Water Receivers

All permitted uses which receive reclaimed water (e.g. golf courses, industrial/commercial uses, etc.) shall be required to record and report reuse quantities and sources on a monthly basis. This requirement shall be implemented by applying the following permit condition to all applicable permits:

The Permittee shall report to the District existing connections to reclaimed water by November 1, 1990. New connections to reclaimed water shall be reported to the District within 30 days of connection to the reuse source. The Permittee shall list the source name, location, and quantities obtained in gallons per day, annual average, for each source, and submit this information to the District by the 10th day of each month for the preceding month, in conjunction with the monthly pumpage report.

The following condition shall be applied to applicable permits for new use:

The Permittee shall report connection to reclaimed water to the District within 30 days of connection to the reuse source. The Permittee shall list the source name, location, and reclaimed quantities obtained in gallons per day, annual average, for each source, and submit this information to the District by the 10th day of each month for the preceding month, in conjunction with the monthly pumpage report.

8. Metering of Withdrawals

All permitted withdrawal points, on permits at or above 100,000 gallons per day annual average daily withdrawal, shall be metered and the Permittee shall be required to record and submit withdrawal information. Withdrawal points on permits existing as of the effective date of this rule, shall be metered at the permittee's expense by July 31, 1995, except as provided below.

The following permit condition shall be applied to all active permits with quantities at or above 500,000 gpd which shall have meters provided by the District under the provisions of Section 5.1, Basis of Review, for withdrawal points existing prior to October 1, 1989:

At such time as the District completes installation of meter(s) on all applicable withdrawal points, the Permittee shall record the total withdrawal for each metered withdrawal point. Withdrawal points constructed after September 30, 1989 shall be metered within 90 days of construction, at Permittee's expense. Total withdrawals shall be reported to the District (using District format) on or before the tenth day of the following month.

Withdrawal points existing prior to the effective date of this rule, on permits granted for quantities at or above 100,000 gpd, which will not receive District-supplied meters under the provisions of Section 5.1, Basis of Review, shall receive the following condition:

The following withdrawal points (District ID numbers) shall be equipped with totalizing flow meters or other measuring devices as approved in writing by the Director, Resource Regulation Department. Such devices shall have and maintain an accuracy within five percent of the actual flow. Those designated withdrawal points not equipped with such devices on the date of permit issuance shall be equipped by July 31, 1995.

Total withdrawal from each metered withdrawal point shall be recorded on a monthly basis and reported to the District (using District format) on or before the tenth day of the following month.

Permits granted for quantities at or above 100,000 gpd, which have withdrawal points constructed after the effective date of this rule, shall receive the following condition:

The following withdrawal points (District ID numbers) shall be equipped with totalizing flow meters or other measuring devices as approved in writing by the Director, Resource Regulation Department. Such devices shall have and maintain an accuracy within five percent of the actual flow. Those designated withdrawal points not equipped with such devices on the date of permit issuance shall be equipped within 90 days of completion of construction of the withdrawal facility, unless an extension is granted by the Director, Resource Regulation.

Total withdrawal from each monitored source shall be recorded on a monthly basis and reported to the District (using District format) on or before the tenth day of the following month.

All permits with reporting requirements shall receive the following condition:

All reports and data required by the permit shall be submitted to the District and shall be addressed to:

Permits Data
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34609-6899

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**Figure 7.1-1
Highlands Ridge WUCA**

Water Use Caution Area

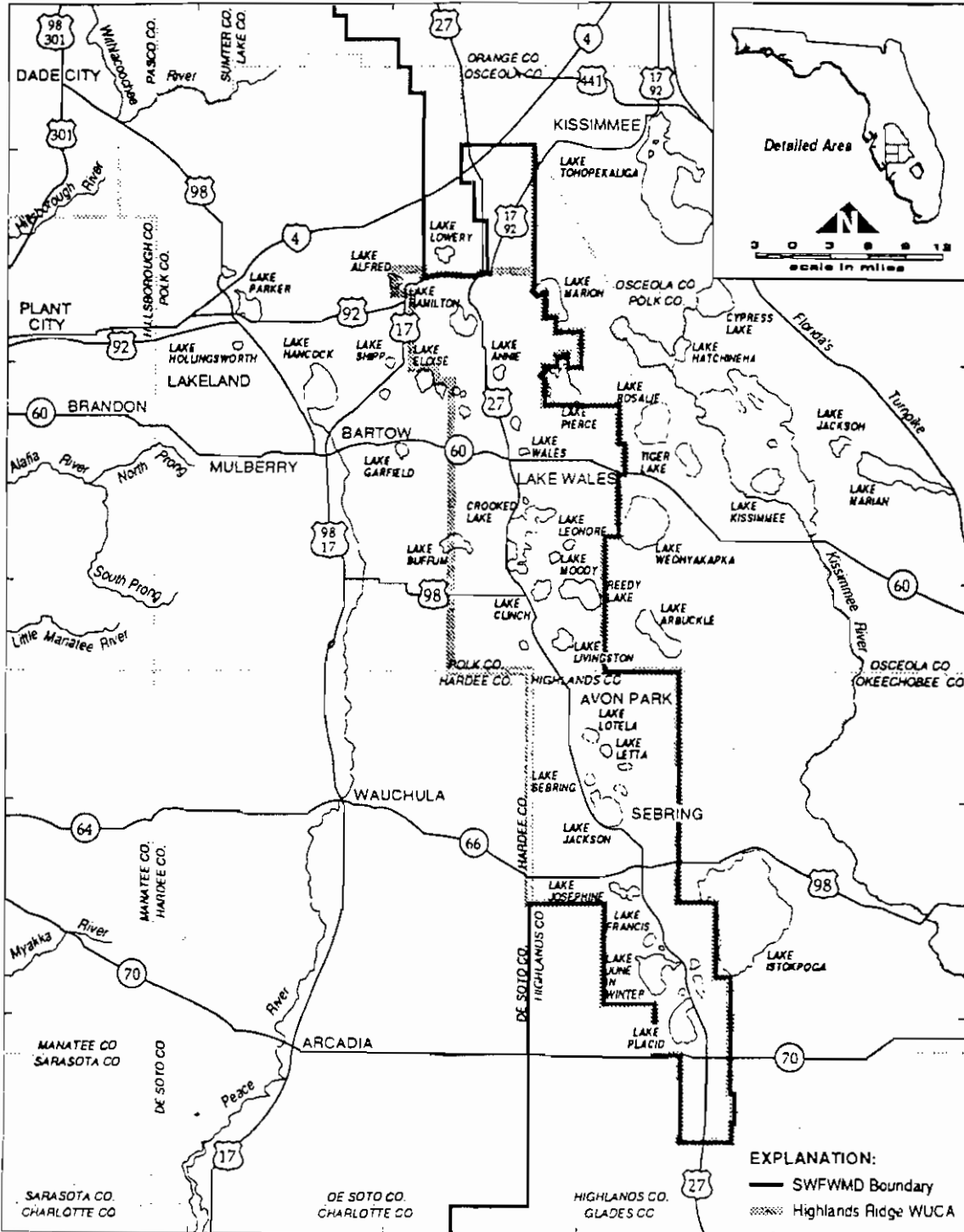


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7.2 EASTERN TAMPA BAY WATER USE CAUTION AREA

The Governing Board declared portions of Hillsborough, Manatee, and Sarasota Counties a Water Use Caution Area (WUCA) on June 28, 1989. The area designated is shown in Figure 7.2-1; the legal description is provided in Rule 40D-2.801(3)(b). As of the effective date of this rule, all existing water use permits within the Water Use Caution Area are modified to incorporate the applicable measures and conditions described below. Valid permits, legally in effect as of the effective date of this rule, are hereafter referred to as existing permits. Applicable permit conditions, as specified below, are incorporated into all existing water use permits in the Water Use Caution Area and shall be placed on new permits issued within the area. However, both the language and the application of any permit conditions listed may be modified when appropriate.

These portions of the Basis of Review for the Eastern Tampa Bay Water Use Caution Area are intended to supplement the other provisions of the Basis of Review and are not intended to supersede or replace them. If there is a conflict between requirements, the more stringent provision shall prevail.

1. Public Supply

A wholesale public supply customer shall be required to obtain a separate permit to effect the following conservation requirements unless the quantity obtained by the wholesaler is less than 100,000 gallons per day on an annual average basis and the per capita daily water use of the wholesale public supply customer is less than the applicable per capita daily water use requirement outlined in Section 7.2 1.1.1.

The following water conservation requirements shall apply to all public supply utilities and suppliers with Permits that are granted for an annual average quantity of 100,000 gallons per day or greater, as well as wholesale customers supplied by another entity which obtain an annual average quantity of 100,000 gallons per day or greater, either indirectly or directly under water use permits within the Water Use Caution Area, regardless of the name(s) on the water use permit.

1.1 Per-Capita Use

Per-capita daily water use is defined as population-related withdrawals associated with residential, business, institutional, industrial, miscellaneous metered, and unaccounted uses. Permittees with per-capita daily water use which is skewed by the demands of significant water uses can deduct these uses provided that these uses are separately accounted. Generally, the formula used for determining gallons per day per capita is as follows: total withdrawal minus significant uses, environmental mitigation, and treatment losses, divided

by the population served (adjusted for seasonal and tourist populations, if appropriate). For interconnected systems, incoming transfers and wholesale purchases of water shall be added to withdrawals; outgoing transfers and wholesale sales of water shall be deducted from withdrawals.

A significant use, which may be deducted, is defined as an individual non-residential customer using 25,000 gallons per day or greater on an annual average basis, or an individual non-residential customer whose use represents greater than five percent of the utility's annual water use.

Any uses which are deducted from the per-capita daily water use based on the above guidelines shall be supported with documentation demonstrating that they are significant uses, and shall include documentation of usage quantities. Additionally, all deducted uses must be accounted for in a water conservation plan developed by the applicant/permittee which includes specific water conservation goals for each use or type of use. Environmental mitigation quantities permitted by the District and Treatment losses such as desalination reject water and sand-filtration backwash water shall be identified and reported separately, and shall not be included in the calculation of per-capita use. Water supplied to wholesale public supply customers shall be identified and reported separately, with a separate per-capita use calculated for each customer in addition to the wholesaler.

All permittees shall calculate and report gross per-capita water usage as outlined above. However, for purposes of compliance with per-capita requirements, a permittee may also calculate and report a per-capita use rate that reflects incentives for reuse and the use of desalination sources.

For compliance purposes, a permittee may deduct the quantity of reclaimed water delivered for uses not served by the permittee's water utility. Allowable deductions shall be limited to those quantities that would normally be permitted for the activity (e.g. if reuse is supplied for golf course irrigation, the acreage of greens, tees, and fairways must be submitted, and the quantity of potable water that would be permitted for that use would be deducted from the total quantity used for compliance with the per-capita requirement). Reclaimed water is wastewater that has received at least secondary treatment and is reused for a beneficial purpose. A permittee may deduct only the quantity of reclaimed water under the control of the utility, supplier, or governmental unit holding the water use permit. This deduction may include water reclaimed by wholesale customers based on the percentage of total water used (e.g., a utility supplying 50% of a wholesale customer's potable water may claim up to 50% of the reclaimed water generated by the customer).

For compliance purposes, a permittee may deduct 50% of the quantity of finished water from desalination sources. A desalination source is a plant which removes or reduces salts and other chemicals from highly mineralized water of greater than 500 mg/l Total Dissolved Solids.

Acceptable data sources for service area population and seasonal/tourist population adjustments are described in section 3.6 of the Basis of Review. If the service area population is developed using a person per unit factor, then calculation of the factor must be documented indicating that the factor is reasonable for the service area. In cases where seasonal adjustment is appropriate and the service area is smaller than the area covered by the applicable comprehensive or regional plan, then the same seasonal adjustment factors used to adjust the permanent population of the planning area may be applied to the permanent population of the service area. Other methods of calculating service area population may be used provided that the methodology is accepted by the District as appropriate for the service area. Estimates of population shall be based on information developed or reported no more than twelve months prior to the applicable management period.

When reporting per capita rates, the service area of a permitted public supply utility or supplier shall consist of the area which the permittee exerts management control for public water supply.

January 1, 1993 Management Period

Public Supply uses within the Water Use Caution Area shall meet, at a minimum, an overall maximum per capita water use rate of 150 gallons per day for the January 1, 1993 management period. This standard shall remain in effect until modified by rule. However, for planning purposes, also listed are per-capita goals for future management periods. Public supply permittees shall also document the quantities supplied to deducted uses, and the water conservation measures employed for these uses.

January 1, 1997 Management Period

Based on information collected for the period 1990-1992, the per-capita rate will be developed for the January 1, 1997 management period and adopted by rule with sufficient time for permittees to prepare for the 1997 management period. Based on current information, the per capita water use rate goal would be 140 gallons per day.

January 1, 2001 Management Period

Based on information collected for the period 1993-1996, the per-capita rate will be developed for the January 1, 2001

management period and adopted by rule with sufficient time for permittees to prepare for the 2001 management period. Based on current information, the per capita water use rate goal would be 130 gallons per day.

January 1, 2011 Management Period

Based on information collected for the period 1997-2000, the per-capita rate will be developed for the January 1, 2011 management period and adopted by rule with sufficient time for permittees to prepare for the 2011 management period. Based on current information, the per-capita water use rate goal would be 130 gallons per day.

This requirement shall be implemented by applying the following permit conditions to all existing and new public supply permits:

1. By January 1, 1993, the Permittee shall achieve a per capita water rate equal to or less than 150 gpd; This standard shall remain in effect until modified by rule.

For planning purposes, listed below are per-capita goals for future management periods. These goals may be established as requirements through future rulemaking by the District:

- a. By January 1, 1997, the District may establish a new per capita water use standard. Based on current information, the per capita water use goal may be established by rule at 140 gpd;
 - b. By January 1, 2001, the District may establish a new per capita water use standard. Based on current information, the per capita water use goal may be established by rule at 130 gpd; and,
 - c. By January 1, 2011, the District may establish a new per capita water use standard. Based on current information, the per capita water use goal may be established by rule at 130 gpd;
2. By April 1 of each year for the preceding calendar year, the permittee shall submit a report detailing:
 - a. The population served;
 - b. Deducted uses, the associated quantity, and conservation measures applied to these uses;
 - c. Total withdrawals;

- d. Treatment losses.
- e. Environmental mitigation quantities.
- f. Sources and quantities of incoming and outgoing transfers of water and wholesale purchases and sales of water, with quantities determined at the supplier's departure point.

As of January 1, 1993, if the permittee does not achieve the specified per capita rates, the report shall document why these rates and requirements were not achievable, measures taken to attempt meeting them, and a plan to bring the permit into compliance. This report is subject to District approval. If the report is not approved, the Permittee is in violation of the Water Use Permit.

- 3. The District will evaluate information submitted by Permittees who do not achieve these requirements to determine whether the lack of achievement is justifiable and a variance is warranted. Permittees may justify lack of achievement by documenting unusual water needs, such as larger than average lot sizes with greater water irrigation needs than normal-sized lots. However, even with such documented justification, phased reductions in water use shall be required unless the District determines that water usage was reasonable under the circumstances reported and that further reductions are not feasible. For such Permittees, on a case-by-case basis, individual water conservation requirements may be developed for each management period.

Prior to the 1997, 2001, and 2011 management periods, the District will reassess the per-capita and other uses conservation goals. As a result of this reassessment, these goals may be adjusted upward or downward through rulemaking and will become requirements.

1.2 Water Conserving Rate Structure

Each water supply utility within the Water Use Caution Area shall adopt a water-conserving rate structure by January 1, 1993. This requirement shall be implemented by applying the following permit condition to all existing public supply permits:

The Permittee shall adopt a water conservation oriented rate structure no later than January 1, 1993. If the Permittee already has a water conservation oriented rate structure, a description of the structure, any supporting documentation, and a report on the effectiveness of the rate structure shall be submitted by January 1, 1993.

Permittees that adopt a water conservation oriented rate structure pursuant to this rule shall submit the above-listed information by July 1, 1993.

New public supply permits shall receive the following permit condition:

The Permittee shall adopt a water conservation oriented rate structure no later than two years from the date of permit issuance. The Permittee shall submit a report describing the rate structure and its estimated effectiveness within 60 days following adoption.

1.3 Water Audit

All water supply utilities shall implement water audit programs by January 1, 1993. A thorough water audit can identify what is causing unaccounted water and alert the utility to the possibility of significant losses in the distribution system. Unaccounted water can be attributed to a variety of causes, including unauthorized uses, authorized unmetered uses, under-registration of meters, fire flows, and leaks.

This requirement shall be implemented by applying the following permit condition to all existing Public Supply permits:

The permittee shall conduct water audits of the water supply system during each management period. The initial audit shall be conducted no later than January 1, 1993. Water audits which identify a greater than 12 percent unaccounted for water shall be followed by appropriate remedial actions. Audits shall be completed and reports documenting the results of the audit shall be submitted as an element of the report required in the per capita condition to the District by the following dates: February 1, 1993; February 1, 1997; February 1, 2001; and February 1, 2011. Water audit reports shall include a schedule for remedial action if needed.

Large, complex water supply systems may conduct the audit in phases, with prior approval by the District. A modified version shall be applied to new permits, replacing the initial audit date with a date two years forward from the permit issuance date. Prior to each management period, the District will reassess the unaccounted-for water standard of 12%, and may adjust this standard upward or downward through rulemaking.

1.4 Residential Water Use Reports

Beginning April 1, 1993, public supply permittees shall be required to annually report residential water use by type of dwelling unit. Residential dwelling units shall be classified into single family, multi-family (two or more dwelling units), and mobile homes. Residential water use consists of the indoor and outdoor water uses associated with these classes of dwelling units, including irrigation uses, whether separately metered or not. The permittee shall document the methodology used to determine the number of dwelling units by type and their quantities used. Estimates of water use based upon meter size may be inaccurate and will not be accepted.

This requirement shall be implemented by applying the following permit condition to all public supply permits:

Beginning in 1993, by April 1 of each year for the preceding calendar year, the permittee shall submit a residential water use report detailing:

- a. The number of single family dwelling units served and their total water use,
- b. The number of multi-family dwelling units served and their total water use,
- c. The number of mobile homes served and their total water use.

Residential water use quantities shall include both the indoor and outdoor water uses associated with the dwelling units, including irrigation water.

2. Agriculture

2.1 Agricultural Water Use Allotments

The District allocates agricultural irrigation-related water use based on a modified Blaney-Criddle model and other methods as described below. For each individual crop type, the permittee shall not exceed the quantity determined by multiplying the total irrigated acres by the total allocated inches per irrigated acre per season. Allocated inches per irrigated acre per season are determined separately for three major categories of water use, and the sum equals the total allocated inches per irrigated acre per season. An irrigated acre, hereafter referred to as "acre," is defined as the gross acreage under cultivation, including areas used for water conveyance such as ditches, but excluding uncultivated areas such as wetlands, retention ponds, and perimeter drainage

ditches. Other non-irrigation related water uses shall be permitted in accordance with section 3.3, Basis of Review.

As a guide for permit applicants and permittees, total allocated inches per acre per season for the most common crops and soil types, with typical planting dates and season length, in the Eastern Tampa Bay WUCA are listed in tables provided in Design Aid 4, Part C, Water Use Permit Information Manual. For crops, soil types, planting dates, and length of growing season not listed in those tables, an applicant or permittee may obtain the total allocated inches per acre per season utilizing procedures described in Design Aid 4 or complete the Agricultural Water Allotment Form and submit it to the District. The District will complete and return the form calculating total allocated inches per acre per season per crop based on the information provided. A permit applicant or permittee may use alternative methods for calculating water use needs subject to District approval.

A key component in calculating total allocated inches per acre per season is the assigned "irrigation water use efficiency," hereafter referred to as "efficiency". Efficiency is defined as the ratio of the volume of water beneficially used to the volume delivered from the irrigation system. For many crops, it is common for different irrigation systems and practices to be employed for different water uses (e.g. a tomato grower may use seepage irrigation for field preparation and drip irrigation for supplemental irrigation). In recognition of these differences, the District applies separate assigned efficiencies to different water irrigation-related water uses.

The three major categories of agricultural water use are: 1) supplemental irrigation (the water delivered to satisfy the evapotranspirational need of the crop); 2) field preparation/crop establishment (the water delivered for tilling, bedding, fumigation, and planting); and 3) other water uses (i.e. frost and freeze protection, heat stress relief, chemical application, irrigation system flushing and maintenance, and leaching of salts from the root zone). The District has assigned minimum efficiency standards for supplemental and field preparation/crop establishment irrigation requirements. These standards are listed later in this section. Design Aid 4, Part C, Water Use Permit Information Manual, describes in detail a method for calculating allotted inches per acre per season for supplemental irrigation (supplemental irrigation requirements divided by the assigned efficiency standard) and the allocated inches per acre per season for field preparation/crop establishment (field preparation/crop establishment irrigation requirements divided by the assigned efficiency standard). As specified in section 3.3 of the Basis, other information and methods may be considered as supported by the facts in individual cases.

Other water uses are permitted on an individual basis as follows:

1. Chemigation, irrigation system flushing and maintenance, heat stress relief, and leaching of salts - the total allocated inches per acre per season for these uses is equal to ten (10) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with a micro irrigation system, and five (5) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with all other irrigation systems.
2. Frost/freeze protection - The District allows irrigation for frost/freeze protection provided that: 1) the maximum daily quantity listed on the permit is not exceeded; 2) irrigation for this purpose will not cause water to go to waste; and, 3) permittees whose annual average daily permitted water use is equal to or exceeds 100,000 gpd shall document and report the beginning and ending hours and dates, and inches per acre applied for such purpose.

The allocated inches per acre per season per crop for supplemental and field preparation/crop establishment for the January 1, 1993, management period will be based on the following minimum assigned efficiency standards. These standards shall remain in effect until modified by rule. However, for planning purposes, also listed are assigned efficiency standard goals for future management periods.

January 1, 1993 Management Period

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 75 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 75 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 75 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for both field preparation/crop establishment and supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent.

These minimum assigned efficiencies shall remain in effect until modified by rule.

January 1, 1997 Management Period

Based on information collected for the period 1990-1992, different efficiency standards may be developed for the January 1, 1997 management period. These efficiencies may be adopted by rule with sufficient time to allow users to prepare for implementation. The following efficiency goals are based on current information.

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 80 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 80 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 80 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for field preparation/crop establishment irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent, and for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 65 percent.

January 1, 2001 Management Period

Based on information collected for the period 1993-1996, different efficiency standards may be developed for the January 1, 2001 management period. These efficiencies may be adopted by rule with sufficient time to allow users to prepare for implementation. The following efficiency goals are based on current information.

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 85 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 85 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 85 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for field preparation/crop establishment irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent, and for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 70 percent.

January 1, 2011 Management Period

Based on information collected for the period 1996-2005, different efficiency standards may be developed for the January 1, 2011 management period. These efficiencies may be adopted by rule with sufficient time to allow users to prepare for implementation. The following efficiency goals are based on current information.

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 85 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 85 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned

efficiency standard of 60 percent and 85 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for field preparation/crop establishment irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent, and for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 70 percent.

These requirements shall be implemented by applying the following permit conditions to all agricultural permits, as applicable:

Effective January 1, 1993, the Permittee shall not exceed the quantity determined by multiplying the total irrigated acres by the total allocated inches per irrigated acre per season for each crop type. An irrigated acre, hereafter referred to as "acre," is defined as the gross acreage under cultivation, including areas used for water conveyance such as ditches, but excluding uncultivated areas such as wetlands, retention ponds, and perimeter drainage ditches.

Allocated inches per irrigated acre per season are determined separately for three major categories of water use: field preparation/crop establishment; supplemental irrigation; and, other uses (i.e., frost/freeze protection, heat stress relief, chemical application, irrigation system flushing and maintenance, and leaching of salts). Once these three separate quantities are calculated, they are added and the sum equals the total allocated inches per irrigated acre per season, for each individual crop type.

These allocated inches per acre per season per crop for field preparation/crop establishment and supplemental irrigation (excluding nurseries, which are permitted on a case-by-case basis) are based on the minimum assigned efficiency standards listed in Table 7.2-1 below. These minimum standards shall remain in effect until modified by rule. However, for planning purposes, also listed are assigned efficiency goals for future management periods.

Table 7.2-1. Minimum Assigned Efficiency Standards and Goals.

Crop Type	Supplemental Irrigation				Field Preparation/ Crop Establishment			
	Eff. Req.	Efficiency	Goals	Goals	Eff. Req.	Efficiency	Goals	Goals
	1993	1997	2001	2011	1993	1997	2001	2011
Citrus								
Existing Permits	75%	80%	85%	85%	na	na	na	na
New Permits	80%	80%	85%	85%	na	na	na	na
Strawberries								
Existing Permits	75%	80%	85%	85%	na	na	na	na
New Permits	80%	80%	85%	85%	na	na	na	na
Row Crops (with drip or unmulched, non-seepage irrigated)								
Existing Permits	75%	80%	85%	85%	60%	60%	60%	60%
New Permits	80%	80%	85%	85%	60%	60%	60%	60%
Other Crops								
Existing Permits	60%	65%	70%	70%	60%	60%	60%	60%
New Permits	70%	70%	70%	70%	60%	60%	60%	60%

In addition to the allotted quantities for field preparation/crop establishment and supplemental irrigation requirements, the Permittee's total allotted inches per acre per season per crop will include the following quantities for other water uses:

1. Chemigation, irrigation system flushing and maintenance, heat stress relief, and leaching of salts - the total allocated inches per acre per season for these uses is equal to ten (10) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with a micro irrigation system, and five (5) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with all other irrigation systems.
2. Frost/freeze protection - Although there are no specific quantities permitted for frost/freeze protection, the District allows irrigation for frost/freeze protection provided that: 1) the maximum daily quantity listed on the permit is not exceeded; 2) irrigation for this purpose will not cause water to go to waste; and, 3) permittees whose annual average daily permitted water use is equal to or exceeds 100,000 gpd shall document and report the beginning and ending hours and dates, and inches per acre applied for such purpose.

As a guide for the Permittee, total allocated inches per acre per season for the most common crops and soil types, with typical planting dates and season lengths, in the Eastern Tampa Bay WUCA are listed in tables provided in Design Aid 4, Part C, Water Use Permit Information Manual. For crops, soil types, planting dates, and lengths of growing season not listed in those tables, an applicant or Permittee can obtain the total allocated inches per acre per season utilizing procedures described in Design Aid 4, or complete the Agricultural Water Allotment Form and submit it to the District. The District will complete and return the form calculating total allocated inches per acre per season based on the information provided. A permit applicant or permittee may use alternative methods for calculating water use needs subject to District approval.

2.2 Monitoring Requirements for Agricultural Water Use

To ensure compliance with the total allocated inches per acre per season per crop, the District requires the following data to be submitted. Although the permittee is not required to be in compliance with allocation requirements until January 1, 1993, the permittee is required to submit these data beginning with the first appropriate date in 1991, as specified in the permit conditions below.

1. All Permittees whose average daily permitted use is equal to or exceeds 100,000 gpd shall record the following information for all seasonal crops (example: vegetables) and nurseries:
 - a. crop type;
 - b. monthly irrigated acres per crop;
 - c. the dominant soil type;
 - d. irrigation method(s);
 - e. planting dates; and,
 - f. season length.

Irrigation for field preparation/crop establishment and supplemental irrigation shall be documented separately by noting the beginning and ending dates for these activities. Additionally, quantities for frost freeze protection shall be documented separately by noting the beginning and ending hour and date. The permittee shall note whether tailwater recovery is used. This information shall be submitted to the District on the Agricultural Water Use Form within 60 days following the crop season. Following December 31, 1992, if the Permittee exceeds the allocated quantities, which are determined by multiplying the total irrigated acres by the total allocated inches per acre per season per crop, the permittee shall submit a report to the District which

shall include reasons why the allotted quantities were exceeded, measures taken to attempt meeting the allocated quantities, and a plan to bring the permit into compliance. Reports for Permittees not achieving the allotted quantities are subject to District approval. If the report is not approved, the Permittee is in violation of the Water Use Permit.

2. All Permittees whose average daily permitted use is equal to or exceeds 100,000 gpd shall record the following information on an annual basis for all perennial crops (example: citrus):
 - a. crop type;
 - b. irrigated acres per crop;
 - c. the dominant soil type; and,
 - d. irrigation method(s);

Irrigation for field preparation/crop establishment and supplemental irrigation shall be documented separately by noting the beginning and ending dates for these activities. Additionally, quantities for frost freeze protection shall be documented separately by noting the beginning and ending hour and date. The permittee shall note whether tailwater recovery is used. This information shall be submitted to the District by March 1 of each year. Following December 31, 1992, if the Permittee exceeds the allocated quantities, which are determined by multiplying the total irrigated acres by the total allocated inches per acre per season per crop, the permittee shall submit a report to the District which shall include reasons why the allotted quantities were exceeded, measures taken to attempt meeting the allocated quantities, and a plan to bring the permit into compliance. Reports for Permittees not achieving the allotted quantities are subject to District approval. If the report is not approved, the Permittee is in violation of the Water Use Permit.

3. The District will evaluate information submitted by Permittees who exceed their allocated quantities to determine whether the lack of achievement is justifiable and a variance is warranted. Permittees may justify lack of achievement by documenting unusual water needs, such as unusual soil or weather conditions creating greater irrigation needs than normal. However, even with such documented justification, phased reductions in water use shall be required unless the District determines that water usage was reasonable under the circumstances reported and that further reductions are not feasible. For such Permittees, on a case-by-case basis, individual

efficiency criteria may be developed for each management period.

4. Compliance with allocated quantities shall be determined by comparing actual use to the calculated quantities for each individual crop on a per season basis. Seasonal crops will be compared on a seasonal basis (e.g. spring tomato requirements based on the calculated inches per season), and perennial crops will be compared on an annual basis (e.g. citrus requirements based on the calculated inches per year).

The District will reassess the efficiency goals prior to implementation. As a result of this reassessment, these goals may be adjusted upward or downward through rulemaking.

2.3 Other Agricultural Water Uses

Quantities for other uses not related to plant preparation and irrigation demand shall be documented separately. Such uses may include filling of spray tanks, livestock needs, cleaning, and frost freeze protection.

3. Recreational, Industrial, and Mining

3.1 Conservation Plan

All permit applicants for recreational/aesthetic, industrial/commercial, and mining/dewatering uses are required to submit a water conservation plan specifically addressing recycling, reuse and landscaping to the District at time of application. Existing permittees shall submit a conservation plan by July 31, 1992. The following condition shall be placed on all appropriate permits, and the elements listed in the condition below shall be addressed in all new applications:

The permittee shall submit to the District a conservation plan by July 31, 1992. This plan shall include documentation and assessment of current and potential internal reuse, as well as external reuse sources. This plan shall also address reducing irrigation withdrawals through evaluation of the use of drought tolerant landscaping for landscaped areas, where present.

3.2 Golf Courses Conservation Plan

All permit applicants for golf course irrigation are required to submit a water conservation plan specifically addressing conversion to low volume irrigation methods, increased system management, limiting frequent irrigation to water-critical

areas, and limiting irrigation of other areas, to the District at time of application. Existing permittees shall submit a conservation plan by July 31, 1992. In addition to the permit condition listed in 3.1, above, the following permit condition shall be applied to all existing golf course permits, and the elements listed in the condition below shall be addressed in all new golf course permit applications:

The permittee shall submit a report to the District by July 31, 1992, detailing how and when the following items shall be implemented, and the expected reduction in withdrawals to be achieved through implementation:

1. Increasing efficiency of water application through conversion to low-volume irrigation methods.
2. Increased system management, including the use of devices such as tensiometers to determine application frequency and duration, and measures to eliminate overspray.
3. Limiting high-frequency irrigation to water-critical areas, such as tees and greens.
4. Reducing the frequency of irrigation for fairways.
5. Elimination of irrigation of roughs.

4. Augmentation

Augmentation means using one source of water to supplement another. Typically, augmentation involves using ground water to supplement the surface water levels of lakes, ponds and wetlands. Augmentation may be required by the District to mitigate the impacts of withdrawals, or it may be requested by an applicant who wishes to raise surface-water levels. Augmentation is permissible provided that the benefits outweigh any adverse impacts to ground- or surface-water resources, depending on the specific situation.

Augmentation for maintenance of lake and wetland natural habitat can be permitted as long as no significant adverse impacts result from the withdrawal. Augmentation may be allowed provided that (1) alternative solutions have been addressed, (2) the need for such augmentation has been established, (3) withdrawals for augmentation do not cause significant adverse impacts, and (4) measures are taken to allow the surface water level to fluctuate seasonally as described in Section 4.12.2.d. of the Basis of Review. Augmentation above District-established applicable minimum water levels is prohibited. Maximum ground-water augmentation

levels for lakes currently below established minimum water levels will be based on recent historical levels.

Augmentation for purely aesthetic purposes, such as for creating and maintaining water levels in constructed ponds shall not be permitted. Existing permits which include aesthetic augmentation may be renewed only if the criteria of Section 4.12.2.c. through i. are implemented. Reuse of water through tail-water recovery ponds in efficiently managed systems is encouraged and is not considered augmentation.

5. Well Construction

Wells constructed in the Eastern Tampa Bay WUCA shall not interfere with legal existing users, shall not interconnect aquifers of different water quality or potentiometric head, and shall be constructed to utilize the lowest quality water appropriate for the use. To ensure that these objectives are met, applications which include new wells will be evaluated on a case-by-case basis versus these objectives. The appropriate well construction shall be required through the following permit condition:

The location(s) and construction characteristics of proposed well(s) shall be in accordance with the following table, to limit impacts to lakes to the greatest extent practicable:

District I.D. No.	Permittee I.D. No.	Casing Diameter	Casing Depth	Total Depth	Latitude/ Longitude
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Casing and total depth may vary up to 10 percent from these specifications. Any further deviation shall require prior written approval from the District.

6. Alternative Sources

6.1 Critical Water Supply Problem Area Designation

The Eastern Tampa Bay Water Use Caution Area is hereby declared a critical water supply problem area pursuant to Chapter 17-40, Florida Administrative Code.

6.2 Reuse

Investigation of the feasibility of reuse may be required for all appropriate uses, and reuse shall be required where feasible. Reuse of treated wastewater as an alternate, replacement, or supplemental water source for irrigation, industrial process, cleaning, or other non-potable use shall

be investigated by all appropriate applicants or permittees. This item shall be implemented through inclusion of the following condition on all applicable permits with agricultural irrigation, recreational or aesthetic irrigation, industrial or commercial, or mining or dewatering uses:

The Permittee shall investigate the feasibility of using reuse as a water source and submit a report describing the feasibility to the District by (date specified). The report shall contain an analysis of reuse sources for the area, including the relative location of these sources to the Permittee's property, the quantity and timing of reuse water available, costs associated with obtaining the reuse water, and an implementation schedule for reuse. Infeasibility shall be supported with a detailed explanation.

6.3 Reporting Reuse Quantities

1. Reclaimed Water Generators

Governmental or other entities holding Water Use Permits and which generate treated wastewater effluent shall submit an annual report listing the disposition of the effluent. This report shall list the number of homes, golf courses, industrial, commercial, and landscaping users supplied with effluent, and the total annual average daily quantity supplied as reuse. This report shall also list the annual average daily quantity of treated wastewater effluent disposed, and the methods and locations of disposal. This requirement will be implemented by applying the following condition to all applicable permits:

The Permittee shall submit an annual report listing the disposition of the effluent. This report shall list the number of homes, golf courses, industrial, commercial, and landscaping users supplied with effluent, and the total annual average daily quantity supplied as reuse. This report shall also list the annual average daily quantity of treated wastewater effluent disposed, and the methods and locations of disposal. This report shall be an addendum to the annual per-capita and other supplied uses report.

2. Reclaimed Water Receivers

All permitted uses which receive reclaimed water (e.g. golf courses, industrial/commercial uses, etc.) shall be required to record and report reuse quantities and sources on a monthly basis. This requirement shall be

implemented by applying the following permit condition to all applicable permits:

The Permittee shall report to the District existing connections to reclaimed water by November 1, 1990. New connections to reclaimed water shall be reported to the District within 30 days of connection to the reuse source. The Permittee shall list the source name, location, and quantities obtained in gallons per day, annual average, for each source, and submit this information to the District by the 10th day of each month for the preceding month, in conjunction with the monthly pumpage report.

The following condition shall be applied to applicable permits for new use:

The Permittee shall report connection to reclaimed water to the District within 30 days of connection to the reuse source. The Permittee shall list the source name, location, and reclaimed quantities obtained in gallons per day, annual average, for each source, and submit this information to the District by the 10th day of each month for the preceding month, in conjunction with the monthly pumpage report.

6.4 Investigate Desalination

All industrial and public supply applicants for new quantities shall be required to investigate the feasibility of desalination to provide all or a portion of requested quantities. This requirement shall be implemented by applying the following permit condition to all applicable permits:

The Permittee shall investigate the feasibility of desalination to provide all or a portion of the requested quantities, and to implement desalination if feasible. The report of this investigation shall be submitted with any application for new quantities, and shall include a detailed economic analysis of desalination, including disposal costs, versus development of fresh water supplies, including land acquisition and transmission costs.

7. Metering of Withdrawals

All permitted withdrawal points, on permits at or above 100,000 gallons per day annual average daily withdrawal, shall be metered and the Permittee shall be required to record and submit withdrawal information. Withdrawal points on permits

existing as of the effective date of this rule, shall be metered at the permittee's expense by July 31, 1995, except as provided below.

The following permit condition shall be applied to all active permits with quantities at or above 500,000 gpd which shall have meters provided by the District under the provisions of Section 5.1, Basis of Review, for withdrawal points existing prior to October 1, 1989:

At such time as the District completes installation of meter(s) on all applicable withdrawal points, the Permittee shall record the total withdrawal for each metered withdrawal point. Withdrawal points constructed after September 30, 1989, shall be metered within 90 days of construction, at Permittee's expense. Total withdrawals shall be reported to the District (using District format) on or before the tenth day of the following month.

Withdrawal points existing prior to the effective date of this rule, on permits granted for quantities at or above 100,000 gpd, which will not receive District-supplied meters under the provisions of Section 5.1, Basis of Review, shall receive the following condition:

The following withdrawal points (District ID numbers) shall be equipped with totalizing flow meters or other measuring devices as approved in writing by the Director, Resource Regulation Department. Such devices shall have and maintain an accuracy within five percent of the actual flow. Those designated withdrawal points not equipped with such devices on the date of permit issuance shall be equipped by July 31, 1995.

Total withdrawal from each metered withdrawal point shall be recorded on a monthly basis and reported to the District (using District format) on or before the tenth day of the following month.

Permits granted for quantities at or above 100,000 gpd, which have withdrawal points constructed after the effective date of this rule, shall receive the following condition:

The following withdrawal points (District ID numbers) shall be equipped with totalizing flow meters or other measuring devices as approved in writing by the Director, Resource Regulation Department. Such devices shall have and maintain an accuracy within five percent of the actual flow. Those designated withdrawal points not equipped with such devices on the date of permit issuance shall be equipped within 90 days of completion of construction of the withdrawal facility, unless an extension is granted by the Director, Resource Regulation.

Total withdrawal from each monitored source shall be recorded on a monthly basis and reported to the District (using District format) on or before the tenth day of the following month.

All permits with reporting requirements shall receive the following condition:

All reports and data required by the permit shall be submitted to the District and shall be addressed to:

Permits Data
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34609-6899

8. Limitation of Quantity Permitted

A. In order to stabilize ground water declines and the associated water resource problems, the District presumes that new quantities of ground water use from confined aquifers shall not be permitted from the Most Impacted Area (MIA) within the WUCA, as identified in Figure 7.2-2, and delineated in paragraph F., below. If site-specific information is provided which demonstrates that the presumption is incorrect, this information will be used to evaluate whether a permit may be issued. This restriction on permitting new quantities of ground water does not apply to surface water, surficial aquifer, and desalination sources. In addition, this restriction on permitting new quantities of ground water shall apply only to applications filed after April 24, 1990. Permits for water use in existence as of June 27, 1990, within the MIA may be issued provided that an application is filed prior to July 1, 1991, provided that all permitting criteria and conditions are met, and the quantity to be permitted represents an existing impact to the aquifer. New quantities outside the MIA shall only be permitted at high efficiency.

B. In order to reduce ground water declines and the inland movement of the saline water interface, the District presumes that proposed new quantities of ground water applied for after March 30, 1993, from confined aquifers from areas outside the MIA, whether inside of or outside of the Eastern Tampa Bay Water Use Caution Area, that cause a potentiometric surface drawdown of 0.2 feet or greater within the MIA will significantly induce saline water intrusion. Applicants may demonstrate compliance with regard to the significant saline water intrusion standard by affirmatively showing that the potentiometric surface drawdown at the MIA boundary would be less than 0.2 feet, based on site-specific information, using scientifically acceptable flow modeling, or that significant saline water intrusion, as defined in the Performance Standards, Section 4.5, subsection 1, will not be caused within the MIA, using scientifically acceptable solute transport modeling. The drawdown impacts of successive withdrawal requests will be aggregated in applying this presumption to any permit issued pursuant to this rule. This presumption on permitting proposed new quantities of ground water does not apply to surface water,

surficial aquifer, and desalination sources. This presumption also does not apply to the renewal of previously permitted quantities. This provision will remain in effect for a period of two years from March 30, 1993, except that if a rule incorporating permanent standards for the Southern Groundwater Basin Water Use Caution Area is noticed for adoption during the two year period, this provision will remain in effect during the pendency of any Section 120.54(4), F.S., rule challenge and final disposition of the proposed rule by the Governing Board.

- C. The limitation of quantities provided by this section is intended to prevent further adverse impacts to confined aquifer levels and ground-water quality. In the event that aquifer levels and ground-water quality no longer necessitate the restrictions imposed by this section, the Governing Board may consider modification or repeal restrictions.
- D. Permittees with valid water use permits for water uses within the Most Impacted Area (MIA), or with permits for water uses outside the MIA which currently cause a potentiometric surface drawdown of 0.2 feet or greater within the MIA, who relocate their operation will be granted a permit modification reflecting the relocation provided all other permitting criteria are met, and:
1. For quantities permitted within the MIA which are relocated within the MIA, the quantities of the modified permit do not exceed those of the prior permit.
 2. For quantities permitted within the MIA which are relocated outside the MIA, the quantities of the modified permit may exceed those of the prior permit provided that the additional quantities do not cause a 0.2 feet or greater drawdown in the potentiometric surface within the MIA.
 3. For quantities permitted outside the MIA which cause a potentiometric surface drawdown of 0.2 feet or greater within the MIA, which are relocated outside the MIA, the quantities of the modified permit do not cause a greater drawdown in the potentiometric surface within the MIA than that caused by the prior permit.
- E. Water uses in the MIA within the WUCA as identified in Figure 7.2-2, and paragraph F., below, otherwise ineligible for a permit, where withdrawal is from a well having an outside diameter of 6 inches or more at the surface, and where the average annual withdrawal from any source or combined sources is less than 100,000 gallons per day, may be eligible for a

water use permit provided that all permitting criteria are met and either:

1. The discharge diameter is reduced to less than 4 inches and the pump used is 7.5 horsepower or less, or,
2. A flowmeter is installed at the permittee's expense, and monthly pumpage data is collected and submitted to the District.

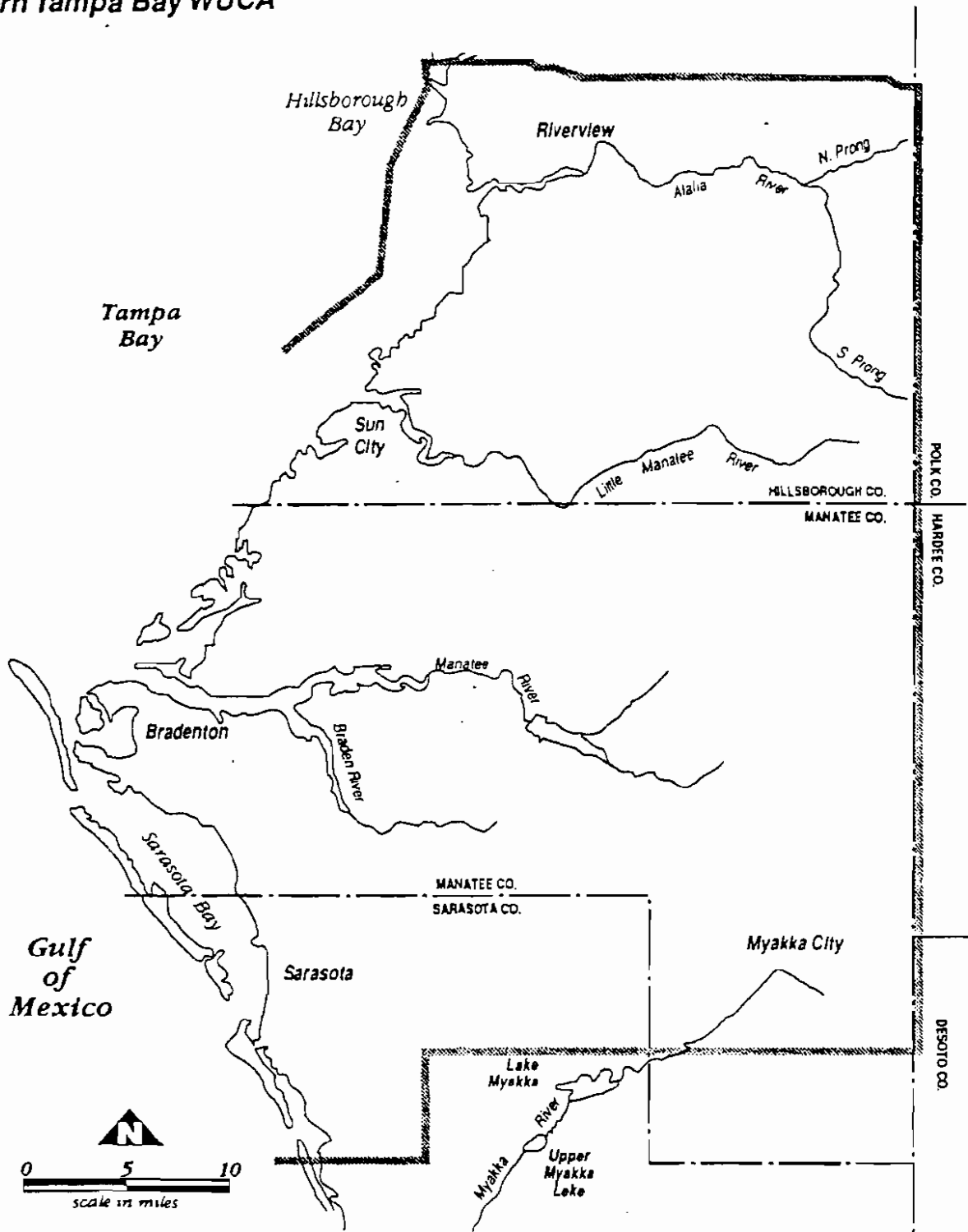
This provision shall apply only to wells with an outside diameter of 6 inches or more constructed prior to June 27, 1990.

Affected users shall apply for a water use permit in accordance with this subsection on or before February 10, 1995.

- F. The area for the MIA of the Eastern Tampa Bay Water Use Caution Area is as follows:

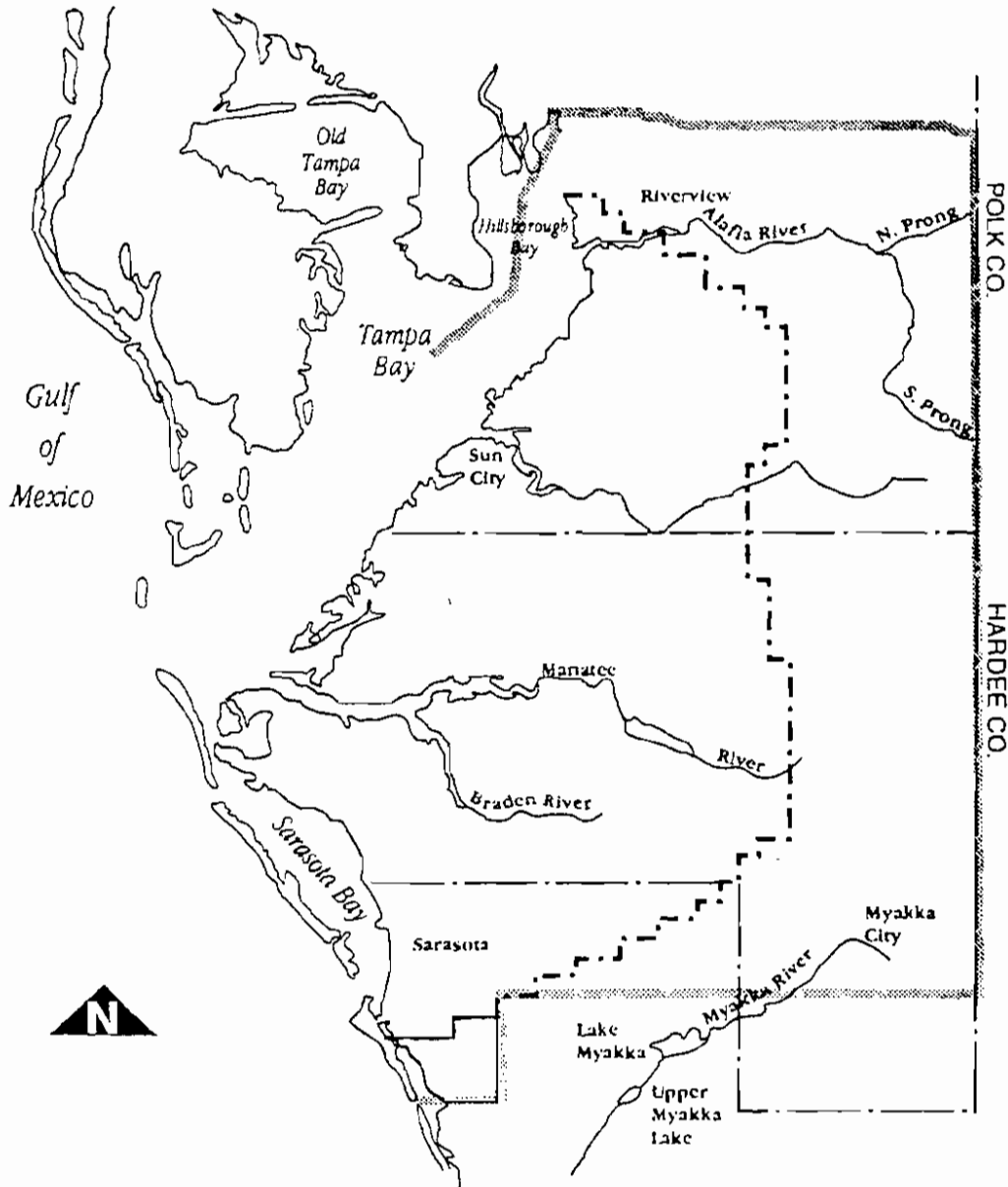
Township 30, Range 19, Sections 2 through 36;
Township 30, Range 20, Sections 17 through 22; and
27 through 36;
Township 31, Range 18, all sections;
Township 31, Range 19, all sections;
Township 31, Range 20, all sections;
Township 31, Range 21, Sections 6 through 8; 17
through 20; and 29 through 32;
Township 32, Range 18, all sections;
Township 32, Range 19, all sections;
Township 32, Range 20, all sections;
Township 32, Range 21, Sections 5 through 7;
Township 33, Range 16, all sections;
Township 33, Range 17, all sections;
Township 33, Range 18, all sections;
Township 33, Range 19, all sections;
Township 33, Range 20, all sections;
Township 33, Range 21, Sections 19, 30, 31;
Township 34, Range 16, all sections;
Township 34, Range 17, all sections;
Township 34, Range 18, all sections;
Township 34, Range 19, all sections;
Township 34, Range 20, all sections;
Township 34, Range 21, Sections 6 through 8; 17
through 20; and 29 through 32;
Township 35, Range 16, all sections;
Township 35, Range 17, all sections;
Township 35, Range 18, all sections;
Township 35, Range 19, all sections;
Township 35, Range 20, all sections;
Township 35, Range 21, Sections 5 through 8; 17
through 20; and 30;
Township 36, Range 17, all sections;
Township 36, Range 18, all sections;
Township 36, Range 19, Sections 1 through 24; and
27 through 32;
Township 36, Range 20, Sections 2 through 10; and
17 and 18;
Township 37, Range 17, Sections 1 through 18;
Township 37, Range 18, Sections 1 through 10; and
17 and 18.

Figure 7.2-1
Eastern Tampa Bay WUCA



EXPLANATION:
----- Eastern Tampa Bay WUCA

Figure 7.2-2
Eastern Tampa Bay WUCA



EXPLANATION.
----- Eastern Tampa Bay WUCA
- · - · - · Most Impacted Area, as of June 27, 1990

7.3 NORTHERN TAMPA BAY WATER USE CAUTION AREA

The Governing Board declared portions of Hillsborough, Pasco, and Pinellas Counties a Water Use Caution Area (WUCA) on June 28, 1989. The area designated is shown in Figure 7.3-1; the legal description is provided in Rule 40D-2.801(3)(c). As of the effective date of this rule, all existing water use permits within the Water Use Caution Area are modified to incorporate the applicable measures and conditions described below. Valid permits, legally in effect as of the effective date of this rule, are hereafter referred to as existing permits. Applicable permit conditions, as specified below, are incorporated into all existing water use permits in the Water Use Caution Area and shall be placed on new permits issued within the area. However, both the language and the application of any permit conditions listed may be modified when appropriate.

These portions of the Basis of Review for the Northern Tampa Bay Water Use Caution Area are intended to supplement the other provisions of the Basis of Review and are not intended to supersede or replace them. If there is a conflict between requirements, the more stringent provision shall prevail.

1. Public Supply

A wholesale public supply customer shall be required to obtain a separate permit to effect the following conservation requirements unless the quantity obtained by the wholesale public supply customer is less than 100,000 gallons per day on an annual average basis and the per capita daily water use of the wholesale public supply customer is less than the applicable per capita daily water use requirement outlined in Section 7.3 1.1.1.

The following water conservation requirements shall apply to all public supply utilities and suppliers with Permits that are granted for an annual average quantity of 100,000 gallons per day or greater, as well as wholesale customers supplied by another entity which obtain an annual average quantity of 100,000 gallons per day or greater, either indirectly or directly under water use permits within the Water Use Caution Area, regardless of the name(s) on the water use permit.

1.1 Per-Capita Use

Per-capita daily water use is defined as population-related withdrawals associated with residential, business, institutional, industrial, miscellaneous metered, and unaccounted uses. Permittees with per-capita daily water use which is skewed by the demands of significant water uses can deduct these uses provided that these uses are separately accounted. Generally, the formula used for determining gallons per day per capita is as follows: total withdrawal minus significant

uses, environmental mitigation, and treatment losses, divided by the population served (adjusted for seasonal and tourist populations, if appropriate). For interconnected systems, incoming transfers and wholesale purchases of water shall be added to withdrawals; outgoing transfers and wholesale sales of water shall be deducted from withdrawals.

A significant use, which may be deducted, is defined as an individual non-residential customer using 25,000 gallons per day or greater on an annual average basis, or an individual non-residential customer whose use represents greater than five percent of the utility's annual water use.

Any uses which are deducted from the per-capita daily water use based on the above guidelines shall be supported with documentation of the use and associated quantities. Additionally, all significant deducted uses must be accounted for in a water conservation plan developed by the applicant/permittee which includes specific water conservation goals for each use or type of use. Environmental mitigation quantities permitted by the District and treatment losses such as desalination reject water and sand-filtration backwash water shall be identified and reported separately, and shall not be included in the calculation of per-capita use. Treatment losses for each type of treatment plant (e.g. desalination, sand filtration) shall be calculated separately. Treatment losses are calculated as raw water into the plant minus treated water out of the plant.

All permittees shall calculate and report gross per-capita water usage as outlined above. However, for purposes of compliance with per-capita requirements, a permittee may also calculate and report a per-capita use rate that reflects incentives for reuse and the use of desalination sources.

For compliance purposes, a permittee may deduct the quantity of reclaimed water delivered for uses not served by the permittee's water utility. Allowable deductions shall be limited to those quantities that would normally be permitted for the activity (e.g. if reuse is supplied for golf course irrigation, the acreage of greens, tees, and fairways must be submitted, and the quantity of potable water that would be permitted for that use would be deducted from the total quantity used for compliance with the per-capita requirement). Where the ground-water source to be permitted or replaced is of significantly lower water quality but is suitable for the intended use, the reuse credit may not be claimed (e.g. reclaimed water replaces saline withdrawals used for irrigation, where the saline water is suitable for the irrigation and the withdrawals do not threaten the water resources). Reclaimed water is wastewater that has received at least secondary treatment and is reused for a beneficial purpose.

A permittee may deduct only the quantity of reclaimed water under the control of the utility, supplier, or governmental unit holding the water use permit.

For compliance purposes, a permittee may deduct 50% of the quantity of finished water from desalination sources prior to blending with water derived from freshwater sources. A desalination source is a plant which removes salts and other chemicals from highly mineralized water of greater than 500 mg/l Total Dissolved Solids.

Acceptable data sources for service area population and seasonal/tourist population adjustments are described in section 3.6 of the Basis of Review. If the service area population is developed using a person per unit factor, then calculation of the factor must be documented indicating that the factor is reasonable for the service area. In cases where seasonal adjustment is appropriate and the service area is smaller than the area covered by the applicable comprehensive or regional plan, then the same seasonal adjustment factors used to adjust the permanent population of the planning area may be applied to the permanent population of the service area. Other methods of calculating service area population may be used provided that the methodology is accepted by the District as appropriate for the service area. Estimates of population shall be based on information developed or reported no more than twelve months prior to the applicable management period. When reporting per capita rates, the service area of a permitted public supply utility or supplier shall consist of the area which the permittee exerts management control for public water supply.

January 1, 1993 Management Period

Public Supply uses within the Water Use Caution Area shall meet, at a minimum, an overall maximum per capita water use rate of 150 gallons per day for the January 1, 1993 management period. This standard shall remain in effect until modified by rule. However, for planning purposes, also listed are per-capita goals for future management periods. Public supply permittees shall also document the quantities supplied to deducted uses, and the water conservation measures employed for deducted significant uses.

January 1, 1997 Management Period

Based on information collected for the period 1990-1992, the per-capita rate will be developed for the January 1, 1997 management period and adopted by rule with sufficient time for permittees to prepare for the 1997 management period. Based on current information, the per capita water use rate goal would be 140 gallons per day.

January 1, 2001 Management Period

Based on information collected for the period 1993-1996, the per-capita rate will be developed for the January 1, 2001 management period and adopted by rule with sufficient time for permittees to prepare for the 2001 management period. Based on current information, the per capita water use rate goal would be 130 gallons per day.

January 1, 2011 Management Period

Based on information collected for the period 1997-2000, the per-capita rate will be developed for the January 1, 2011 management period and adopted by rule with sufficient time for permittees to prepare for the 2011 management period. Based on current information, the per-capita water use rate goal would be 130 gallons per day.

This requirement shall be implemented by applying the following permit conditions to all existing and new public supply permits:

1. By January 1, 1993, the Permittee shall achieve a per capita water rate equal to or less than 150 gpd; This standard shall remain in effect until modified by rule.

For planning purposes, listed below are per-capita goals for future management periods. These goals may be established as requirements through future rulemaking by the District:

- a. By January 1, 1997, the District may establish a new per capita water use standard. Based on current information, the per capita water use goal may be established by rule at 140 gpd;
 - b. By January 1, 2001, the District may establish a new per capita water use standards. Based on current information, the per capita water use goal may be established by rule at 130 gpd; and,
 - c. By January 1, 2011, the District may establish a new per capita water use standard. Based on current information, the per capita water use goal may be established by rule at 130 gpd;
2. By April 1 of each year for the preceding fiscal year (October 1 through September 30), the permittee shall submit a report detailing:
 - a. The population served;
 - b. Significant deducted uses, the associated quantity, and conservation measures applied to these uses;
 - c. Total withdrawals;

- d. Treatment losses.
- e. Environmental mitigation quantities.
- f. Sources and quantities of incoming and outgoing transfers of water and wholesale purchases and sales of water, with quantities determined at the supplier's departure point.
- g. Documentation of reuse and desalination credits, if taken.

As of January 1, 1993, if the permittee does not achieve the specified per capita rates, the report shall document why these rates and requirements were not achievable, measures taken to attempt meeting them, and a plan to bring the permit into compliance. This report is subject to District approval. If the report is not approved, the Permittee is in violation of the Water Use Permit.

- 3. The District will evaluate information submitted by Permittees who do not achieve these requirements to determine whether the lack of achievement is justifiable and a variance is warranted. Permittees may justify lack of achievement by documenting unusual water needs, such as larger than average lot sizes with greater water irrigation needs than normal-sized lots. However, even with such documented justification, phased reductions in water use shall be required unless the District determines that water usage was reasonable under the circumstances reported and that further reductions are not feasible. For such Permittees, on a case-by-case basis, individual water conservation requirements may be developed for each management period.

Prior to the 1997, 2001, and 2011 management periods, the District will reassess the per-capita and other uses conservation goals. As a result of this reassessment, these goals may be adjusted upward or downward through rulemaking and will become requirements.

1.2 Water Conserving Rate Structure

Each water supply utility within the Water Use Caution Area shall adopt a water-conserving rate structure by January 1, 1993. This requirement shall be implemented by applying the following permit condition to all existing public supply permits:

The Permittee shall adopt a water conservation oriented rate structure no later than January 1, 1993. If the Permittee already has a water conservation oriented rate structure, a description of the structure, any supporting documentation, and a report on the effectiveness of the

rate structure shall be submitted by January 1, 1993. Permittees that adopt a water conservation oriented rate structure pursuant to this rule shall submit the above-listed information by July 1, 1993.

New public supply permits shall receive the following permit condition:

The Permittee shall adopt a water conservation oriented rate structure no later than two years from the date of permit issuance. The Permittee shall submit a report describing the rate structure and its estimated effectiveness within 60 days following adoption.

1.3 Water Audit

All water supply utilities shall implement water audit programs by January 1, 1993. A thorough water audit can identify what is causing unaccounted water and alert the utility to the possibility of significant losses in the distribution system. Unaccounted water can be attributed to a variety of causes, including unauthorized uses, line flushing, authorized unmetered uses, under-registration of meters, fire flows, and leaks. Any losses that are measured and documented are not considered unaccounted water.

This requirement shall be implemented by applying the following permit condition to all existing Public Supply permits:

The permittee shall conduct water audits of the water supply system during each management period. The initial audit shall be conducted no later than January 1, 1993. Water audits which identify a greater than 12 percent unaccounted for water shall be followed by appropriate remedial actions. Audits shall be completed and reports documenting the results of the audit shall be submitted as an element of the report required in the per capita condition to the District by the following dates: January 1, 1993; January 1, 1997; January 1, 2001; and January 1, 2011. Water audit reports shall include a schedule for remedial action if needed.

Large, complex water supply systems may conduct the audit in phases, with prior approval by the District. A modified version shall be applied to new permits, replacing the initial audit date with a date two years forward from the permit issuance date. Prior to each management period, the District will reassess the unaccounted-for water standard of 12%, and may adjust this standard upward or downward through rulemaking.

1.4 Residential Water Use Reports

Beginning April 1, 1993, public supply permittees shall be required to annually report residential water use by type of dwelling unit. Residential dwelling units shall be classified into single family, multi-family (two or more dwelling units), and mobile homes. Residential water use consists of the indoor and outdoor water uses associated with these classes of dwelling units, including irrigation uses, whether separately metered or not. The permittee shall document the methodology used to determine the number of dwelling units by type and their quantities used. Estimates of water use based upon meter size may be inaccurate and will not be accepted.

This requirement shall be implemented by applying the following permit condition to all public supply permits:

Beginning in 1993, by April 1 of each year for the preceding fiscal year (October 1 through September 30), the permittee shall submit a residential water use report detailing:

- a. The number of single family dwelling units served and their total water use,
- b. The number of multi-family dwelling units served and their total water use,
- c. The number of mobile homes served and their total water use.

Residential water use quantities shall include both the indoor and outdoor water uses associated with the dwelling units, including irrigation water.

2. Agriculture

2.1 Irrigation Water Use Allotments

The District allocates agricultural irrigation-related water use based on a modified Blaney-Criddle model and other methods as described below. For each individual crop type, the permittee shall not exceed the quantity determined by multiplying the total irrigated acres by the total allocated inches per irrigated acre per season. Allocated inches per irrigated acre per season are determined separately for three major categories of water use, and the sum equals the total allocated inches per irrigated acre per season. An irrigated acre, hereafter referred to as "acre," is defined as the gross acreage under cultivation, including areas used for water conveyance such as ditches, but excluding uncultivated areas such as wetlands, retention ponds, and perimeter drainage ditches. Other non-irrigation related water uses shall be permitted in accordance with section 3.3, Basis of Review.

As a guide for permit applicants and permittees, total allocated inches per acre per season for citrus in the Northern Tampa Bay WUCA are listed in tables provided in Design Aid 4, Part C, Water Use Permit Information Manual. For crops, soil types, planting dates, and length of growing season not listed in those tables, an applicant or permittee may obtain the total allocated inches per acre per season utilizing procedures described in Design Aid 4 or complete the Agricultural Water Allotment Form and submit it to the District. The District will complete and return the form calculating total allocated inches per acre per season per crop based on the information provided. A permit applicant or permittee may use alternative methods for calculating water use needs subject to District approval.

A key component in calculating total allocated inches per acre per season is the assigned "irrigation water use efficiency," hereafter referred to as "efficiency". Efficiency is defined as the ratio of the volume of water beneficially used to the volume delivered from the irrigation system. For many crops, it is common for different irrigation systems and practices to be employed for different water uses (e.g. a tomato grower may use seepage irrigation for field preparation and drip irrigation for supplemental irrigation). In recognition of these differences, the District applies separate assigned efficiencies to different water irrigation-related water uses.

The three major categories of agricultural irrigation-related water use are: 1) supplemental irrigation (the water delivered to satisfy the evapotranspirational need of the crop); 2) field preparation/crop establishment (the water delivered for tilling, bedding, fumigation, and planting); and 3) other water uses (i.e. frost and freeze protection, heat stress relief, chemical application, irrigation system flushing and maintenance, and leaching of salts from the root zone). The District has assigned minimum efficiency standards for supplemental and field preparation/crop establishment irrigation requirements. These standards are listed later in this section. Design Aid 4, Part C, Water Use Permit Information Manual, describes in detail a methodology for calculating allotted inches per acre per season for supplemental irrigation (supplemental irrigation requirements divided by the assigned efficiency standard) and the allocated inches per acre per season for field preparation/crop establishment (field preparation/crop establishment irrigation requirements divided by the assigned efficiency standard). As specified in section 3.3 of the Basis, other information and methods may be considered as supported by the facts in individual cases.

Other water uses are permitted on an individual basis as follows:

1. Chemigation, irrigation system flushing and maintenance, heat stress relief, and leaching of salts - the total allocated inches per acre per season for these uses is equal to ten (10) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with a micro irrigation system, and five (5) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with all other irrigation systems.
2. Frost/freeze protection - The District allows irrigation for frost/freeze protection provided that: 1) the maximum daily quantity listed on the permit is not exceeded; 2) irrigation for this purpose will not cause water to go to waste; and, 3) permittees whose annual average daily permitted water use is equal to or exceeds 100,000 gpd shall document and report the beginning and ending hours and dates, and inches per acre applied for such purpose.

The allocated inches per acre per season per crop for supplemental and field preparation/crop establishment for the January 1, 1993, management period will be based on the following minimum assigned efficiency standards. These standards shall remain in effect until modified by rule. However, for planning purposes, also listed are assigned efficiency standard goals for future management periods.

January 1, 1993 Management Period

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 75 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 75 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 75 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for both field preparation/crop establishment and supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent.

These minimum assigned efficiencies shall remain in effect until modified by rule.

January 1, 1997 Management Period

Based on information collected for the period 1990-1992, different efficiency standards may be developed for the January 1, 1997 management period. These efficiencies may be adopted by rule with sufficient time to allow users to prepare for implementation. The following efficiency goals are based on current information.

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 80 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 80 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 80 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for field preparation/crop establishment irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent, and for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 65 percent.

January 1, 2001 Management Period

Based on information collected for the period 1993-1996, different efficiency standards may be developed for the January 1, 2001 management period. These efficiencies may be adopted by rule with sufficient time to allow users to prepare for implementation. The following efficiency goals are based on current information.

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 85 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 85 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 85 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for field preparation/crop establishment irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent, and for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 70 percent.

January 1, 2011 Management Period

Based on information collected for the period 1996-2005, different efficiency standards may be developed for the January 1, 2011 management period. These efficiencies may be adopted by rule with sufficient time to allow users to prepare for implementation. The following efficiency goals are based on current information.

Citrus - the total allocated inches per acre per season for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 85 percent.

Strawberries - the total allocated inches per acre per season for field preparation/crop establishment shall be 14 inches. The total inches per acre per season for supplemental irrigation shall be based on a minimum assigned efficiency standard of 85 percent.

Row crops irrigated with a drip system or row crops that are unmulched and not grown with a seepage system - the total allocated inches per acre per season for field preparation/crop establishment shall be based on a minimum assigned efficiency standard of 60 percent and 85 percent for supplemental irrigation requirements.

Nurseries - the total allocated inches per acre shall be based on the type of nursery, production factors, plant types, and irrigation method.

Other crops - the total allocated inches per acre per season for field preparation/crop establishment irrigation requirements shall be based on a minimum assigned efficiency standard of 60 percent, and for supplemental irrigation requirements shall be based on a minimum assigned efficiency standard of 70 percent.

These requirements shall be implemented by applying the following permit conditions to all agricultural permits, as applicable:

Effective January 1, 1993, the Permittee shall not exceed the quantity determined by multiplying the total irrigated acres by the total allocated inches per irrigated acre per season for each crop type. An irrigated acre, hereafter referred to as "acre," is defined as the gross acreage under cultivation, including areas used for water conveyance such as ditches, but excluding uncultivated areas such as wetlands, retention ponds, and perimeter drainage ditches.

Allocated inches per irrigated acre per season are determined separately for three major categories of water use: field preparation/crop establishment; supplemental irrigation; and, other uses (i.e., frost/freeze protection, heat stress relief, chemical application, irrigation system flushing and maintenance, and leaching of salts). Once these three separate quantities are calculated, they are added and the sum equals the total allocated inches per irrigated acre per season, for each individual crop type.

These allocated inches per acre per season per crop for field preparation/crop establishment and supplemental irrigation (excluding nurseries, which are permitted on a case-by-case basis) are based on the minimum assigned efficiency standards listed in Table 7.3-1 below. These minimum standards shall remain in effect until modified by rule. However, for planning purposes, also listed are assigned efficiency goals for future management periods.

Table 7.3-1. Minimum Assigned Efficiency Standards and Goals.

Crop Type	Supplemental Irrigation				Field Preparation/ Crop Establishment			
	Eff. Req.	Efficiency Goals			Eff. Req.	Efficiency Goals		
	1993	1997	2001	2011	1993	1997	2001	2011
Citrus								
Existing Permits	75%	80%	85%	85%	na	na	na	na
New Permits	80%	80%	85%	85%	na	na	na	na
Strawberries								
Existing Permits	75%	80%	85%	85%	na	na	na	na
New Permits	80%	80%	85%	85%	na	na	na	na
Row Crops (with drip or unmulched, non-seepage irrigated)								
Existing Permits	75%	80%	85%	85%	60%	60%	60%	60%
New Permits	80%	80%	85%	85%	60%	60%	60%	60%
Other Crops								
Existing Permits	60%	65%	70%	70%	60%	60%	60%	60%
New Permits	70%	70%	70%	70%	60%	60%	60%	60%

In addition to the allotted quantities for field preparation/crop establishment and supplemental irrigation requirements, the Permittee's total allotted inches per acre per season per crop will include the following quantities for other water uses:

1. Chemigation, irrigation system flushing and maintenance, heat stress relief, and leaching of salts - the total allocated inches per acre per season for these uses is equal to ten (10) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with a micro irrigation system, and five (5) percent of the allocated inches per acre per season of the supplemental irrigation requirement for crops irrigated with all other irrigation systems.
2. Frost/freeze protection - Although there are no specific quantities permitted for frost/freeze protection, the District allows irrigation for frost/freeze protection provided that: 1) the maximum daily quantity listed on the permit is not exceeded; 2) irrigation for this purpose will not cause water to go to waste; and, 3) permittees whose annual average daily permitted water use is equal to or exceeds 100,000 gpd shall document and

report the beginning and ending hours and dates, and inches per acre applied for such purpose.

As a guide for the Permittee, total allocated inches per acre per season for major crops in the Northern Tampa Bay WUCA are listed in tables provided in Design Aid 4, Part C, Water Use Permit Information Manual. For crops, soil types, planting dates, and lengths of growing season not listed in those tables, an applicant or Permittee can obtain the total allocated inches per acre per season utilizing procedures described in Design Aid 4, or complete the Agricultural Water Allotment Form and submit it to the District. The District will complete and return the form calculating total allocated inches per acre per season based on the information provided. A permit applicant or permittee may use alternative methods for calculating water use needs subject to District approval.

2.2 Monitoring Requirements for Agricultural Water Use

To ensure compliance with the total allocated inches per acre per season per crop, the District requires the following data to be submitted. Although the permittee is not required to be in compliance with allocation requirements until January 1, 1993, the permittee is required to submit these data beginning with the first appropriate date in 1991, as specified in the permit conditions below.

1. All Permittees whose average daily permitted use is equal to or exceeds 100,000 gpd shall record the following information for all seasonal crops (example: vegetables) and nurseries; Annual crops (example: citrus) may omit items e. and f.:
 - a. crop type;
 - b. monthly irrigated acres per crop;
 - c. the dominant soil type;
 - d. irrigation method(s);
 - e. planting dates; and,
 - f. season length.

Irrigation for field preparation/crop establishment and supplemental irrigation shall be documented separately by noting the beginning and ending dates for these activities. Additionally, quantities for frost freeze protection shall be documented separately by noting the beginning and ending hour and date. The permittee shall note whether tailwater recovery is used. This information shall be submitted to the District on the Agricultural Water Use Form within 60 days following the crop season. Following December 31, 1992, if the Permittee exceeds the allocated quantities, which are determined by multiplying the total irrigated acres by

the total allocated inches per acre per season per crop, the permittee shall submit a report to the District which shall include reasons why the allotted quantities were exceeded, measures taken to attempt meeting the allocated quantities, and a plan to bring the permit into compliance. Reports for Permittees not achieving the allotted quantities are subject to District approval. If the report is not approved, the Permittee is in violation of the Water Use Permit.

2. The District will evaluate information submitted by Permittees who exceed their allocated quantities to determine whether the lack of achievement is justifiable and a variance is warranted. Permittees may justify lack of achievement by documenting unusual water needs, such as unusual soil or weather conditions creating greater irrigation needs than normal. However, even with such documented justification, phased reductions in water use shall be required unless the District determines that water usage was reasonable under the circumstances reported and that further reductions are not feasible. For such Permittees, on a case-by-case basis, individual efficiency criteria may be developed for each management period.
3. Compliance with allocated quantities shall be determined by comparing actual use to the calculated quantities for each individual crop on a per season basis. Seasonal crops will be compared on a seasonal basis (e.g. spring tomato requirements based on the calculated inches per season), and perennial crops will be compared on an annual basis (e.g. citrus requirements based on the calculated inches per year). The District will reassess the efficiency goals prior to implementation. As a result of this reassessment, these goals may be adjusted upward or downward through rulemaking.

2.3 Other Agricultural Water Uses

Quantities for other uses not related to plant preparation and irrigation demand shall be documented separately. Such uses may include filling of spray tanks, livestock needs, cleaning, and frost freeze protection.

3. Recreational, Industrial, and Mining

3.1 Conservation Plan

All permit applicants for recreational/aesthetic, industrial/commercial, and mining/dewatering uses are required to submit a water conservation plan specifically addressing recycling, reuse and landscaping to the District at time of application.

Existing permittees shall submit a conservation plan by July 31, 1992. The following condition shall be placed on all appropriate permits, and the elements listed in the condition below shall be addressed in all new applications:

The permittee shall submit to the District a conservation plan by July 31, 1992. This plan shall include documentation and assessment of current and potential internal reuse, as well as external reuse sources. This plan shall also address reducing irrigation withdrawals through evaluation of the use of drought tolerant landscaping for landscaped areas, where present.

3.2 Golf Courses Conservation Plan

All permit applicants for golf course irrigation are required to submit a water conservation plan specifically addressing conversion to low volume irrigation methods, increased system management, limiting frequent irrigation to water-critical areas, and limiting irrigation of other areas, to the District at time of application. Existing permittees shall submit a conservation plan by July 31, 1992. In addition to the permit condition listed in 3.14 above, the following permit condition shall be applied to all existing golf course permits, and the elements listed in the condition below shall be addressed in all new golf course permit applications:

The permittee shall submit a report to the District by July 31, 1992, detailing how and when the following items shall be implemented, and the expected reduction in withdrawals to be achieved through implementation:

1. Increasing efficiency of water application through conversion to low-volume irrigation methods
2. Increased system management, including the use of devices such as tensiometers to determine application frequency and duration, and measures to eliminate overspray.
3. Limiting high-frequency irrigation to water-critical areas, such as tees and greens.
4. Reducing the frequency of irrigation for fairways.
5. Elimination of irrigation of roughs.

4. Augmentation

Augmentation means using one source of water to supplement another. Typically, augmentation involves using ground water to supplement the surface water levels of lakes, ponds and wetlands. Augmentation may be required by the District to mitigate the impacts of withdrawals, or it may be requested by an applicant who wishes to raise surface-water levels. Augmentation is permissible provided that the benefits outweigh any

adverse impacts to ground- or surface-water resources, depending on the specific situation.

Augmentation for maintenance of lake and wetland natural habitat can be permitted as long as no significant adverse impacts result from the withdrawal. Augmentation may be allowed provided that (1) alternative solutions have been addressed, (2) the need for such augmentation has been established, (3) withdrawals for augmentation do not cause significant adverse impacts, and (4) measures are taken to allow the surface water level to fluctuate seasonally as described in Section 4.12.2.d. of the Basis of Review. Augmentation above District-established applicable minimum water levels is prohibited. Maximum ground-water augmentation levels for lakes currently below established minimum water levels will be based on recent historical levels.

Augmentation for purely aesthetic purposes, such as for creating and maintaining water levels in constructed ponds shall not be permitted. Existing permits which include aesthetic augmentation may be renewed only if the criteria of Section 4.12.2.c. through i. are implemented. Reuse of water through tail-water recovery ponds in efficiently managed systems is encouraged and is not considered augmentation.

5. Lake Impacts

A stressed condition for a lake is defined to be chronic fluctuation below the normal range of lake level fluctuations. For lakes with District-established management levels, a stressed condition is a chronic fluctuation below the minimum low management level. For those lakes without established management levels, stressed conditions shall be determined on a case-by-case basis through site investigation by District staff during the permit evaluation process. The District maintains a list of lakes within the WUCA which have been determined to be stressed.

5.1 Stressed Lakes - New Withdrawals

Due to cumulative ground water and surface water withdrawal impacts, new withdrawals from stressed lakes shall not be permitted.

5.2 Stressed Lakes - Existing Withdrawals

Existing permitted surface withdrawals from stressed lakes shall be abandoned or replaced with an alternate source by September 30, 1993. Existing and new permitted withdrawals from lakes which are determined by the District to be stressed following the implementation of the WUCA Rule shall abandon or replace these withdrawals with alternate sources within three

years of the designation of the stressed lake. This requirement shall be implemented for all existing permits which include surface water withdrawals from stressed lakes by applying the following permit condition:

All existing surface water withdrawals from stressed lakes shall be abandoned or replaced with a surficial or Floridan aquifer ground-water source, or a reuse source, by September 30, 1993. Such replacement shall require a modification of the Water Use Permit.

This requirement shall be implemented for all existing and new permits which include surface water withdrawals from lakes that may be designated stressed in the future by applying the following permit condition to all permits within the WUCA which have surface water withdrawals from lakes:

Within 3 years from notification by the District that the lake from which the Permittee is withdrawing is stressed, all surface water withdrawals from this lake shall be abandoned or replaced with a surficial or Floridan aquifer ground-water source, or a reuse source. Such replacement shall require a modification of the Water Use Permit.

Water users with existing surface withdrawals on stressed lakes shall be allowed some impact on the lake from the proposed replacement well as long as the quantities withdrawn do not increase.

5.3 Stressed Lakes - New Ground-water Withdrawals

New ground-water withdrawals which adversely impact stressed lakes, or which would cause a lake to become stressed, shall not be permitted.

6. Alternative Sources

6.1 Critical Water Supply Problem Area Designation

The Northern Tampa Bay Water Use Caution Area is hereby declared a critical water supply problem area pursuant to Chapter 17-40, Florida Administrative Code.

6.2 Reuse

Investigation of the feasibility of reuse may be required for all appropriate uses, and reuse shall be required where feasible. Reuse of treated wastewater as an alternate, replacement, or supplemental water source for irrigation, industrial process, cleaning, or other non-potable use shall be investigated by all appropriate applicants or permittees.

submit an annual report listing the disposition of the effluent.

This report shall list the annual average daily quantity and monthly quantity of treated wastewater effluent disposed, and the methods and locations of disposal for effluent that is not reused. This requirement will be implemented by applying the following condition to all applicable permits:

By January 1 of each year for the preceding fiscal year (October 1 through September 30), the Permittee shall submit a report detailing:

- a. The total annual average daily and monthly quantity of effluent supplied as reuse;
- b. For all individual customer reuse connections with line sizes of 4 inches or greater, list:
 1. line size;
 2. location of connection;
 3. account name and address;
 4. indication of meter, if present; and
 5. metered quantities, if metered.
- c. The annual average daily quantities, monthly quantities, locations, and methods of disposal for effluent that is not reused.
- d. A map or plan depicting the area of reuse service; this map should include any areas projected to be added within the next year, if possible.

2. Reclaimed Water Receivers

All permitted uses which receive reclaimed water (e.g. golf courses, industrial/commercial uses, etc.) shall be required to record and report reuse quantities and sources on a monthly basis. This requirement shall be implemented by applying the following permit condition to all applicable permits:

The Permittee shall report to the District existing connections to reclaimed water by July 1, 1991. New connections to reclaimed water shall be reported to the District within 30 days of connection to the reuse source. The Permittee shall list the reuse supplier's name, location, and quantities obtained in gallons per day, annual average, for each source, and submit this infor-

mation to the District by the 10th day of each month for the preceding month, in conjunction with the monthly pumpage report.

The following condition shall be applied to applicable permits for new use:

The Permittee shall report connection to reclaimed water to the District within 30 days of connection to the reuse source. The Permittee shall list the reuse supplier's name, location, and reclaimed quantities obtained in gallons per day, annual average, for each source, and submit this information to the District by the 10th day of each month for the preceding month, in conjunction with the monthly pumpage report.

6.4 Investigate Desalination

All industrial and public supply applicants for new quantities shall be required to investigate the feasibility of desalination to provide all or a portion of requested quantities. This requirement shall be implemented by applying the following permit condition to all applicable permits:

The Permittee shall investigate the feasibility of desalination to provide all or a portion of the requested quantities, and to implement desalination if feasible. The report of this investigation shall be submitted with any application for new quantities, and shall include a detailed economic analysis of desalination, including disposal costs, versus development of fresh water supplies, including land acquisition and transmission costs.

7. Metering of Withdrawals

All permitted withdrawal points, on permits at or above 100,000 gallons per day annual average daily withdrawal, shall be metered and the Permittee shall be required to record and submit withdrawal information. Withdrawal points on permits existing as of the effective date of this rule, shall be metered at the permittee's expense by July 31, 1995, except as provided below.

The following permit condition shall be applied to all active permits with quantities at or above 500,000 gpd which shall have meters provided by the District under the provisions of Section 5.1, Basis of Review, for withdrawal points existing prior to October 1, 1989:

At such time as the District completes installation of meter(s) on all applicable withdrawal points, the Permittee shall record the total withdrawal for each metered withdrawal point. Withdrawal points constructed after September 30, 1989 shall be equipped with non-resettable, totalizing flow meters within 90 days of construction, at Permittee's expense. Such devices shall maintain an accuracy within five percent of actual flow as installed. Total withdrawals shall be reported to the District (using District format) on or before the tenth day of the following month.

Withdrawal points existing prior to the effective date of this rule, on permits granted for quantities at or above 100,000 gpd, which will not receive District-supplied meters under the provisions of Section 5.1, Basis of Review, shall receive the following condition:

The following withdrawal points (District ID numbers) shall be equipped with non-resettable totalizing flow meters or other measuring devices as approved in writing by the Director, Resource Regulation Department. Such devices shall have and maintain an accuracy within five percent of the actual flow as installed. Those designated withdrawal points not equipped with such devices on the date of permit issuance shall be equipped by July 31, 1995.

Total withdrawal from each metered withdrawal point shall be recorded on a monthly basis and reported to the District (using District format) on or before the tenth day of the following month.

Permits granted for quantities at or above 100,000 gpd, which have withdrawal points constructed after the effective date of this rule, shall receive the following condition:

The following withdrawal points (District ID numbers) shall be equipped with non-resettable totalizing flow meters or other measuring devices as approved in writing by the Director, Resource Regulation Department. Such devices shall have and maintain an accuracy within five percent of the actual flow as installed. Those designated withdrawal points not equipped with such devices on the date of permit issuance shall be equipped within 90 days of completion of construction of the withdrawal facility, unless an extension is granted by the Director, Resource Regulation. Total withdrawal from each monitored source shall be recorded on a monthly basis and reported to the District (using District format) on or before the tenth day of the following month.

All permits with reporting requirements shall receive the following condition:

Three copies of all reports and one copy of data required by the permit shall be submitted to the District and shall be addressed to:

Permits Data
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34609-6899

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**Figure 7.3-1
Northern Tampa Bay WUCA**

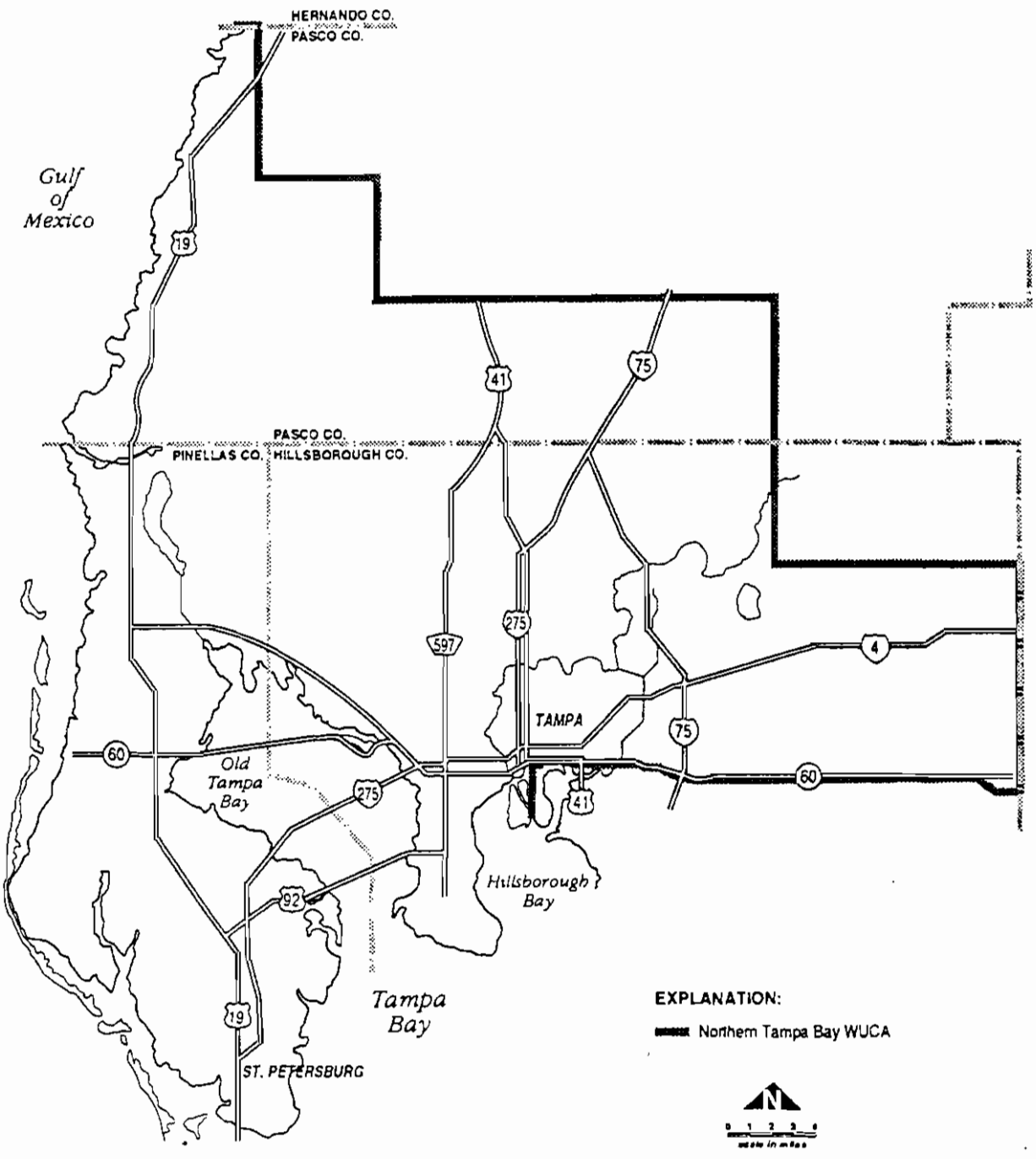


EXHIBIT _____ (MF-1)
PAGE 78 OF 84

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ENVIRONMENTAL CONTROL

FLL 403.063(2)(b)

1/95

PART I: POLLUTION CONTROL

(b) The susceptibility of each site to contamination.

(3) This information shall be made available to state and federal agencies and local governments to facilitate their regulatory and land use planning decisions.

(4) To the greatest extent practicable, the actual sampling and testing of groundwater pursuant to the provisions of this section may be conducted by local and regional agencies.

History.— s. 3, ch. 83-310.

403.064 Reuse of reclaimed water.

(1) The encouragement and promotion of water conservation, and reuse of reclaimed water, as defined by the department, are state objectives and are considered to be in the public interest. The Legislature finds that for those wastewater treatment plants permitted and operated under an approved reuse program by the department, the reclaimed water shall be considered environmentally acceptable and not a threat to public health and safety.

(2) All applicants for permits to construct or operate a domestic wastewater treatment facility located within, serving a population located within, or discharging within a water resource caution area shall prepare a reuse feasibility study as part of their application for the permit. Reuse feasibility studies shall be prepared in accordance with department guidelines adopted by rule and shall include, but are not limited to:

- (a) Evaluation of monetary costs and benefits for several levels and types of reuse.
- (b) Evaluation of water savings if reuse is implemented.
- (c) Evaluation of rates and fees necessary to implement reuse.
- (d) Evaluation of environmental and water resource benefits associated with reuse.
- (e) Evaluation of economic, environmental, and technical constraints.
- (f) A schedule for implementation of reuse. The schedule shall consider phased implementation.

(3) The study required under subsection (2) shall be performed by the applicant, and the applicant's determination of feasibility is final if the study complies with the requirements of subsection (2).

(4) A reuse feasibility study is not required if:

- (a) The domestic wastewater treatment facility has an existing or proposed permitted or design capacity less than 0.1 million gallons per day; or
- (b) the permitted reuse capacity equals or exceeds the total permitted capacity of the domestic wastewater treatment facility.

ENVIRONMENTAL CONTROL

FLL 403.064(5)

1/95

PART I: POLLUTION CONTROL

(5) A reuse feasibility study prepared under subsection (2) satisfies a water management district requirement to conduct a reuse feasibility study imposed on a local government or utility that has responsibility for wastewater management.

(6) Local governments may allow the use of reclaimed water for inside activities, including, but not limited to, toilet flushing, fire protection, and decorative water features, as well as for outdoor uses, provided the reclaimed water is from domestic wastewater treatment facilities which are permitted, constructed, and operated in accordance with department rules.

(7) Permits issued by the department for domestic wastewater treatment facilities shall be consistent with requirements for reuse included in applicable consumptive use permits issued by the water management district, if such requirements are consistent with department rules governing reuse of reclaimed water. This subsection applies only to domestic wastewater treatment facilities which are located within, or serve a population located within, or discharge within water resource caution areas and are owned, operated, or controlled by a local government or utility which has responsibility for water supply and wastewater management.

(8) Local governments may and are encouraged to implement programs for the reuse of reclaimed water. Nothing in this chapter shall be construed to prohibit or preempt such local reuse programs.

(9) A local government that implements a reuse program under this section shall be allowed to allocate the costs in a reasonable manner.

(10) Pursuant to chapter 367, the Florida Public Service Commission shall allow entities under its jurisdiction which conduct studies or implement reuse projects, including, but not limited to, any study required by subsection 403.064(2) or facilities used for reliability purposes for a reclaimed water reuse system, to recover the full, prudently incurred cost of such studies and facilities through their rate structure.

(11) In issuing consumptive use permits, the permitting agency shall consider the local reuse program.

(12) A local government shall require a developer, as a condition for obtaining a development order, to comply with the local reuse program.

(13) If, after conducting a feasibility study under subsection (2), and applicant determines that reuse of reclaimed water is feasible, domestic wastewater treatment facilities that dispose of effluent by Class I deep well injection, as defined in 40 C.F.R. part 144.6(a), must implement reuse according to the schedule for implementation contained in the study conducted under subsection (2), to the degree that reuse is determined feasible. Applicable permits issued by the department shall be consistent with the requirements of this subsection.

(a) This subsection does not limit the use of a Class I deep well injection facility as backup for a reclaimed water reuse system.

(b) This subsection applies only to domestic wastewater treatment facilities located within, serving a population located within, or discharging within a water resource caution area.

History.— s. 7, ch. 89-324; s. 3, ch. 94-243.

WATER RESOURCES

FLL 373.249

2/96

PART II: PERMITTING OF CONSUMPTIVE USES OF WATER

373.249 Existing regulatory districts preserved. The enactment of this chapter shall not affect any existing water regulatory districts pursuant to chapter 373, or orders issued by said regulatory districts, unless specifically revoked, modified, or amended by such regulatory district or by the department.

History.— s. 11, part II, ch. 72–299.

373.250 Reuse of reclaimed water.

(1) The encouragement and promotion of water conservation and reuse of reclaimed water, as defined by the department, are state objectives and considered to be in the public interest. The Legislature finds that the use of reclaimed water provided by domestic wastewater treatment plants permitted and operated under a reuse program approved by the department is environmentally acceptable and not a threat to public health and safety.

(2) (a) For purposes of this section, “uncommitted” means the average amount of reclaimed water produced during the three lowest-flow months minus the amount of reclaimed water that a reclaimed water provider is contractually obligated to provide to a customer or user.

(b) Reclaimed water may be presumed available to a consumptive use permit applicant when a utility exists which provides reclaimed water, which has uncommitted reclaimed water capacity, and which has distribution facilities, which are initially provided by the utility at its cost, to the site of the affected applicant’s proposed use.

(3) The water management district shall, in consultation with the department, adopt rules to implement this section. Such rules shall include, but not be limited to:

(a) Provisions to permit use of water from other sources in emergency situations or if reclaimed water becomes unavailable, for the duration of the emergency or the unavailability of reclaimed water. These provisions shall also specify the method for establishing the quantity of water to be set aside for use in emergencies or when reclaimed water becomes unavailable. The amount set aside is subject to periodic review and revision. The methodology shall take into account the risk that reclaimed water may not be available in the future, the risk that other sources may be fully allocated to other uses in the future, the nature of the uses served with reclaimed water, the extent to which the applicant intends to rely upon reclaimed water and the extent of economic harm which may result if other sources are not available to replace the reclaimed water. It is the intent of this paragraph to ensure that users of reclaimed water have the same access to ground or surface water and will otherwise be treated in the same manner as other users of the same class not relying on reclaimed water.

(b) A water management district shall not adopt any rule which gives preference to users within any class of use established under s. 373.246 who do not use reclaimed water over users within the same class who use reclaimed water.

WATER RESOURCES

FLL 373.250(4)

2/96

PART II: PERMITTING OF CONSUMPTIVE USES OF WATER

(4) Nothing in this section shall impair a water management district's authority to plan for and regulate consumptive uses of water under this chapter.

(5) This section applies to new consumptive use permits and renewals of existing consumptive use permits.

(6) Each water management district shall submit to the Legislature, by January 30 of each year, an annual report which describes the district's progress in promoting the reuse of reclaimed water. The report shall include, but not be limited to:

(a) The number of permits issued during the year which required reuse of reclaimed water and, by categories, the percentages of reuse required.

(b) The number of permits issued during the year which did not require the reuse of reclaimed water and, of those permits, the number which reasonably could have required reuse.

(c) In the second and subsequent annual reports, a statistical comparison of reuse required through consumptive use permitting between the current and preceding years.

(d) A comparison of the volume of reclaimed water available in the district to the volume of reclaimed water required to be reused through consumptive use permits.

(e) A comparison of the volume of reuse of reclaimed water required in water resource caution areas through consumptive use permitting to the volume required in other areas in the district through consumptive use permitting.

(f) An explanation of the factors the district considered when determining how much, if any, reuse of reclaimed water to require through consumptive use permitting.

(g) A description of the district's efforts to work in cooperation with local government and private domestic wastewater treatment facilities to increase the reuse of reclaimed water. The districts, in consultation with the department, shall devise a uniform format for the report required by this subsection and for presenting the information provided in the report.

History.— s. 2, ch. 94-243.

WATER POLICY

DEP 62-40.412(1)

7/95

PART IV: RESOURCE PROTECTION AND MANAGEMENT

longer term or more flexible permits, economic incentives, and greater certainty of supply during water shortages;

(2) Establishing efficiency standards for urban, industrial, and agricultural demand management which may include the following:

(a) Restrictions against inefficient irrigation practices;

(b) If a district imposes year-round restrictions, which may include variances or exemptions, on particular irrigation activities or irrigation sources, using a uniform time period of 10:00 a.m. to 4:00 p.m.;

(c) Minimizing unaccounted for water losses;

(d) Promoting water conserving rate structures;

(e) Water conserving plumbing fixtures, xeriscape, and rain sensors.

(3) Maintaining public information and education programs for long- and short-term water conservation goals;

(4) Executing provisions to implement the above criteria and to consistently apply water shortage restrictions between those districts whose boundaries contain political jurisdictions located in more than one district.

Specific Authority: 373.026, 373.043, 403.061(33), F.S.

Law Implemented: 373.171, 373.175, 373.185, 373.196, 373.1961, F.S.

History: New 7-20-95.

62-40.416 Water Reuse.

(1) As required by Section 373.0391(2)(e), F.S., the districts shall designate areas that have water supply problems which have become critical or are anticipated to become critical within the next 20 years. The districts shall identify such water resource caution areas during preparation of a District Plan pursuant to Rule 62-40.520, F.A.C., and shall adopt and amend these designations by rule.

(2) In implementing consumptive use permitting programs, a reasonable amount of reuse of reclaimed water shall be required within designated water resource caution areas, unless objective evidence demonstrates that such reuse is not economically, environmentally, or technically feasible.

(3) The districts shall periodically update their designations of water resource caution areas by rule. Such updates shall occur within one year after updates of the District Plan prepared pursuant to Rule 62-40.520, F.A.C. After completion of the District Plan or updates pursuant to Rule 62-40.520, F.A.C., the districts may limit areas where reuse shall be required to areas where reuse is specified as a remedial or preventive action

WATER POLICY

DEP 62-40.416(3)

7/95

PART IV: RESOURCE PROTECTION AND MANAGEMENT

pursuant to Rule 62-40.520, F.A.C. Any such limitation of areas where reuse shall be required shall be designated by rule.

(4) In implementing consumptive use permitting programs, a reasonable amount of reuse of reclaimed water from domestic wastewater treatment facilities may be required outside of areas designated pursuant to Rule 62-40.416(1), F.A.C., as subject to water supply problems, provided:

- (a) Reclaimed water is readily available;
- (b) Objective evidence demonstrates that such reuse is economically, environmentally, and technically feasible; and
- (c) The district has adopted rules for reuse in these areas.

(5) The Department encourages local governments to implement programs for reuse of reclaimed water. The districts are encouraged to establish incentives for local governments and other interested parties to implement programs for reuse of reclaimed water. These rules shall not be deemed to pre-empt any such local reuse programs.

Specific Authority: 373.026, 373.043, 403.061(33), F.S.

Law Implemented: 187.101(3), 373.016, 373.023(1), 373.0391(2)(e), 373 Part II, 403.064, F.S.

History: New 7-20-95.

62-40.422 Interdistrict Transfer. The following shall apply to the transfers of surface and ground water where such transfers are regulated pursuant to Part II of Chapter 373, Florida Statutes:

- (1) The transfer or use of surface water across district boundaries shall require approval of each involved district. The transfer or use of ground water across district boundaries shall require approval of the district where the withdrawal of ground water occurs.
- (2) In deciding whether the transfer and use of surface water across district boundaries is consistent with the public interest pursuant to Section 373.223, Florida Statutes, the districts should consider the extent to which:
 - (a) Comprehensive water conservation and reuse programs are implemented and enforced in the area of need;
 - (b) The major costs, benefits, and environmental impacts have been adequately determined including the impact on both the supplying and receiving areas;
 - (c) The transfer is an environmentally and economically acceptable method to supply water for the given purpose;
 - (d) The present and projected water needs of the supplying area are reasonably determined and can be satisfied even if the transfer takes place;



1997
Spring Hill Water Conservation
Cost Share Proposal

Submitted by
Southern States Utilities, Inc.

December 8, 1995

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Federal Identification Number
Proof of Insurance
Completed Application



Southern States Utilities • 1000 Color Place • Apopka, FL 32703 • 407/880-0058

December 8, 1995

Mr. Peter G. Hubbell
Executive Director
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34609-6899

Dear Mr. Hubbell:

Southern States Utilities respectfully submits the enclosed water conservation proposal for cooperative funding by the Coastal Rivers Basin Board. The proposal presents a water conservation program for residents of Spring Hill including:

1. A comparative residential water study.
2. An indoor plumbing retrofit program.
3. A low-flow toilet rebate program.
4. A coordinated public education program to promote proper installation and use of devices.
5. A benefits analysis component to evaluate the water savings achieved following implementation of the program.

Spring Hill is SSU's largest single service area where a total of 2.7 billion gallons of water are consumed each year by approximately 24,000 residential customers. It is unique in that 25 percent of the customers consume nearly 2/3 of this water. This makes for an ideal proving ground to study the differences in consumption habits between this large volume water group and the remaining 75 percent of the population who only consume 1/3 of the water. It also gives SSU and the District the opportunity to test whether a broad scale conservation education program can significantly change the consumption habits of a high volume group of users.

In addition, a targeted program of indoor plumbing retrofits and rebates for installation of low-flow toilets can significantly reduce water consumption in this area.

Southern States Utilities is confident that through sound, effective and voluntary demand management measures, including the residential indoor plumbing retrofits and a low-flow toilet rebate program, consumption can be significantly reduced at Spring Hill.

We look forward to you seriously considering cooperative funding for the attached coordinated, multi-faceted conservation program.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ida M. Roberts". The signature is fluid and cursive, written over the typed name.

Ida M. Roberts
Manager of Conservation, Communications
and Community Affairs

Southern States Utilities, Inc.
Fiscal Year 1997
Spring Hill Retrofit, Rebate, Usage Study and Conservation Education
Cooperative Funding Program
Submitted To:
Southwest Florida Water Management District
Coastal Rivers Basin Board

Type of Project

This project is a fully integrated, multi faceted program which includes conservation, research and a communications program designed to reduce water consumption significantly on a permanent basis and change consumption habits in Spring Hill, Hernando County, Florida.

Spring Hill is SSU's largest single service area which includes approximately 24,000 residential and 6,500 commercial customers. Billing analysis indicates that the residential customers consumer 2.7 billion gallons of water annually. Most significantly, 25 percent of the residential population consume 2/3 of this water.

These 7,500 high-volume single-family residential and multi-family consumers will be the major focus of the program. They will be targeted. Through a scientific and statistical study, their consumption habits and demographics will be compared with those of the low end users. Following the results of this study, a program of in-door plumbing retrofits and rebates for installation of low flow toilets will be implemented, as well as a carefully tailored conservation education program to alter their consumption habits.

Usage of these users will be tracked from start to finish to measure the impact of the consumption study, retrofit kit and low-flow toilet installation and the conservation education program

Project Description

This multi-faceted proposal includes:

A Residential Plumbing Retrofit Program: As has been stated, approximately 25 percent of SSU's Spring Hill residential customers utilize 2/3 of the water. It has been documented that retrofit programs result in a daily reduction in water use of between 5 and 10 gallons per person. For the targeted 7,500 residences, with Hernando County's average 2.37 individuals per household, the potential annual conservation savings is 64 million gallons. A water conservation consulting firm will be contracted with to handle equipment purchase, delivery and follow up to ensure installation. Consumption will be tracked both before and after installation to measure water savings.

Residential Low-Flow Toilet Rebate Program: Most homes in Spring Hill were constructed prior to the requirement to install low-flow toilets. These same high volume users at Spring Hill will be offered a \$100 rebate for the installation of low flow toilets. Recent research shows that more than a 15 percent reduction can be achieved in single-family homes when low consumption toilets are installed. This savings is even higher in multi-family apartments. The potential savings in this

program could be even greater than the savings in the residential plumbing retrofit program if a significant portion of these high volume users take advantage of the SSU rebate offer.

Comparative Residential Water Use Study: Because of the significant dichotomy in volume of usage in Spring Hill, the community presents an ideal opportunity to study the consumption habits of both low usage and high usage residences. SSU will develop and present a questionnaire covering both consumption habits and demographics of all of its Spring Hill residents. This will be followed up by telephone interview to verify the validity of the responses. Consumption habits of both the low volume and high volume users will be compared to develop and implement a targeted public education program designed to change the water consciousness and habits of the high volume users.

Public Education Program: While the program will include general information to the entire population in the form of questionnaires, conservation mailings, seminars and advertising, the major focus will be on a targeted public education program aimed toward the high volume users. This will include mailings, advertising and, at least three water-saving workshops.

Project Objectives

The objectives of this project are to:

- 1) directly reduce indoor water demand amongst Spring Hill's high volume users by up to 20 percent,
- 2) discover consumption habits which result in such high use and educate and permanently change the consumption habits of these high volume users,
- 3) promote water savings resulting from retrofitting indoor plumbing and fixtures which comply with the National Energy Policy Act and the conservation goals of the Southwest Florida Water Management District and Coastal Rivers Basin Board, and
- 4) communicate the need for assuring a long-term water supply at affordable costs.

Target Audience

The target audience is the 7,500 (or approximately 25 percent of the total) residential customers who utilize 2/3 of the approximately 2.7 billion gallons of water consumed on an annual basis in the Spring Hill service area. However, through general mailings, advertising and workshops, the entire Spring Hill customer base of approximately 57,000 will be impacted.

Demonstration of Need

Spring Hill lies entirely within the Coastal River Basin Board and Southwest Florida Water Management District. Water concerns are critical in the area as evidenced by growing conflicts between the counties and water authorities as to its ownership and most efficient use. This area is critical in response to groundwater withdrawals.

This project supports the conservation goals of Hernando County and is consistent with the basin board's priorities for water-supply-water conservation assistance through plumbing retrofit and education.

This project is also consistent with the District's long term water supply plan.

Measurable Benefits

Reduced usage is the major measurable benefit. Usage of the high-volume users will be tracked before the program begins, after the questionnaire mailing, following installation of retrofit kits and low flow toilets and subsequent to each workshop to evaluate the water savings achieved following the implementation of each segment of the program.

Deliverables

The retrofit program will consist of the purchase and distribution of 7,500 water conservation kits, each capable of retrofitting a home with 2 1/2 bathrooms (faucet aerators, toilet tank volume displacement devices, low-flow showerheads and a request card for the District's Plant Guide for each residential unit participating).

Low-flow toilet rebates are also a deliverable under the program. Research shows that 70 percent of indoor consumption occurs in the bathroom. Toilets are the largest source of household water consumption, flushed on average 10 times a day in a two-person household. Most toilets installed before 1980 use five to seven gallons per flush. The majority of new low-flow toilets are rated at 1.6 gallons per flush. The savings from a low-flow toilet, some 68 to 77 percent, are significant. The installation of low-flow toilets can assist in reducing household water consumption, especially when other conservation measures are also practiced.

Project Costs

Item	Cost
Retrofit Kits	
Equipment Purchase	\$100,000
Consultant Services	50,000
Low-Flow Toilet Rebates	25,000
Questionnaire	2,000
Telephone Verification	3,000
Public Information Program	
Letters	2,500
Advertising	15,000
Workshops	<u>2,500</u>
Total	\$200,000

Matching funds from the Coastal Rivers Basin Board are respectfully requested for this project. Resources from Southern States operating budget will provide the funding for one-half of this project.

SSU will track the monthly consumption of those customers who receive retrofit kits and rebates starting with the time of installation. Current versus historical usage will be analyzed in order to evaluate true savings. This tracking will continue for a minimum of 2 years in order to dampen the affects of weather on savings estimates.

Key Personnel

The following individuals are authorized representatives on behalf of Southern States Utilities with regard to this proposal. All are located at Southern States Utilities, 1000 Color Place, Apopka, Florida 32703, (407) 880-0058.

Ida Roberts	Manager-Conservation, Communications and Community Affairs
Carlyn H. Kowalsky	Attorney
Chris Arcand	Environmental Specialist
Judy Field	Statistical Analyst

Additional Information

Southern States Utilities (SSU), headquartered in Apopka, was initially a combination of six small Central Florida water companies. The Company has grown steadily into a professional statewide utility dedicated solely to providing high-quality water and wastewater service. In 1989, through the acquisition of The Deltona Corporation's utility systems, SSU more than doubled in size. Today it is the largest privately-held water and wastewater utility in the State of Florida serving some 150,000

customers in 152 service areas. SSU's communities range in size from merely 6 connections to those as large as Spring Hill with more than 30,000 residential and commercial customers.

Raw water is drawn primarily from groundwater sources and treated using chlorination/aeration, lime softening, or reverse osmosis treatment process. SSU also operates more than 45 wastewater treatment facilities. The effluent from these treatment plants is distributed for reuse on non-restricted public access areas, in groundwater reclamation systems, or to replenish surface water channels.

SSU fully supports Florida's long-term water management policy of water conservation and reuse (reclaimed water) to preserve the dwindling fresh water supply. In 1991 SSU initiated a statewide conservation program to address the water supply issue and adhere to the St. Johns River Water Management District Conservation Rule, Chapter 40C-2. The program primarily focused on measurement and control of unaccounted-for water and public education. The following year, it was expanded to include meter testing and replacement. A handbook detailing the program was compiled and distributed to all of the water management districts. It remains in use today.

Since 1991, SSU's public education efforts have employed a variety of channels ranging from community outreach activities to direct mail campaigns. Over the years, the key elements of the program have continued to be modified and expanded and today include many effective communication channels.

Customer Outreach – Customer outreach has been central to the success of SSU's efforts. Through the Company's Speakers Bureau, employees throughout the State have delivered more than 300 conservation presentations and participated in numerous customer open houses at which water conservation was an important theme. An extension of customer relations has included whole

communities as represented by SSU's participation at local fairs with water conservation information booths and water education floats in holiday parades. These efforts are continually reinforced by advertisements in local newspapers, part of a continuing education effort that commenced in 1993. Each ad features a toll-free information number which customers could use to request additional information.

Youth Education – Youth education is also important to SSU. Since 1991, the company has engaged the Small Change Original Theatre, a live theater troupe, to perform Captain Hydro and the Water Bandit for elementary children in SSU's service area. That first year, the program reached 10 schools and included 21 performances witnessed by 5,900 students. Brought back in 1994, the group visited 30 schools and performed 54 shows for 13,668 elementary students. In 1995, Small Change Original Theatre is scheduled for 20 schools in March and May, a program which should reach nearly 10,000 students. Beyond live theater, one of the most recent efforts directed at children involves a contribution to the Nature Conservancy to help fund an education and conservation complex at Blowing Rocks Preserve in Martin County. SSU has agreed to underwrite the cost of the rainfall collection cistern and irrigation system for the native plant nursery which will be used to educate children, as well as adults, about the value of conservation and the use of xeriscape practices.

Printed Materials and Videos – Printed materials and video tapes are other elements of SSU's conservation program. Since 1991, the *Waterworks* newsletter (formerly Service Lines) has been issued to customers with conservation a part of its regular contents. This publication is sent out periodically to all SSU customers, as well as government officials, the media and SSU employees. In addition, SSU maintains an extensive library of conservation and xeriscape literature published by the AWWA (American Water Works Association), Florida Water Management Districts, and other organizations on timely topics of interest to customers. These are made available to customers free-of-charge upon request and are also distributed as bill inserts, used at events, and provided at open houses. In keeping with this, two educational videos, "Water for Florida's Future" and "Save Our Water," are made available to customers on request and featured at SSU customer service offices. These videos have also been sent to hundreds of government officials, media, libraries, and key organizations within SSU's service areas.

Conservation Devices and Mail Order Programs – Conservation devices and a mail order program are newer elements of SSU's program. Initiated in late 1993, SSU offered retrofit kits to customers throughout the State through an extensive direct mail campaign. These same kits are made available to SSU customer service offices to encourage local examination and to help publicize the program. As a companion to the program, in 1994 the company ordered leak detection and sprinkler water gauges for use during open houses and speakers bureau programs related to conservation.

Current Conservation Program

In May 1994, SSU established a Conservation Committee to help focus the Company's conservation efforts. The committee meets regularly to discuss conservation issues and future conservation initiatives. During 1994, the Conservation Committee developed and implemented a conservation plan for Marco Island in response to high growth and concurrent critical water demands on facilities serving the Island (Marco Island has the highest per capita consumption of all of SSU's plants). The need to develop an aggressive conservation program was further compounded by the inability to construct new facilities of adequate size and complexity in a short time frame, as well as the Company's desire to minimize rate increases to its customers.

The Marco program was officially kicked-off in a public meeting open to all Marco residents on December 20, 1994 and is continuing currently. Implementation of the program is expected to continue at the same level of effort for the foreseeable future.

###

STATEMENT OF BUSINESS ORGANIZATION

- 1. Business Name: Southern States Utilities, Inc.
- 2. Mailing Address: 1000 Color Place Apopka, Florida 32703
- 3. Remittance Address: 1000 Color Place Apopka, FL 32703
- 4. State of Incorporation: Florida
- 5. Federal Employer I.D.: 590948672
- 6. Telephone: (407) 880-0058
- 7. Fax No.: (407) 884-7740
- 8. Type of Organization:
 Corporation Partnership Joint Individual

If proposer is a corporation, provide certification from the Florida Secretary of State verifying proposer's corporate status and good standing, and in the case of out-of-state corporations, evidence of authority to do business in the State of Florida. In the case of a sole proprietorship or partnership, provide Social Security numbers for all owners or partners. In the case of a "d.b.a.," provide a copy of the fictitious name affidavit filed with the Clerk of the Court.

Signature:

Manager of Conservation, Communications and Community Affairs

ACORD. CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)

10/09/95

PRODUCER

ORLANDO
MCGRUFF, SEIBELS AND WILLIAMS
1080 WOODCOCK BLVD SUITE 108
ORLANDO FL 32803,
407-894-7024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER **A** GULF INSURANCE COMPANY

COMPANY LETTER **B** SELECT INSURANCE COMPANY

COMPANY LETTER **C** RISCORP INSURANCE CORPORATION

COMPANY LETTER **D** GENSTAR INDEMNITY COMPANY

COMPANY LETTER **E**

INSURED

Southern States Utilities, Inc
1000 Color Place
Apopka

FL 32703

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
B	<input checked="" type="checkbox"/> GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR. <input type="checkbox"/> OWNER'S & CONTRACTOR'S PROT.	CLP7636993 **	10/15/94	1/01/96	GENERAL AGGREGATE \$ 100000
					PRODUCTS-COMP/OP AGG. \$ 100000
					PERSONAL & ADV. INJURY \$ 50000
					EACH OCCURRENCE \$ 50000
					FIRE DAMAGE (Any one fire) \$ 50000
					MED. EXPENSE (Any one person) \$ 5000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY *See limitation	BUA5437072	10/15/94	1/01/96	COMBINED SINGLE LIMIT \$ 500000
					SODILY INJURY (Per person) \$
					SODILY INJURY (Per accident) \$
					PROPERTY DAMAGE \$
					EACH OCCURRENCE \$
C	<input type="checkbox"/> EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM	03161	1/01/95	1/01/96	<input checked="" type="checkbox"/> STATUTORY LIMITS \$
					EACH ACCIDENT \$ 50000
					DISEASE-POLICY LIMIT \$ 500000
D	<input type="checkbox"/> OTHER Excess Automobile Liability-*applies to 3 vehicles only	IXG306582C	1/01/95	1/01/96	Limits: \$750,000 each occurrence BI &/or PD combined.

CLIENT'S COPY

DESCRIPTION OF OPERATIONS/LOCATION/S/VEHICLES/SPECIAL ITEMS

Co. C - Blanket Bldg/PP Pol CLP7636993 Eff 10-15-94 to 1-1-96 \$27,024,601.
Co. E-Blanket Bldg/PP Pol. 769737 Eff 1-1-95 to 1-1-96 \$37,450,519 Marco Isl.
** Certificate holder is named as add'l insd with respect to operations performed by insured.

CERTIFICATE HOLDER

Southwest Florida Water Management District
2379 Broad Street
Brooksville, FL 34609
Attn: Carl Wright

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

031060000 064

Application

Cooperative Funding Program

New Water Source Initiative

Date: 12/8/95

(Who should we contact for more information?)

Applicant: Southern States Utilities, Inc.

Contact Person: Ida M. Roberts

Address: 1000 Color Place
Apopka, Florida 32703

Telephone: 407-880-0058

Which geographic areas would be enhanced by this project:

Counties (circle all that apply):

- Charlotte DeSoto Hernando Hillsborough Levy Marion Pinellas Sarasota
- Citrus Hardee Highlands Lake Manatee Pasco Polk Sumter Not Sure

Basins (circle all that apply):

- Green Swamp Hillsborough River Coastal Rivers Withlacoochee River Manasota
- Alafia River Northwest Hillsborough Pinellas-Anclote River Peace River Not Sure

Project Title: Spring Hill Retrofit, Rebate, Usage Study and Conservation Program

What type of project is this? (please check only one)

- Aerial Mapping Communications Stormwater Management/Flood Control
- Water Conservation Alternative Source Groundwater SWIM/NEP
- Water Quality



What is the total proposed project cost? \$200,000

What is/are the proposed Basin(s) cost share of the project? \$100,000

Is this a new or phased funding project? If phased, please indicate past or future funding cycle.

New

What problems, if any, (environmental, regulatory, public perception, etc.) are anticipated?

None

Please provide a brief description of the project.

This is a conservation program (plumbing retrofit, low-flow toilet rebates, usage study and education) targeted to the 25 percent of Spring Hill

customers who consume 2/3 of the 2.7 billion gallons of water utilized in this service area. Please describe the project benefits - regionally and locally.

Because this is SSU's largest system, it can provide the most beneficial conservation of nearly any program we can implement, plus it will raise the consciousness of water conservation in an area that is embroiled in inter-county controversy over water ownership and usage.

District Use Only

Project # _____ Focus Group(s) A B C D

Received by CAD: ___/___/___ Database Entry: ___/___/___

Project Manager (past/current District effort): _____

Evaluator (proposed District effort): _____

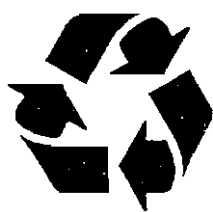
Permit #(s) involved: _____

Prepared by:
Carl P. Wright
Resource Projects Department
Conservation Projects Section

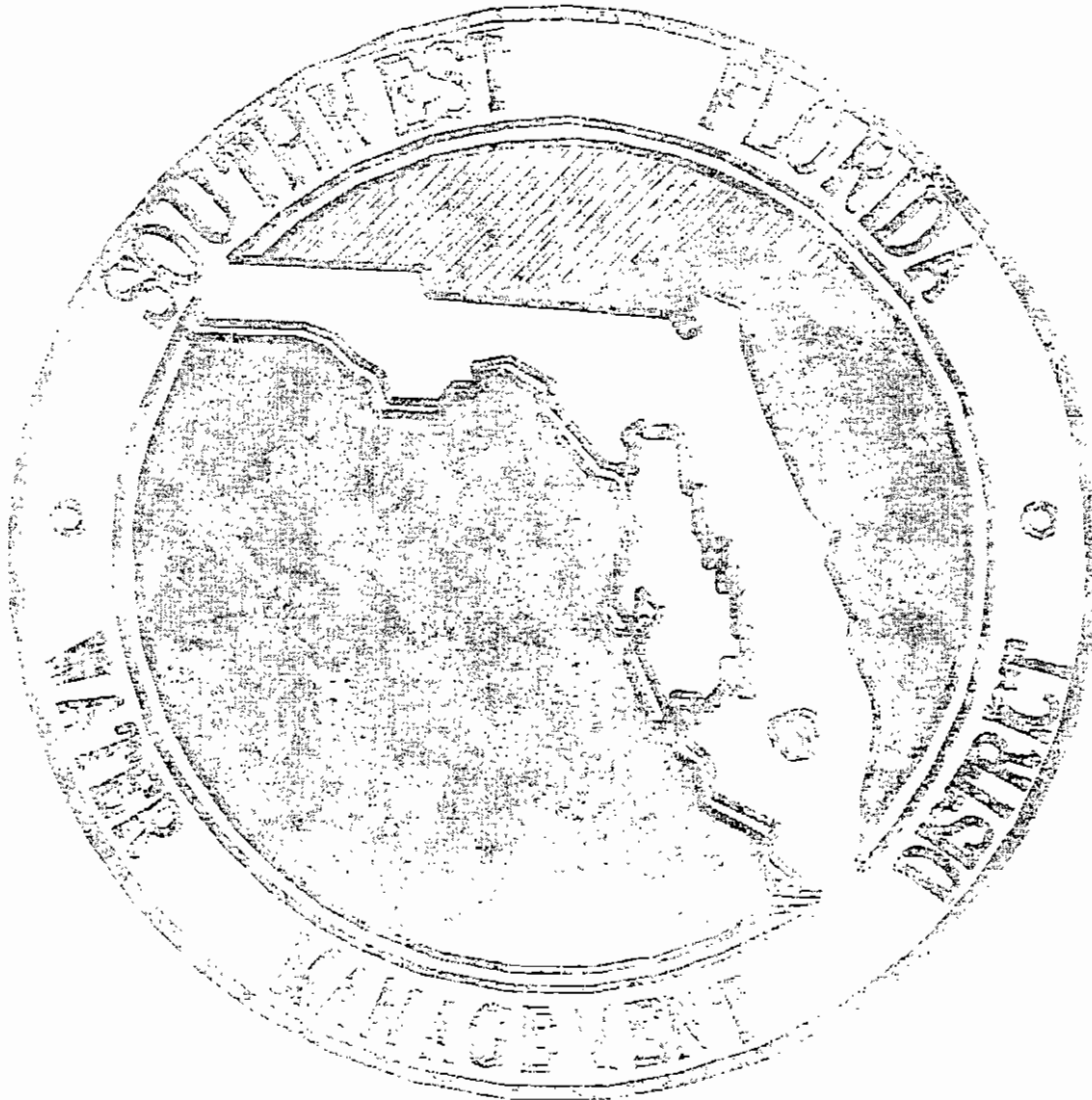
**RETROFIT PROGRAMS AND REUSE
PROJECTS**

SUMMARY REPORT

October 15, 1995



Prepared for:
Southwest Florida Water Management District
2379 Broad Street
Brooksville, Florida 34609-6899



The Southwest Florida Water Management District (District) does not discriminate upon the basis of any individual's disability status. This non-discrimination policy involves every aspect of the District's functions, including one's access to, participation, employment, or treatment in its programs or activities. Anyone requiring reasonable accommodation as provided for in the Americans With Disabilities Act should contact Gwen Brown, Resource Projects Department, at (904) 796-7211 or 1-(800) 423-1476 (Florida), extension 4226; TDD ONLY 1-(800) 231-6103 (Florida); FAX (904) 754-6885/SUNCOM 663-6885.

Retrofit Programs and Reuse Projects
Summary Report, Page 1

FOREWORD

This is a periodic report identifying the accomplishments and status of two major conservation programs, plumbing retrofits and reuse, that have been funded by the basin boards and Governing Board through the cooperative funding, basin initiative process, and New Water Sources Initiative (NWSI).

INTRODUCTION

The mission of the Southwest Florida Water Management District is to manage water and water-related resources for the people through regulatory and other programs. The basin boards' Cooperative Funding Program is one of the vehicles the District employs to manage the water-related resources by providing grant funding for projects that will contribute to meeting the mission. Currently, there are seven major categories of projects eligible for funding. These categories are: 1) SWIM and NEP, 2) Alternative Supply, 3) Ground Water, 4) Storm Water and Flood Control, 5) Water Conservation, 6) Education, and 7) Water Quality. In recent years, much of the emphasis of the Cooperative Funding Program has been on conservation, especially retrofit programs and reuse projects, due to the prospective water conservation benefits.

Plumbing retrofit projects involve distributing retrofit kits to residential and commercial users. The kits typically include low-flow shower heads, faucet aerators, toilet dams or tummies, dye tablets, and educational materials (how-to- conserve brochures, etc.). Retrofit projects are one of the easiest ways to effect conservation. For example, replacing a standard showerhead with a low-flow model can cut consumption from as much as 10 gallons per minute (gpm) to as little as 2.5 gpm. Pilot studies in Tampa, Pinellas County, and Winter Haven show savings of up to 10 gallons per capita per day.

Reuse projects conserve water by replacing potable water used for non-potable purposes with reclaimed water. Reclaimed water can be used for many agricultural and urban irrigation needs, fire fighting, and many industrial processes. The basin boards have typically provided up to 50 percent of the cost of design and construction of reuse transmission lines, pumping facilities, and storage reservoirs.

TABLE 1 is a summary of all retrofit programs and reuse projects, broken down by water use caution area (WUCA). It shows the estimated quantity of water conserved through retrofit or offset by reuse in the Southern Water Use Caution Area (SWUCA), the Northern Tampa Bay WUCA and the remaining non-WUCA (other) area within the District. It indicates the total amount of funding provided and the estimated quantity of potable water conserved through retrofit or offset (replaced) by reuse. It is important to note that we cannot assume reuse will offset potable usage on a gallon-for-gallon basis. Given the lower cost of reclaimed water and the lack of restrictions in its use, the typical consumer is likely to be less conservation-minded when using reclaimed water than when using potable water. Conservatively, it is probably safe to estimate that 10 gallons of reclaimed water will offset 5 gallons of potable water. In other words, 50 percent of reclaimed water made available can be considered as offsetting an existing source.

Retrofit Programs and Reuse Projects
 Summary Report, Page 2

TABLE 1: SUMMARY OF RETROFIT AND REUSE PROJECTS BY WUCA.			
Water Use Caution Area (WUCA)	RETROFIT Est Quantity Conserved (GPD)	REUSE Available Reclaimed Water (GPD)	TOTAL Quantity from Retrofit and from Reuse (GPD)
Southern (SWUCA)	379,616	56,374,670	56,754,286
Northern Tampa Bay	6,250,168	77,646,605	83,896,773
Other (non-WUCA)	0	1,530,000	1,530,000
District Total:	6,629,784	135,551,275	142,181,059

TABLE 2 is a summary of RETROFIT PROGRAMS by basin board. In some ongoing projects, an analysis of the actual water savings has not yet been performed. This explains blank entries.

TABLE 2: SUMMARY OF RETROFIT PROGRAMS BY BASIN BOARD				
Basin Board(s) Providing Funding	Number of Kits Installed	Number of Toilets Installed	Est. Quantity Conserved (GPD)	Amount (\$) Budgeted by District
Alafia	9,665	5,460	355,616	\$256,866
Coastal	3,476	0	0	\$33,132
Hillsborough	77,143	8,953	1,680,036	\$875,259
Manasota	0	0	0	\$0
NW Hillsborough	35,265	8,952	1,043,341	\$574,050
Peace	1,000	0	24,000	\$19,750
Pinellas-Anclote	343,905	0	3,526,791	\$3,913,936
Withlacoochee	172	0	0	\$2,008
Total	470,626	23,365	6,629,784	\$5,675,001

TABLE 3 is a summary of REUSE PROJECTS broken out by board. Reuse occurs when treated wastewater is used for purposes not requiring potable water. Most often, reclaimed water is used for irrigation. Reuse project costs are for design and/or construction of storage facilities (tanks or ponds) and distribution mains.

TABLE 4: RETROFIT PROGRAMS

Proj Num	FY	Name of Cooperator	Basin Board(s) Providing Funding	Project Type	Number of Kits	Number of Toilets	Cost Per Kit/Toilet	Est Quantity Conserved (GPD)	Total Project Cost (\$)	Amount (\$) Budgeted by District	Amount (\$) Reimbursed by District
P371	94	Hillsborough County	Alafia (M)	RFR	3,000		\$17.00	67,800	\$51,000	\$25,500	
P408	95	Hillsborough County	Alafia (M)	RFR	6,665		\$6.00	183,333	\$80,000	\$40,000	
P423	95	City of Tampa	Alafia (M)	TRB		1,666	\$84.43	66,666	\$140,667	\$70,300	
P601	96	City of Tampa	Alafia (M)	TRB		472	\$89.53	4,484	\$42,260	\$21,066	
P609	96	Hillsborough County	Alafia (M)	TRB		3,322	\$195.00	33,333	\$647,833	\$100,000	
ALAFIA TOTALS:					9,665	5,460		355,616	\$961,760	\$256,866	\$0
P291	94	Pasco County	Coastal (M)	RFR	3,476		\$19.15		\$66,264	\$33,132	
COASTAL TOTALS:					3,476	0		0	\$66,264	\$33,132	\$0
P050	91	City of Tampa	Hillsborough	RFR	30,000		\$12.31	600,000	\$369,400	\$144,000	\$144,000
P158	93	City of Tampa	Hillsborough (M)	RFR	9,398		\$9.86	207,215	\$92,737	\$77,655	\$46,383
P164	93	City of Temple Terrace	Hillsborough	RFR	10,000		\$13.54		\$188,129	\$90,000	\$57,589
P281	94	City of Tampa	Hillsborough	TRB		2,000	\$125.00	72,000	\$250,000	\$125,000	
P282	94	City of Plant City	Hillsborough	RFR	2,200		\$7.18	81,644	\$20,023	\$10,000	\$10,000
P291	94	Pasco County	Hillsborough (M)	RFR	1,427		\$19.15		\$27,108	\$13,554	
P363	94	City of Tampa	Hillsborough (M)	RFR	10,453		\$9.39	256,036	\$98,132	\$56,250	\$49,066
P371	94	Hillsborough County	Hillsborough (M)	RFR	7,000		\$17.00	158,200	\$119,000	\$59,500	
P408	95	Hillsborough County	Hillsborough (M)	RFR	6,665		\$6.00	183,333	\$80,000	\$40,000	
P423	95	City of Tampa	Hillsborough (M)	TRB		1,667	\$84.43	66,666	\$140,667	\$70,300	
P593	96	City of Temple Terrace	Hillsborough	TRB		200	\$100.00	4,850	\$20,000	\$10,000	
P601	96	City of Tampa	Hillsborough (M)	TRB		1,764	\$89.53	16,758	\$157,936	\$79,000	
P609	96	Hillsborough County	Hillsborough (M)	TRB		3,322	\$195.00	33,334	\$647,834	\$100,000	
HILLSBOROUGH TOTALS:					77,143	8,953		1,680,036	\$2,210,966	\$875,259	\$307,038
P158	93	City of Tampa	NW Hillsborough (M)	RFR	9,397		\$9.86	207,215	\$92,737	\$78,500	\$46,368
P363	94	City of Tampa	NW Hillsborough (M)	RFR	10,453		\$9.39	256,036	\$98,132	\$56,250	\$49,066
P382	94	Hillsborough County	NW Hillsborough	RFR	8,750		\$17.14	200,000	\$150,000	\$75,000	
P406	95	Hillsborough County	NW Hillsborough	TRB		2,200	\$75.00	80,000	\$165,000	\$75,000	
P408	95	Hillsborough County	NW Hillsborough (M)	RFR	6,665		\$6.00	183,333	\$80,000	\$40,000	
P423	95	City of Tampa	NW Hillsborough (M)	TRB		1,666	\$84.43	66,666	\$140,667	\$70,300	
P601	96	City of Tampa	NW Hillsborough (M)	TRB		1,764	\$89.53	16,758	\$157,936	\$79,000	
P609	96	Hillsborough County	NW Hillsborough (M)	TRB		3,322	\$195.00	33,333	\$647,833	\$100,000	
NW HILLSBOROUGH TOTALS:					35,265	8,952		1,043,341	\$1,532,305	\$574,050	\$95,434

Proj Num: Project tracking number assigned by SWFWMD Finance Department
 FY: Fiscal year interlocal agreement executed with project cooperator(s)
 Project Type: RFC (retrofit, commercial); RFM (retrofit, municipal); RFR (retrofit, residential); TRB (toilet rebate)
 Number of Kits: Entry indicates a plumbing fixtures retrofit program.
 Number of Toilets: Entry indicates a toilet rebate program.
 Cost Per Kit/Toilet: Disparity results from contract deliverables; higher price indicates installation fees included
 Multi-Basin Projects: Indicated by (M) in Basin Board(s) Column; Number of Kits or Toilets, Estimated Quantity Conserved, and Total Project Cost is Split between Boards based upon percentage of Funding Provided by Board.
 Amount (\$) Reimbursed: Entry indicates project complete, no entry indicates ongoing project

TABLE 4: RETROFIT PROGRAMS (continued)																																						
Proj Num	FY	Name of Cooperator	Basin Board(s) Providing Funding	Project Type	Number of Kits	Number of Toilets	Cost Per Kit/Toilet	Est Quantity Conserved (GPD)	Total Project Cost (\$)	Amount (\$) Budgeted by District	Amount (\$) Reimbursed by District																											
P114	94	City of Winter Haven	Peace	RFR	1,000		\$22.26	24,000.00	\$39,500	\$19,750	\$11,130																											
PEACE TOTALS:					1,000	0		24,000	\$39,500	\$19,750	\$11,130																											
P074	91	Pinellas County	Pinellas-Anclote	RFR	190,000		\$13.95	1,900,000	\$2,651,246	\$2,400,000	\$1,505,112																											
P074	93	City of Dunedin	Pinellas-Anclote	RFR	8,928		\$7.59	226,791	\$52,430	\$52,430	\$52,430																											
P074	93	Pinellas Hotel-Motel Assn	Pinellas-Anclote	RFC	1,905				\$136,000	\$60,000																												
P074	93	City of St. Petersburg	Pinellas-Anclote	RFR	142,904			1,400,000	\$2,573,000	\$1,400,000																												
P291	94	Pasco County	Pinellas-Anclote (M)	RFR	168				\$3,012	\$1,506																												
PINELLAS-ANCLOTE TOTALS:					343,905	0		3,526,791	\$5,415,688	\$3,913,936	\$1,557,542																											
P291	94	Pasco County	Withlacoochee (M)	RFR	172				\$4,016	\$2,008																												
WITHLACOOCHEE TOTALS:					172	0		0	\$4,016	\$2,008	\$0																											
DISTRICT TOTALS:					470,626	23,365		6,629,784	\$10,230,498	\$5,675,001	\$1,971,145																											
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;">PROGRAM SUMMARY:</td> <td style="width: 50%; vertical-align: top;">TOTAL NUMBER OF RETROFIT KITS INSTALLED:</td> <td style="text-align: right;">470,626</td> </tr> <tr> <td></td> <td>AVERAGE COST PER RETROFIT KIT:</td> <td style="text-align: right;">\$15.03</td> </tr> <tr> <td></td> <td>TOTAL EST QUANTITY CONSERVED THRU PLUMBING RETROFIT (GPD):</td> <td style="text-align: right;">6,134,936</td> </tr> <tr> <td></td> <td>QUANTITY SAVED PER RETROFIT KIT INSTALLED (GPD):</td> <td style="text-align: right;">13</td> </tr> <tr> <td></td> <td>TOTAL NUMBER OF TOILETS QUALIFYING FOR REBATE:</td> <td style="text-align: right;">23,365</td> </tr> <tr> <td></td> <td>AVERAGE COST PER TOILET REBATE:</td> <td style="text-align: right;">\$135.19</td> </tr> <tr> <td></td> <td>TOTAL EST QUANTITY CONSERVED THRU TOILET REBATE (GPD):</td> <td style="text-align: right;">494,848</td> </tr> <tr> <td></td> <td>QUANTITY SAVED PER TOILET INSTALLED (GPD):</td> <td style="text-align: right;">21</td> </tr> <tr> <td></td> <td>TOTAL DISTRICT FUNDING FOR PLUMBING RETROFIT & TOILET REBATE:</td> <td style="text-align: right;">\$5,675,001</td> </tr> </table>												PROGRAM SUMMARY:	TOTAL NUMBER OF RETROFIT KITS INSTALLED:	470,626		AVERAGE COST PER RETROFIT KIT:	\$15.03		TOTAL EST QUANTITY CONSERVED THRU PLUMBING RETROFIT (GPD):	6,134,936		QUANTITY SAVED PER RETROFIT KIT INSTALLED (GPD):	13		TOTAL NUMBER OF TOILETS QUALIFYING FOR REBATE:	23,365		AVERAGE COST PER TOILET REBATE:	\$135.19		TOTAL EST QUANTITY CONSERVED THRU TOILET REBATE (GPD):	494,848		QUANTITY SAVED PER TOILET INSTALLED (GPD):	21		TOTAL DISTRICT FUNDING FOR PLUMBING RETROFIT & TOILET REBATE:	\$5,675,001
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TABLE 5: REUSE PROJECTS

Proj Num	NWSI	FY	Name of Cooperator	Board(s) Providing Funds	Project Type	Pumping Facilities	Gallons of Storage (Million)	Amount of Pipe (Feet)	Available Reclaimed Water (GPD)	Total Project Cost (\$)	Amount Budgeted by District	Amount (\$) Reimbursed by District
P151		93	Hillsborough County	Alafia (M)	RDC	No	0.00	7,218	450,000	\$211,000	\$105,500	
P279		94	Museum of Science & Industry (MOSI)	Alafia (M)	RDC	Yes	Pond	500	5,400	\$186,666	\$43,333	
P279		95	Museum of Science & Industry (MOSI)	Alafia (M)	2ND						\$50,000	
P367		94	Hillsborough County	Alafia	RFS	N/A	N/A	N/A	N/A	\$75,000	\$37,500	\$19,978
P368		94	Hillsborough County	Alafia (M)	RCO	No	2.50		0	\$522,000	\$130,500	
P368		95	Hillsborough County	Alafia (M)	2ND						\$130,500	
F003	NWSI	95	Hillsborough County	Alafia (M)	RDC	Yes	0.00	10,560	2,000,000	\$1,750,218	\$218,750	
F003	NWSI	96	Hillsborough County	Alafia (M)	2ND						\$218,750	
F009	NWSI	95	City of Tampa	Alafia (M)	RIP	N/A	N/A	N/A	N/A	\$18,000	\$9,000	
F009	NWSI	95	City of Tampa	Alafia (M)	RDC	TBD	TBD	TBD	TBD	\$3,582,000	\$243,143	
F009	NWSI	96	City of Tampa	Alafia (M)	2ND						\$198,364	
ALAFIA TOTALS:							2.50	18,278	2,455,400	\$6,344,666	\$1,385,340	\$19,978
P046		90	Pasco County	Coastal	RCO	Yes	Pond	5,300	350,000	\$160,585	\$305,000	\$160,585
P083		91	Pasco County	Coastal	RDC	Modified	3.00	0	3,000,000	\$2,448,000	\$739,000	\$739,000
P083		92	Pasco County	Coastal	RDO	N/A	N/A	N/A	N/A	\$200,000	\$100,000	\$56,969
P116		92	City of New Port Richey	Coastal	RFS	N/A	N/A	N/A	N/A	\$65,000	\$32,500	\$32,100
P154		93	Pasco County	Coastal	RCO	No	0.00	32,500	2,600,000	\$1,559,270	\$779,635	
P330		94	Pasco County	Coastal	RDC	No	0.00	45,000	2,000,000	\$2,081,000	\$1,040,500	
P384		94	Pasco County/New Port Richey	Coastal (M)	RDC	Yes	1.00	10,560	2,000,000	\$3,082,500	\$100,000	
P384		95	Pasco County/New Port Richey	Coastal (M)	2ND						\$395,625	
P384		96	Pasco County/New Port Richey	Coastal (M)	3RD						\$1,045,625	
P456		95	Pasco County	Coastal	RDC	Yes	2.00	18,300	N/A	\$1,377,400	\$688,700	
P467		95	City of Brooksville	Coastal (M)	RDC	Yes	0.25	3,600	190,000	\$165,000	\$82,500	
P469		95	Southern States Utilities, Inc.	Coastal	RDC	No	0.00	15,800	1,300,000	\$3,500,000	\$316,800	
P680		96	Southern States Utilities, Inc.	Coastal	RDC	Yes	6.60	2,900	0	\$609,000	\$304,500	
P683		96	Pasco County	Coastal	RDC	No	0.00	0	650,000	\$4,000,000	\$150,000	
F009	NWSI	95	City of Tampa	Coastal (M)	RIP	N/A	N/A	N/A	N/A	\$20,000	\$10,000	
F009	NWSI	95	City of Tampa	Coastal (M)	RDC	TBD	TBD	TBD	TBD	\$3,980,000	\$280,000	
F009	NWSI	96	City of Tampa	Coastal (M)	2ND						\$225,912	
F010	NWSI	95	Pasco County, WCRWSA	Coastal (M)	RFS	N/A	N/A	N/A	N/A	\$6,250,000	\$31,250	
F010	NWSI	96	Pasco County, WCRWSA	Coastal (M)	RDO	Yes	TBD	TBD	TBD		\$62,500	
COASTAL TOTALS:							12.85	133,960	12,090,000	\$29,497,755	\$6,690,047	\$988,654

Proj Num: Project tracking number assigned by SWFWMD Finance Department.
 NWSI: New Water Sources Initiative.
 FY: Fiscal year interlocal agreement executed with project cooperator(s).
 Project Type: RDC (reuse design and construction); RDO (reuse design only); RCO (reuse construction only); RFS (reuse feasibility study or plan); RIP (reuse implementation plan);
 2ND (second year funding); 3RD (third year funding)
 Multi-Basin Projects: Indicated by (M) in Basin Board(s) Column; Gallons of Storage, Feet of Pipe, Available Reclaimed Water, and Total Project Cost is Split between Boards based upon Percentage of Funding Provided by Board.
 Amount (\$) Reimbursed: Entry indicates project complete; no entry indicates ongoing project.

TABLE 5: REUSE PROJECTS (continued)												
Proj Num	NWSI	FY	Name of Cooperator	Board(s) Providing Funds	Project Type	Pumping Facilities	Gallons of Storage (Million)	Amount of Pipe (Feet)	Available Reclaimed Water (GPD)	Total Project Cost (\$)	Amount Budgeted by District	Amount (\$) Reimbursed by District
P151		93	Hillsborough County	Hillsborough (M)	RDC	No	0.00	7,218	450,000	\$211,000	\$105,500	
P166		91	Pasco County	Hillsborough	RCO	Yes	2.00	11,000	140,000	\$939,000	\$234,750	\$234,750
P166		94	Pasco County	Hillsborough	2ND						\$234,750	\$234,750
P279		94	Museum of Science & Industry (MOSI)	Hillsborough (M)	RDC	Yes	Pond	500	5,400	\$186,666	\$43,333	
P279		95	Museum of Science & Industry (MOSI)	Hillsborough (M)	2ND						\$50,000	
P286		94	City of Plant City	Hillsborough	RDO	N/A	N/A	N/A	N/A	\$400,000	\$200,000	\$200,000
P288		94	Pasco County	Hillsborough	RCO	Yes	2.00	26,000	600,000	\$1,515,000	\$377,500	
P288		95	Pasco County	Hillsborough	2ND						\$377,500	
P368		94	Hillsborough County	Hillsborough (M)	RCO	No	2.50		0	\$522,000	\$130,500	
P368		95	Hillsborough County	Hillsborough (M)	2ND						\$130,500	
P458		95	City of Zephyrhills	Hillsborough	RCO	Yes	0.50	7,000	300,000	\$340,000	\$170,000	
P587		96	Pasco County	Hillsborough	RDC	No	N/A	79,000	0	\$3,200,000	\$631,000	
P666		96	City of Plant City	Hillsborough	RFS	N/A	N/A	N/A	N/A	\$100,000	\$50,000	
F002	NWSI	95	City of Plant City	Hillsborough (M)	RDC	Yes	TBD	TBD	1,697,500	\$3,852,500	\$642,083	
F002	NWSI	96	City of Plant City	Hillsborough (M)	2ND						\$642,083	
F003	NWSI	95	Hillsborough County	Hillsborough (M)	RDC	Yes	0.00	10,560	2,000,000	\$1,750,000	\$218,750	
F003	NWSI	96	Hillsborough County	Hillsborough (M)	2ND						\$218,750	
F009	NWSI	95	City of Tampa	Hillsborough (M)	RIP	N/A	N/A	N/A	N/A	\$72,000	\$36,000	
F009	NWSI	95	City of Tampa	Hillsborough (M)	RDC	TBD	TBD	TBD	TBD	\$14,328,000	\$984,714	
F009	NWSI	96	City of Tampa	Hillsborough (M)	2ND						\$514,872	
F010	NWSI	95	Pasco County, WCRWSA	Hillsborough (M)	RFS	N/A	N/A	N/A	N/A	\$6,250,000	\$31,250	
F010	NWSI	96	Pasco County, WCRWSA	Hillsborough (M)	RDO	Yes	TBD	TBD	TBD		\$62,500	
HILLSBOROUGH TOTALS:							7.00	141,278	5,192,900	\$33,666,166	\$6,086,335	\$669,500
P068		91	City of Sarasota	Manasota	RCO	Yes	0.00	1,187	100,000	\$106,974	\$47,500	\$47,500
P069		91	City of Palmetto	Manasota	RCO	Yes	0.00	2,820	330,000	\$250,000	\$125,000	\$125,000
P076		91	City of Venice	Manasota	RCO	No	0.00	12,414	399,000	\$273,010	\$125,000	\$125,000
P099		92	Manatee County	Manasota	RCO	No	0.00	13,752	123,200	\$731,827	\$366,000	\$366,000
P124		92	Sarasota County	Manasota	RDC	Yes	0.00		67,000	\$134,443	\$62,950	\$49,771
P125		92	City of Venice	Manasota	RCO	No	0.00	39,295	130,000	\$686,787	\$214,420	\$214,420
P138		92	City of Sarasota	Manasota	RCO	No	0.00	15,840	1,200,000	\$1,155,000	\$110,000	
P178		93	City of Sarasota	Manasota	RDC	Yes	0.00	10,000	310,000	\$1,028,781	\$420,000	\$420,000
P183		93	Manatee County	Manasota	RCO	No	0.00	10,860	33,400	\$568,576	\$337,802	\$284,288
P343		94	City of Bradenton	Manasota	RCO	Yes	2.00	0	0	\$615,932	\$299,000	\$299,000
P346		94	Manatee County	Manasota	RCO	No	0.00	9,230	1,367,000	\$683,818	\$341,909	
P348		94	Manatee County	Manasota	RCO	No	0.00	6,150	1,294,000	\$410,451	\$189,471	\$189,471
P355		94	Sarasota County	Manasota	RCO	No	5.40	36,200	1,070,000	\$1,559,400	\$399,850	
P355		95	Sarasota County	Manasota	2ND						\$399,850	
P357		94	City of Sarasota	Manasota	RDC	No	0.00	9,600	225,000	\$647,000	\$323,500	
P515		95	City of Sarasota	Manasota	RDC	No	0.00	3,400	348,000	\$400,000	\$150,000	
P629		96	City of North Port	Manasota	RDC	Yes	0.60	23,800	857,120	\$990,000	\$198,485	
F007	NWSI	95	Manatee County	Manasota (M)	RDC	Yes	Aquifer	N/A	6,000,000	\$400,000	\$162,500	
F014	NWSI	95	Manatee County	Manasota (M)	RDC	Yes	104.00	89,259	8,115,000	\$7,012,362	\$670,395	
F014	NWSI	96	Manatee County	Manasota (M)	2ND						\$554,613	
F017	NWSI	96	Sarasota Co, Central Co. Utils., Atlantic Utils.	Manasota (M)	RDC	Yes	26.00	42,900	1,400,000	\$2,131,720	\$517,055	
MANASOTA TOTALS:							138.00	326,707	23,368,720	\$19,786,080	\$6,015,300	\$2,120,450

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 Project Type: RDC (reuse design and construction), RCO (reuse construction only), RFS (reuse feasibility study or plan), RIP (reuse implementation plan), 2ND (second year funding), 3RD (third year funding)
 Multi-District Project: Indicated by (M) in Basin Board(s) Column; Gallons of Storage, Feet of Pipe, Available Reclaimed Water, and Total Project Cost is Split between Boards based upon Percentage of Funding Provided by Board
 Amount (\$) Reimbursed: Entry indicates project complete, no entry indicates ongoing project

TABLE 5. REUSE PROJECTS (continued)														
Proj Num	NWSI	FY	Name of Cooperator	Board(s) Providing Funds	Project Type	Pumping Facilities	Gallons of Storage (Million)	Amount of Pipe (Feet)	Available Reclaimed Water (GPD)	Total Project Cost (\$)	Amount Budgeted by District	Amount (\$) Reimbursed by District		
P048		91	The Westshore Alliance, Inc.	NW Hillsborough	RFS	N/A	N/A	N/A	N/A	\$19,947	\$10,000	\$9,947		
P094		92	The Westshore Alliance, Inc.	NW Hillsborough	RDO	N/A	N/A	N/A	N/A	\$138,120	\$75,000	\$66,972		
P132		93	Hillsborough County	NW Hillsborough	RCO	No	0.00		700,000	\$2,204,000	\$340,000			
P279		94	Museum of Science & Industry (MOSI)	NW Hillsborough (M)	RDC	Yes	Pond	500	5,400	\$186,666	\$43,333			
P279		95	Museum of Science & Industry (MOSI)	NW Hillsborough (M)	2ND						\$50,000			
P386		94	Hillsborough County *	NW Hillsborough	RDC	N/A	N/A	N/A	N/A	\$200,000	\$100,000			
P389		94	Hillsborough County	NW Hillsborough	RDC	No	0.00	30,200	1,600,000	\$1,243,700	\$475,000			
P389		95	Hillsborough County	NW Hillsborough	2ND						\$261,600			
P404		95	Hillsborough County	NW Hillsborough	RDC	Yes	5.00	N/A	N/A	\$2,000,000	\$500,000			
F009	NWSI	95	City of Tampa	NW Hillsborough (M)	RIP	N/A	N/A	N/A	N/A	\$25,000	\$12,500			
F009	NWSI	95	City of Tampa	NW Hillsborough (M)	RDC	TBD	TBD	TBD	TBD	\$4,975,000	\$350,714			
F009	NWSI	96	City of Tampa	NW Hillsborough (M)	2ND					\$25,000	\$284,811			
F010	NWSI	95	Pasco County, WCRWSA	NW Hillsborough (M)	RFS	N/A	N/A	N/A	N/A	\$6,250,000	\$31,250			
F010	NWSI	96	Pasco County, WCRWSA	NW Hillsborough (M)	RDO	Yes	TBD	TBD	TBD		\$62,500			
F011	NWSI	94	St. Petersburg, WCRWSA, Hillsborough County	NW Hillsborough (M)	RDC	Yes	N/A	2,225	500,000	\$210,250	\$55,125			
F020	NWSI	96	Hillsborough County	NW Hillsborough (M)	RDC	Yes	TBD	90,900	5,800,000	\$5,550,000	\$1,387,500			
*P386 Telemetry System (Automatic Valving)							NW HILLSBOROUGH TOTALS:		5.00	123,825	8,605,400	\$23,027,683	\$4,039,333	\$76,919
P098		92	City of Winter Haven	Peace	RDC	Yes	0.00		145,000	\$96,000	\$38,000			
P123		92	City of Arcadia	Peace	RDC	Yes	0.60	12,500	1,200,000	\$1,283,881	\$301,500	\$301,500		
P123		93	City of Arcadia	Peace	2ND						\$301,500	\$301,500		
P220		93	Charlotte County	Peace	RFS	N/A	N/A	N/A	N/A	\$46,967	\$23,484	\$23,484		
P232		93	Polk County	Peace	RCO	No	0.00		1,770,000	\$652,000	\$150,000	\$71,237		
P236		93	City of Winter Haven	Peace	RDC	Yes	0.00	10,300	36,440	\$130,500	\$65,250			
P339		94	City of Bartow	Peace	RDC	Yes	0.00	47,520	4,000,000	\$5,080,000	\$487,847			
P339		95	City of Bartow	Peace	2ND						\$410,431			
P339		96	City of Bartow	Peace	3RD						\$570,551			
P366		94	City of Winter Haven	Peace	RDC	Yes	0.00	8,700	137,000	\$130,000	\$65,000			
P383		94	Polk County	Peace	RFS	N/A	N/A	N/A	N/A	\$50,000	\$25,000	\$24,993		
P481		95	City of Haines City	Peace	RDC	Yes	0.00	40,300	1,567,000	\$9,866,000	\$445,000			
P481		96	City of Haines City	Peace	2ND						\$445,000			
P484		95	City of Fort Meade	Peace	RDC	Yes	0.00	25,000	600,000	\$362,500	\$120,313			
P484		96	City of Fort Meade	Peace	2ND						\$60,937			
P491		95	City of Lake Wales	Peace	RDO	Yes	N/A	N/A	N/A	\$48,000	\$24,000			
P497		95	City of Punta Gorda	Peace	RFS	N/A	N/A	N/A	N/A	\$75,000	\$37,500			
P499		95	Charlotte County	Peace	RCO	Yes	0.00	47,300	900,000	\$2,760,000	\$460,000			
P499		96	Charlotte County	Peace	2ND						\$460,000			
P541		95	City of Bowling Green	Peace	RDC	Yes	0.00	17,300	240,000	\$370,000	\$185,000			
P555		96	City of Sebring	Peace	RFS	N/A	N/A	N/A	N/A	\$40,000	\$20,000			
P563		96	Polk County, City of Mulberry	Peace	RDC	Yes	0.00	25,500	4,000,000	\$1,120,765	\$280,191			
P564		96	City of Fort Meade	Peace	RDC	No	0.00	21,000	400,000	\$221,260	\$110,630			
P566		96	City of Winter Haven	Peace	RDC	Yes	0.00	4,000	40,110	\$126,000	\$59,500			
PEACE TOTALS:							0.60	259,420	15,035,550	\$22,458,873	\$5,146,634	\$722,713		

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 Project Type: RDC (reuse design and construction), RDO (reuse design only), RCO (reuse construction only), RFS (reuse feasibility study or plan), RIP (reuse implementation plan), 2ND (second year funding), 3RD (third year funding)
 Multi-Basin Projects: Indicated by (M) in Basin Board(s) Column, Gallons of Storage, Feet of Pipe, Available Reclaimed Water, and Total Project Cost is Split between Boards based upon Percentage of Funding Provided by Board
 Amount (\$) Reimbursed: Entry indicates project complete; no entry indicates ongoing project

TABLE 5: REUSE PROJECTS (continued)

Proj Num	NWSI	FY	Name of Cooperator	Board(s) Providing Funds	Project Type	Bumping Facilities	Galions of Storage (Million)	Amount of Pipe (Feet)	Available Reclaimed Water (GPD)	Total Project Cost (\$)	Amount Budgeted by District	Amount (\$) Reimbursed by District		
P7120		87	City of Largo	Pinellas-Anclote	RDO	N/A	N/A	N/A	N/A	\$18,000	\$18,000	\$18,000		
P033		90	City of Largo	Pinellas-Anclote	RDC	No	0.00	29,125	1,034,000	\$1,323,867	\$464,750	\$464,750		
P070		91	City of St. Petersburg	Pinellas-Anclote	RCO	No	0.00	4,124	280,000	\$221,958	\$132,700	\$54,693		
P071		91	City of St. Petersburg	Pinellas-Anclote	RCO	No	0.00	29,143	1,200,000	\$1,149,294	\$364,000	\$261,764		
P072		91	City of Tarpon Springs	Pinellas-Anclote	RDC	No	2.00	23,000	460,000	\$1,819,193	\$650,000	\$650,000		
P096		92	St. Petersburg Dch., So. Pasadena	Pinellas-Anclote	RDC	Yes	0.00	67,700	2,500,000	\$6,124,000	\$3,394,500			
P096		95	St. Petersburg Dch., So. Pasadena	Pinellas-Anclote	2ND						\$395,490			
P117		92	City of Pinellas Park	Pinellas-Anclote	RFS	N/A	N/A	N/A	N/A	\$100,000	\$50,000	\$46,386		
P118		92	City of Oldsmar	Pinellas-Anclote	RCO	No	0.00		250,000	\$309,982	\$248,225	\$154,991		
P120		92	City of Dunedin	Pinellas-Anclote	RDC	Yes	2.00	8,200	1,500,000	\$1,075,000	\$500,000			
P121		92	City of Largo	Pinellas-Anclote	RDC	No	0.00	74,700	1,600,000	\$2,040,400	\$1,020,200	\$1,020,200		
P190		93	City of Dunedin	Pinellas-Anclote	RDC	No	0.00	18,100	575,000	\$1,010,000	\$505,000			
P190		96	City of Dunedin	Pinellas-Anclote	2ND						\$41,189			
P204		93	City of Oldsmar	Pinellas-Anclote	RDC	Yes	0.00	1,400	250,000	\$500,000	\$250,000			
P204		96	City of Oldsmar	Pinellas-Anclote	2ND						\$124,450			
P205		93	City of Pinellas Park	Pinellas-Anclote	RDO	N/A	N/A	N/A	N/A	\$750,000	\$375,000			
P210		93	Pasco County	Pinellas-Anclote	RDC	Yes	1.50	15,000	900,000	\$2,034,000	\$1,017,000			
P213		93	City of St. Petersburg	Pinellas-Anclote	RDC	No	0.00	10,560	1,200,000	\$2,360,000	\$1,180,000			
P300		94	Pinellas County	Pinellas-Anclote	RCO	No	0.00	10,500	500,000	\$1,417,000	\$708,500			
P301		94	City of Largo	Pinellas-Anclote	RDC	No	0.00	24,000	2,500,000	\$2,400,000	\$1,200,000			
P302		94	Pinellas County	Pinellas-Anclote	RCO	Yes	18.00	15,780	8,300,000	\$11,226,000	\$2,679,500			
P302		95	Pinellas County	Pinellas-Anclote	2ND						\$1,379,750			
P302		96	Pinellas County	Pinellas-Anclote	3RD						\$1,339,750			
P305		94	City of Tarpon Springs	Pinellas-Anclote	RDC	No	0.00	18,000	106,405	\$400,000	\$100,000	\$100,000		
P305		95	City of Tarpon Springs	Pinellas-Anclote	2ND						\$100,000	\$100,000		
P309		94	City of St. Petersburg *	Pinellas-Anclote	RFS	N/A	N/A	N/A	N/A	\$379,000	\$94,750			
P384		94	Pasco County/New Port Richey	Pinellas-Anclote (M)	RDC	Yes	1.00	10,560	2,000,000	\$3,082,500	\$100,000			
P384		95	Pasco County/New Port Richey	Pinellas-Anclote (M)	2ND						\$395,625			
P384		96	Pasco County/New Port Richey	Pinellas-Anclote (M)	3RD						\$1,045,625			
P439		95	Pinellas County	Pinellas-Anclote	RCO	No	0.00	53,700	12,500,000	\$9,488,000	\$2,372,000			
P439		96	Pinellas County	Pinellas-Anclote	2ND						\$2,372,000			
P443		95	City of Oldsmar	Pinellas-Anclote	RCO	No	0.00	31,500	200,000	\$728,000	\$182,000			
P443		96	City of Oldsmar	Pinellas-Anclote	2ND						\$182,000			
P445		95	City of Pinellas Park	Pinellas-Anclote	RCO	No	0.00	31,000		\$4,630,000	\$1,162,500			
P445		96	City of Pinellas Park	Pinellas-Anclote	2ND						\$1,162,500			
P447		95	City of Largo	Pinellas-Anclote	RDC	Yes	5.00	56,000	600,000	\$4,701,000	\$1,175,250			
P447		96	City of Largo	Pinellas-Anclote	2ND						\$1,175,250			
P571		96	Town of Kenneth City	Pinellas-Anclote	RDC	No	0.00	28,200	300,000	\$1,134,120	\$567,060			
F009	NWSI	95	City of Tampa	Pinellas-Anclote (M)	RIP	N/A	N/A	N/A	N/A	\$115,000	\$57,500			
F009	NWSI	95	City of Tampa	Pinellas-Anclote (M)	RDC	TBD	TBD	TBD	TBD	\$22,885,000	\$1,587,837			
F009	NWSI	96	City of Tampa	Pinellas-Anclote (M)	2ND						\$1,283,219			
F010	NWSI	95	Pasco County, WCRWSA	Pinellas-Anclote (M)	RFS	N/A	N/A	N/A	N/A	\$6,250,000	\$31,250			
F010	NWSI	96	Pasco County, WCRWSA	Pinellas-Anclote (M)	RDO	Yes	TBD	TBD	TBD		\$62,500			
F011	NWSI	94	St. Petersburg, WCRWSA, Hillsborough County	Pinellas-Anclote (M)	RDC	Yes	N/A	2,225	500,000	\$210,250	\$55,125			
*P109 Aquifer Storage/Recovery Project							PINELLAS-ANCLOTE TOTALS:		29.50	562,517	39,255,405	\$89,920,564	\$33,262,015	\$2,870,784

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 Multi-Board Projects: Indicated by (M) in Board(s) Column; Galions of Storage, Feet of Pipe, Available Reclaimed Water, and Total Project Cost is Split between Boards based upon Percentage of Funding Provided by Board
 Amount (\$) Reimbursed: Entry indicates project complete; no entry indicates ongoing project

TABLE 5: REUSE PROJECTS (continued)

Proj Num	NWSI	FY	Name of Cooperator	Board(s) Providing Funds	Project Type	Pumping Facilities	Gallons of Storage (Million)	Amount of Pipe (Feet)	Available Reclaimed Water (GPD)	Total Project Cost (\$)	Amount Budgeted by District	Amount (\$) Reimbursed by District
P242		93	Pasco County	Withlacoochee	RCO	Yes	1.50	7,500	425,000	\$290,082	\$145,000	\$145,000
P244		93	City of Wildwood	Withlacoochee	RDC	Yes	2.00	22,600	695,000	\$650,000	\$72,500	\$72,500
P244		94	City of Wildwood	Withlacoochee	2ND						\$121,250	\$121,250
P244		95	City of Wildwood	Withlacoochee	3RD						\$121,250	\$121,250
P467		95	City of Brooksville	Withlacoochee (M)	RDC	Yes	0.25	3,600	190,000	\$165,000	\$41,250	
P665		96	City of Ocala	Withlacoochee	RCO	Yes	0.00	15,000	220,000	\$375,000	\$90,702	
WITHLACOOCHEE TOTALS:							3.75	48,700	1,530,000	\$1,480,082	\$591,952	\$460,000
P279		94	Museum of Science & Industry (MOSI)	Governing Board (M)	RDC	Yes	Pond	500	5,400	\$140,000	\$70,000	
F002	NWSI	95	City of Plant City	Governing Board (M)	RDC	Yes	TBD	TBD	1,697,500	\$3,852,500	\$963,125	
F002	NWSI	96	City of Plant City	Governing Board (M)	2ND						\$963,125	
F003	NWSI	95	Hillsborough County	Governing Board (M)	RDC	Yes	0.00	21,120	4,000,000	\$1,500,000	\$800,000	
F003	NWSI	96	Hillsborough County	Governing Board (M)	2ND						\$316,666	
F007	NWSI	95	Manatee County	Governing Board (M)	RDC	Yes	Aquifer	N/A	6,000,000	\$400,000	\$162,500	
F009	NWSI	95	City of Tampa	Governing Board (M)	RIP	N/A	N/A	N/A	N/A	\$250,000	\$125,000	
F009	NWSI	95	City of Tampa	Governing Board (M)	RDC	TBD	TBD	TBD	TBD	\$49,750,000	\$7,875,000	
F009	NWSI	96	City of Tampa	Governing Board (M)	2ND						\$1,522,900	
F010	NWSI	95	Pasco County, WCRWSA	Governing Board (M)	RFS	N/A	N/A	N/A	N/A	\$25,000,000	\$395,375	
F010	NWSI	96	Pasco County, WCRWSA	Governing Board (M)	RDO	Yes	TBD	TBD	TBD		\$500,000	
F011	NWSI	94	St. Petersburg, WCRWSA, Hillsborough County	Governing Board (M)	RDC	Yes	N/A	4,450	1,000,000	\$420,500	\$110,250	
F014	NWSI	95	Manatee County	Governing Board (M)	RDC	Yes	156.00	89,259	8,115,000	\$7,012,362	\$1,000,000	
F014	NWSI	96	Manatee County	Governing Board (M)	2ND						\$745,712	
F017	NWSI	96	Sarasota Co., Central Co. Utils., Atlantic Utils.	Governing Board (M)	RDC	Yes	26.00	42,900	1,400,000	\$2,131,720	\$517,055	
F020	NWSI	96	Hillsborough County	Governing Board (M)	RDC	Yes	TBD	90,900	5,800,000	\$5,550,000	\$1,387,500	
GOVERNING BOARD TOTALS:							182.00	249,129	28,017,900	\$98,007,082	\$17,454,208	\$0
DISTRICT TOTALS:							381.20	1,863,814	135,551,275	\$324,188,951	\$80,671,164	\$7,928,999

PROJECT SUMMARY:	TOTAL STORAGE CONSTRUCTED (MILLIONS/GALLONS):	381.20
	TOTAL PIPE INSTALLED (FEET)	1,863,814
	TOTAL PIPE INSTALLED (MILES)	353.0
	TOTAL QUANTITY OFFSET THROUGH REUSE (GPD):	135,551,275
	TOTAL DISTRICT FUNDING:	\$80,671,164

Proj Num: Project tracking number assigned by SWFWMD Finance Department
 NWSI: New Water Sources Initiative
 FY: Fiscal year interlocal agreement executed with project cooperator(s)
 Project Type: RDC (reuse design and construction); RDO (reuse design only); RCO (reuse construction only); RFS (reuse feasibility study or plan); RIP (reuse implementation plan); 2ND (second year funding); 3RD (third year funding)
 Multi-Basin Projects: Indicated by (M) in Basin Board(s) Column; Gallons of Storage, Feet of Pipe, Available Reclaimed Water, and Total Project Cost is Split between Boards based upon Percentage of Funding Provided by Board
 Amount (\$) Reimbursed: Entry indicates project complete, no entry indicates ongoing project

TABLE 6: DEFUNCT PROJECTS (Budgeted but canceled)					
Proj Num	FY	Name of Cooperator	Basin Board(s) Providing Funds	Project Type	Amount (\$) Budgeted by District
P067	91	Hernando County	Coastal	RDC	\$300,000
P093	92	Sabal Park (P163)	Hillshorough	RDC	\$78,925
P119	92	City of Clearwater	Pinellas-Anclote	RCO	\$1,305,250
P122	92	City of Lakeland	Peace	RDC	\$98,150
P122	93	City of Lakeland	Peace	2ND	\$98,150
P122	94	City of Lakeland	Peace	3RD	\$222,386
P152	93	Hernando County	Coastal	RDC	\$425,000
P215	93	City of Avon Park	Peace	RFS	\$15,000
P303	94	South Pasadena	Pinellas-Anclote	RDC	\$45,500
P320	94	Pasco County	Pinellas-Anclote	RDC	\$116,500
P344	94	City of Palmetto	Manasota	RCO	\$308,680
P466	95	City of Ocala	Withlacoochee	RCO	\$112,500
TOTAL BUDGETED (NOT USED):					\$3,126,041
<p>Proj Num: Project tracking number assigned by SWFWMD Finance Department FY: Fiscal year interlocal agreement executed with project cooperator(s) Project Type:</p> <ul style="list-style-type: none"> RDC (reuse design and construction) RDO (reuse design only) RCO (reuse construction only) RFS (reuse feasibility study or plan) RFC (retrofit commercial) RFM (retrofit municipal) RFR (retrofit residential) 					

**APPENDIX A:
INDEX OF REUSE PROJECTS**

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Project	Description	Customers
P7120	City of Largo Reuse Design (Sparkling Water System)	N/A
P033	City of Largo Expansion of Reclaimed Water System	Bay Vista (200,000 gpd) Carroll Brothers Nursery (100,000 gpd) Cove Cay Country Club (400,000 gpd) Cove Cay Condominiums (100,000 gpd) Clearwater Catholic High School (100,000 gpd) 18 commercial/municipal connections
P046	Pasco County Design and Construction of a Reclaimed Water Line to Beacon Woods and Timber Oaks	Golf Courses, residential
P048	Westshore Reuse Feasibility Study	N/A
P068	City of Sarasota Conversion of the Irrigation System at Ed Smith Sports Complex to Reclaimed Water	Ed Smith's Complex and adjacent areas
P069	City of Palmetto Construction of Pump Station and Connection to Reclaimed Water Transmission Line	2 commercial, municipal, residential
P070	City of St. Petersburg Construction of Reclaimed Water Transmission Lines in the Gateway Area of St. Petersburg - Phase I	6 commercial
P071	City of St. Petersburg Construction of Reclaimed Water Transmission Lines in the Gateway Area of St. Petersburg - Phase II	48 commercial and condominium associations
P072	City of Tarpon Springs Design and Construction of Reclaimed Water Storage Facility & Transmission Line to Point Alexis Subdivision	Residential
P076	City of Venice Construction of Reclaimed Water Transmission Line in the Capri Isle Development	Capri Isles Golf Club (341,000 gpd) 57 residential, 18 condominium associations
P083	Pasco County Design and Construction of Storage Tanks, Pump Stations, and Transmission Lines at the Deer Park and Embassy Hills WWTPs, and an Interconnect Line at the Hudson WWTP	N/A
P083	Pasco County Design of Transmission Line to Connect Deer Park and Embassy Hills WWTPs	Golf courses, schools, residential

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Project	Description	Customers
⁰¹⁸ P094	Westshore Alliance Reuse Feasibility Study	N/A
P096	City of St. Petersburg Beach, South Pasadena Construction of Reclaimed Water transmission Line to St. Petersburg Beach, South Pasadena, and Tierra Verde (South Cross Bayou)	Residential
P098	City of Winter Haven Design and Construction of Reclaimed Water Transmission Line to Winter Haven's Inman Park - Phase I	Municipal cemetery, municipal citrus grove, Inman Park
P099	Manatee County Construction of Reclaimed Water Transmission Line Expansion down 53rd Avenue and 34th Street	3 schools, boys club, residential
P116	City of New Port Richey Reclaimed Water Master Plan	N/A
P117	City of Pinellas Park Reclaimed Water Master Plan	N/A
P118	City of Oldsmar Construction of Reclaimed Water Transmission Line for Shore Drive and R.E. Olds Park	Harbor Palms Golf Course (100,000 gpd) Canal Park (160,000 gpd) Sheffield Park (100,000 gpd) Residential, commercial, municipal
P120	City of Dunedin Design and Construction of Reclaimed Water Transmission Line through Fairway Estates	Golf courses, parks, recreational fields, commercial, residential, schools
P121	City of Largo Construction of Reclaimed Water Transmission Lines in the Central Service Area	Golf course, commercial, mobile home parks, residential
P123	City of Arcadia Design and Construction of the City's Reclaimed Water System	Municipal golf course, cemetery, ball fields, DeSoto County Hospital, DeSoto HS, Arcadia Village GC
P124	Sarasota County Conversion of Irrigation System at the Youth Athletic Complex to Reclaimed Water	Youth Athletic Complex
P125	City of Venice Construction of Reclaimed Water Transmission Line Expansion to the Bay Indies Mobile Home Park	Bay Indies Mobile Home Park (130,000 gpd)
P132	Hillsborough County Construction of Reclaimed Water System in Carrollwood Village	945 residential

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Project	Description	Customers
P138	City of Sarasota Design and Construction of Reclaimed Water Transmission Line along Tuttle Avenue	Commercial, residential
P151	Hillsborough County Construction of Reclaimed Water Transmission Line in Valrico along Sidney Road	Diamond Hills Golf Course (400,000 gpd) Future development
P154	Pasco County Construction of Deer Park/Embassy Hills Reclaimed Water Interconnect Transmission Line	N/A
P166	Pasco County Design and Construction of Reclaimed Water Pump Station, Storage Tank, and Transmission Line to Wildcat Groves	Wildcat Groves (140,000 gpd)
P178	City of Sarasota Construction of Reclaimed Water Master Pumping Station and Transmission Line Segment from US 41 to Bayfront Park	Commercial, residential
P183	Manatee County Design and Construction of Reclaimed Water Transmission Line to the Sara Bay Development	55 residential
P190	City of Dunedin Construction of Reclaimed Water Transmission Line Segment Comprising Southern Segment of the City's Reclaimed Water System	City parks, golf courses, residential
P204	City of Oldsmar Modification of Pump Station and Design and Construction of Reclaimed Water Storage Tank and Transmission Line in the Mobbly Bay Area	Residential
P205	City of Pinellas Park Design of the City's Reclaimed Water System - Phase I	N/A
P210	Pasco County Design and Construction of the South Loop Extension to the West Pasco Reclaimed Water System	Golf courses, commercial, residential
P213	City of St. Petersburg Construction of Reclaimed Water Transmission Line to Increase the Hydraulic Transmission Capacity of the Reclaimed Water System	Residential

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Project	Description	Customers
P309	City of St. Petersburg Aquifer Storage and Recovery Feasibility Study	N/A
P330	Pasco County Design and Construction of Reclaimed Water Transmission Line to Complete the Northeast Loop Portion of the County's Reclaimed Water System	Golf courses, commercial, residential
P339	City of Bartow Design and Construction of Reclaimed Water Transmission Line to Florida Power's Site Southwest of Homeland	Florida Power Corporation (4,000,000 gpd)
P343	City of Bradenton Construction of Reclaimed Water Storage Tank	Mixon Fruit Farms (331,000 gpd) River Run Golf Links (274,000 gpd) Recreational and athletic fields
P346	Manatee County Construction of Whitefield Area Reclaimed Water Line Extension	Sarabay Golf Club (170,000 gpd) Citrus grove, residential
P348	Manatee County Construction of Moccasin Wallow Road Reclaimed Water Line Extension	Blossom Groves (800,000 gpd) Pursley Turf (302,000 gpd) Imperial Lake Golf Club (192,000 gpd)
P355	Sarasota County Construction of Reclaimed Water Transmission Lines and Reclaimed Water Storage Pond in Bee Ridge Road Area	Misty Creek Golf Course (162,000 gpd) Gator Creek Golf Course (174,000 gpd) Sarasota Golf Club (168,000 gpd) Residential
P357	City of Sarasota Design and Construction of the City's Urban Reclaimed Water Transmission Line Expansion	Commercial, residential
P366	City of Winter Haven Construction of Reclaimed Water Transmission Line from Central Park to the Chain O' Lakes Complex-Phase III	Chain O'Lakes Complex (137,000 gpd) Oaklawn Cemetery
P367	Hillsborough County Reuse Feasibility Study - Phase I	N/A
P368	Hillsborough County Valrico Reclaimed Water Storage Tank	N/A
P383	Polk County Conceptual Water Reuse Plan	N/A
P384	Pasco County Design and Construction of New Port Richey/Pasco County Reuse Interconnect	N/A
P386	Hillsborough County Dale Mabry Reuse Telemetry System	N/A

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Project	Description	Customers
P481	City of Haines City Design and Construction of Reclaimed Water Pump Station and Transmission Line from the City's WWTP to Lost Grove Golf Course and Nearby Citrus Groves	Lost Grove Golf Course (495,000 gpd) Holly Hill Fruit (235,000 gpd) Victor Story Groves (194,000 gpd) Carl Boozer Groves (251,000 gpd)
P484	City of Fort Meade Design and Construction of Reclaimed Water Transmission Line to Mobile Mine	Mobil Mine (600,000 gpd)
P491	City of Lake Wales Design of Reclaimed Water Pump Station and Transmission Line for Citrus Grove Irrigation	N/A
P497	City of Punta Gorda Reuse Feasibility Study	N/A
P499	Charlotte County Construction of Reclaimed Water Pump Station and Transmission Lines from the East Port WWTP to Four Golf Courses	Deep Creek Golf Course (140,000 gpd) Kingsway Country Club (190,000 gpd) Maple Leaf Golf Course (190,000 gpd) Victoria Estates (190,000 gpd) Eagle Point Golf Course (160,000 gpd)
P515	City of Sarasota Design and Construction of Reclaimed Water Transmission Line Completing Southern Segment of the City's Reclaimed Water System - Phase IV-C	N/A
P541	City of Bowling Green Design and Construction of Reclaimed Water Pump Station and Transmission Line from the City's WWTP to Cargill Fertilizer Corporation	Cargill Fertilizer (240,000 gpd)
P555	City of Sebring Conceptual Water Reuse Plan	
P563	Polk County Design and Construction of Reclaimed Water Transmission Line from SW Regional WWTP and City of Mulberry Waste Water Treatment Plant to Mobil Nichols Mine	Mobil Nichols Mine (4,000,000 gpd)
P564	City of Fort Meade Design and Construction of Reclaimed Water Transmission Line Extension from Reclaimed Water Storage Pond to Mobil Mine	Mobil Mining (400,000 gpd)
P566	City of Winter Haven Design and Construction of Reclaimed Water Transmission Line Extension to 2 schools, a cemetery, and recreational complex-Phase IV	
P571	Town of Kenneth City Design and Construction of the Town's Reclaimed Water System	900 Residential

