REBUTTAL TESTIMONY OF MARK FARRELL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

ON BEHALF OF

SOUTHERN STATES UTILITIES, INC.

DOCKET NO. 950495-WS

Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

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

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

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

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

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

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

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

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

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Florida Legislature has recognized the importance of reclaimed water in Florida Statute Sections 403.064, and 373.250, which provide, "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." According to Section 403.064, F.S., wastewater utilities operating within water resource caution areas must provide a reuse feasibility study with their consumptive use permit application.

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

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

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

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

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

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

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

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

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

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

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

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

Y. Yes.

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

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

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

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

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

line with the program costs of other utilities.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

conservation signal based on their levelized consumption.

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

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

Q. DOES THAT CONCLUDE YOUR PRE-FILED TESTIMONY?

A. Yes, it does.

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.

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.

<u>January 1, 1993 Management Period</u>
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.

<u>January 1, 1993 Management Period</u>
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 supplement al 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.**

As a guide for the Permittee, 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 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 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 permitable 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

EXHIBIT (MF-1)

PAGE 24 OF 84

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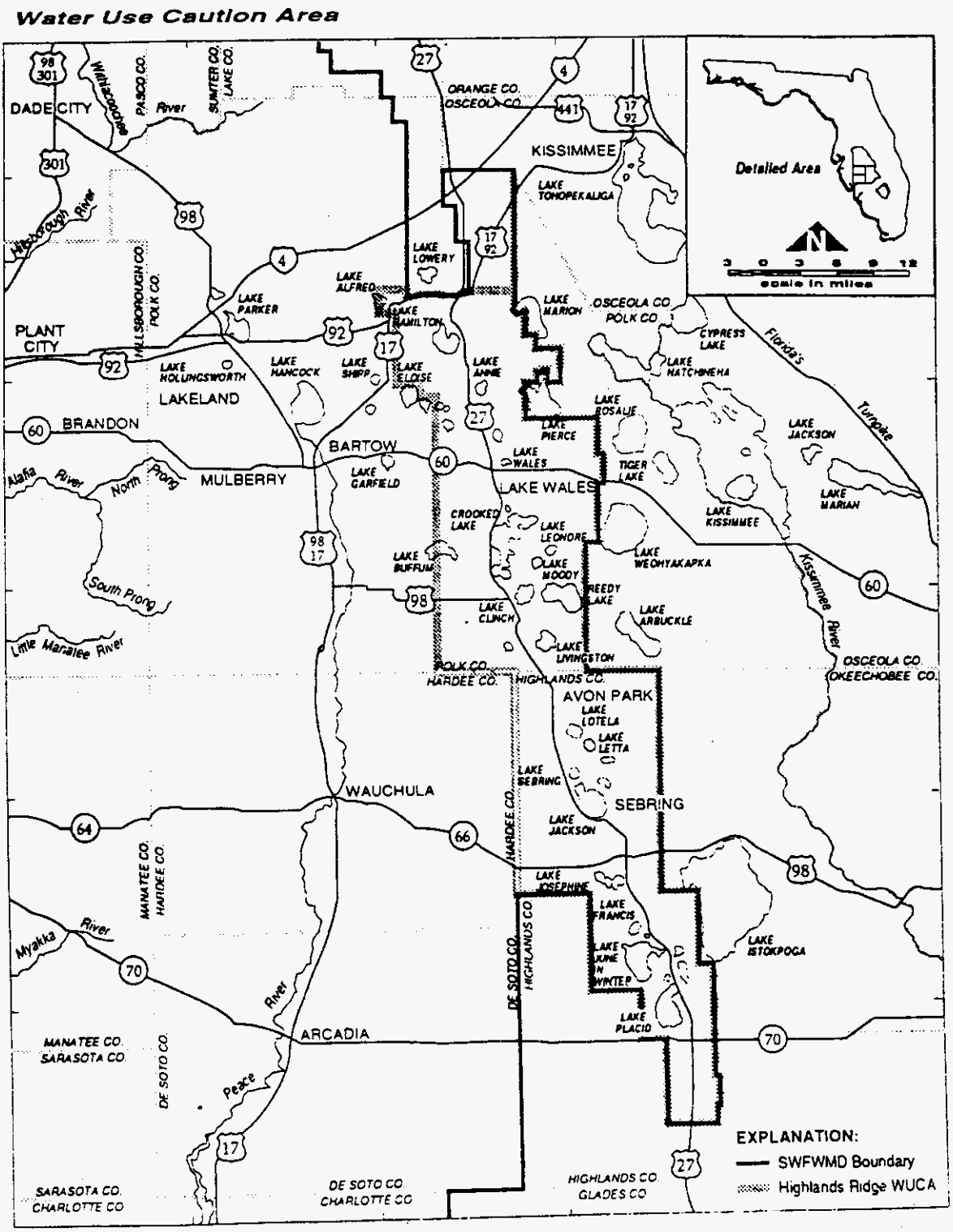
Figure 7.1-1
Highlands Ridge WUCA



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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.

<u>January 1, 1993 Management Period</u>
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.

<u>January 1, 2011 Management Period</u>
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			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 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 permitable 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 |
> |---|---|---|---|---|---|
> | | | | | | |
>
> 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.

EXHIBIT (MF-1)

PAGE 51 OF 84

Figure 7.2-1
Eastern Tampa Bay WUCA

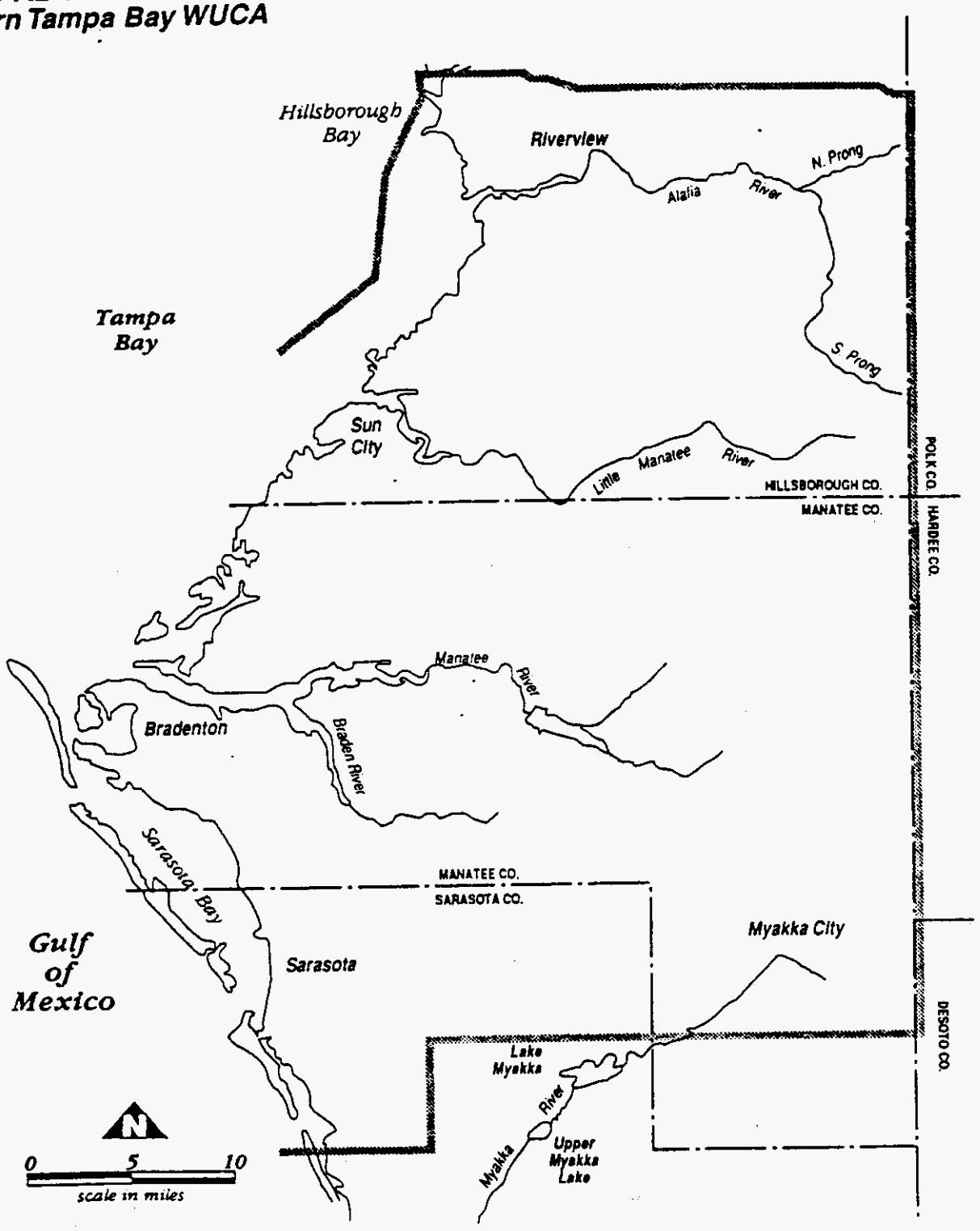
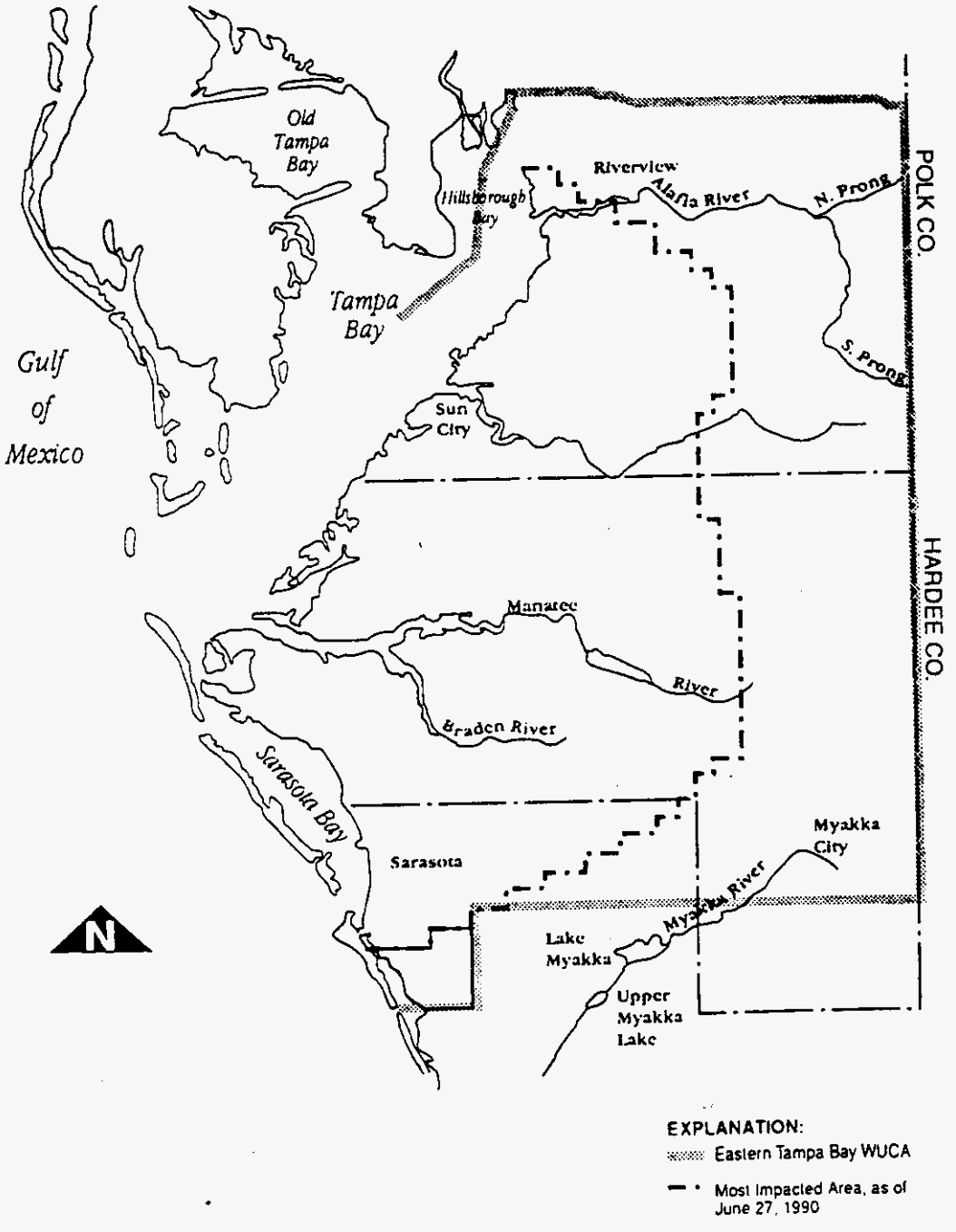


Figure 7.2-2
Eastern Tampa Bay WUCA



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.

<u>January 1, 1993 Management Period</u>
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.

<u>January 1, 1997 Management Period</u>
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.

<u>January 1, 1993 Management Period</u>
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 3.1.4 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 permitable 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.

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.**

All Water Use Permit applicants for water uses where reclaimed water is appropriate shall provide documentation from the local wastewater entity indicating whether reclaimed water is available or is planned to be available within the next six years. Permittees generating reclaimed water shall respond to such requests by permit applicants in a timely manner. If reclaimed water is available, or is planned to be available within the next 6 years, the local wastewater entity shall provide a cost estimate for connection to the permit applicant. If reclaimed water is planned to be available within the next 6 years, the local wastewater entity shall provide an estimate of when the reclaimed water will become available. If the wastewater generator does not hold a valid water use permit and does not supply the requested information, the applicant shall be required to prepare a cost-estimate for connection.

Permittees capable of using reclaimed water will be required to accept it when it becomes available, provided that the quantity and quality are acceptable for the intended use, as determined by the District. If the reclaimed water generator provides the reuse connection, acceptance is required, provided that the quantity and quality of the reclaimed water are acceptable for the intended use, as determined by the District. If the Permittee must pay for all or a part of the cost of connection to the reclaimed water source, the permittee may present an economic feasibility report to the District demonstrating whether connection is feasible.

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 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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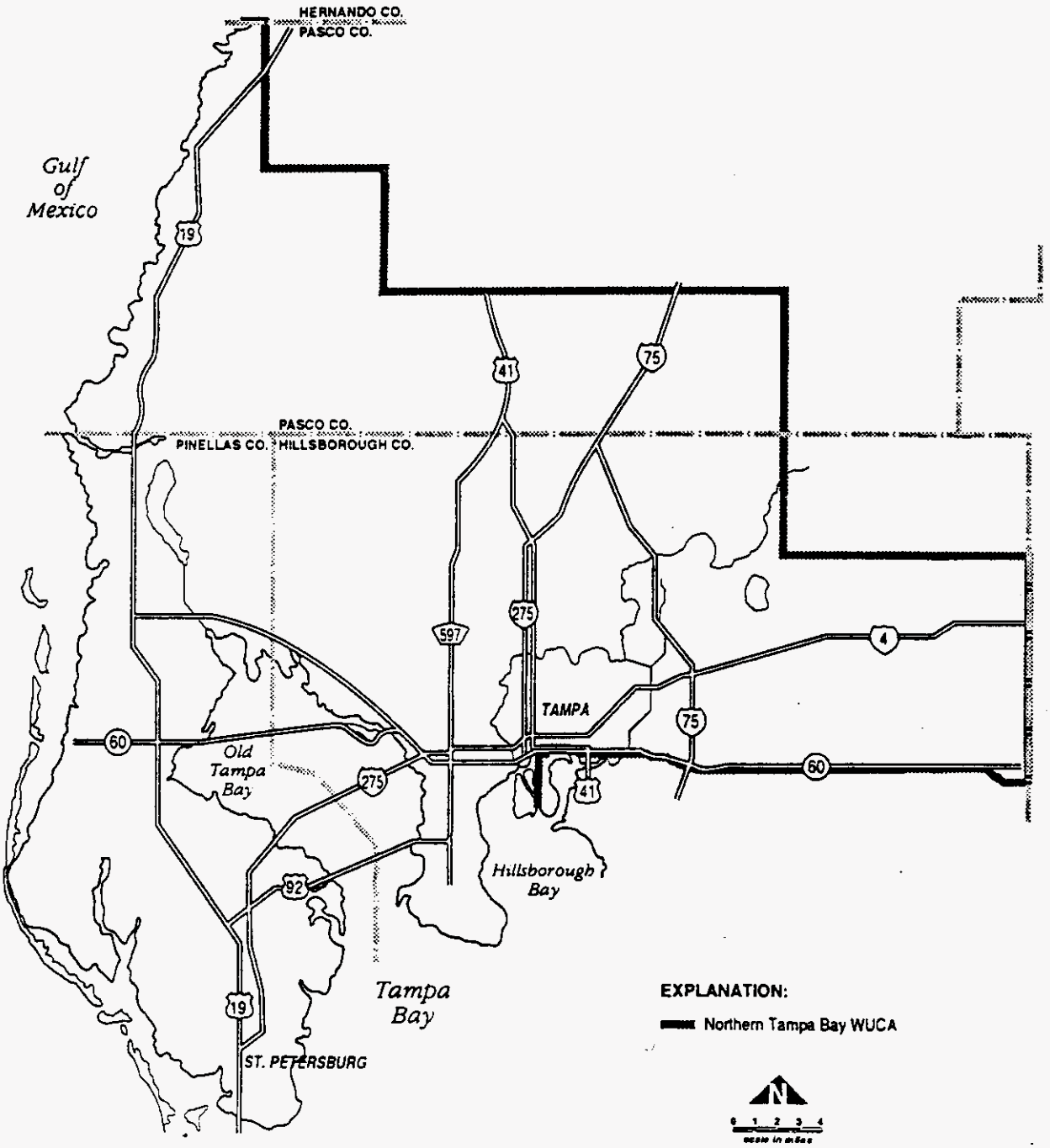
Figure 7.3-1
Northern Tampa Bay WUCA



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(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.

(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.

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.

(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.

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

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;

EXHIBIT _____ (MF-2)

PAGE 1 OF 14

1997
Spring Hill Water Conservation
Cost Share Proposal

Submitted by
Southern States Utilities, Inc.

December 8, 1995

CONTENTS

SSU
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 pluming 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,

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	2,500
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.

Completion Schedule

Development and Mailing of Questionnaires - October 1996

Collection and Evaluation of Consumption Habit and Demographic Data - November/December 1996, January 1997

Negotiate and Hire Consultants - December 1996/January 1997

Press Release and Mailing of Letters Announcing Retrofit and Rebate Program - January 1997

Advertising and Workshops - January, March and July 1997

Distribution and Installation of Retrofit Kits - February, March, April 1997

Follow-Up on Low Flow Toilet Rebate offer - March, April 1997

Follow-Up on Retrofit Kits - May, June, July 1997

Statistical Tracking and Data Collection - Ongoing from October 1996 though September 1997

Submission of Final Report - September 30, 1997

Implementation Plan

The work plan from October 1996 to October 1997 will be to effect the installation of retrofit kits in the majority of the homes of high volume users and low-flow toilets through a rebate program. A public education program will kick-off the effort. The initiative will include a letter promotion, advertising, newsletter articles, workshops and local media publicity. The combined target groups would be single-family residential and multi-family complex high-volume customers.

SSU will hire a conservation consultant to coordinate the plumbing retrofit program to insure maximum participation and installation.

SSU will provide to customers a list of approved manufacturers and approved plumbing firms that are eligible to install the low-flow toilets. The high-volume customers, as determined by SSU billing records, will be contacted individually by mail to inform them about the rebate offer. Customers will be provided a toll-free number to call for information. Conservation credit certificates for low-flow toilets will be designed, printed, and provided to the Spring Hill customer service office. Customers must visit the Spring Hill office in order to provide proof of purchase and installation by the approved manufacturers and installers. SSU representatives will confirm or deny verification and issue a certificate for the amount spent up to $100 per low-flow toilet. The customer will then mail the certificate with their next bill payment. Upon verification with the Spring Hill customer service office, a rebate will be applied to the customer's next bill.

If expenses for retrofit kits and low-flow toilets exceed budgeted amounts, the funds will be shifted, if possible, to the more popular type of program.. If all funds are depleted and additional requests are received, customers will be placed on a waiting list for consideration in future phases of the conservation program.

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 tothose 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'ss 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.

####

EXHIBIT (MF-2)

PAGE 11 OF 14

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 x 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
MCGRIFF, 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.

INSURED

Southern States Utilities, Inc
1000 Color Place
Apopka

FL 32703

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	

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	GENERAL LIABILITY [X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS MADE [X] OCCUR. [ ] OWNER'S & CONTRACTOR'S PROT.	CLP7636993 **	10/15/94	1/01/96	GENERAL AGGREGATE PRODUCTS-COMP/OP AGG. PERSONAL & ADV. INJURY EACH OCCURRENCE FIRE DAMAGE (Any one fire) MED. EXPENSE (Any one person)	$ 1000000 $ 1000000 $ 500000 $ 500000 $ 50000 $ 5000
A	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS [X] HIRED AUTOS [X] NON-OWNED AUTOS [ ] GARAGE LIABILITY *See limitation	BUA5437072	10/15/94	1/01/96	COMBINED SINGLE LIMIT BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE	$ 500000 $ $ $
	EXCESS LIABILITY [ ] UMBRELLA FORM [ ] OTHER THAN UMBRELLA FORM				EACH OCCURRENCE AGGREGATE	$ $
C	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY	03161	1/01/95	1/01/96	[X] STATUTORY LIMITS EACH ACCIDENT DISEASE-POLICY LIMIT DISEASE-EACH EMPLOYEE	$ 500000 $ 500000 $ 500000
D	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.	

DESCRIPTION OF OPERATIONS/LOCATIONS/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 Jeffrey L. Johnson

031060000 064

Application

Cooperative Funding Program
New Water Source Initiative

Date: 1/ 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 Progra

What type of project is this? *(please check only one)*

____ Aerial Mapping ____ Communications ____ Stormwater Management/Flood Control
_X_ Water Conservation ____ Alternative Source ____ Groundwater ____ SWIM/NEP
____ Water Quality

(continued on other side)

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: _____

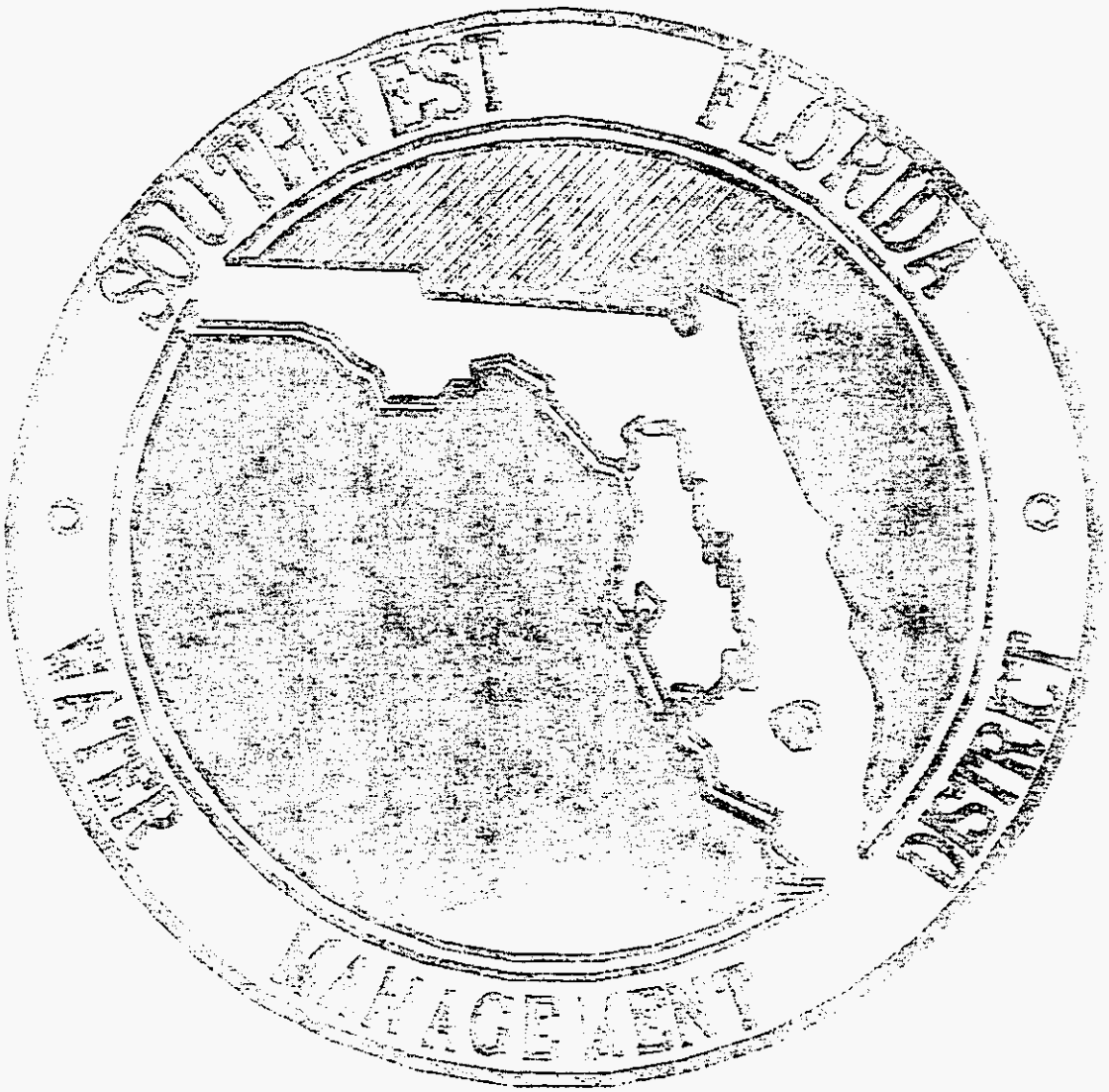
Prepared by:
Carl P. Wright
Resource Projects Department
Conservation Projects Section

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.

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.

Retrofit Programs and Reuse Projects
Summary Report, Page 3

TABLE 3: SUMMARY OF REUSE PROJECTS BY BOARD

Board(s) Providing Funding	Available Reclaimed Water (GPD)	Gallons of Storage (Million)	Amount ($) Budgeted by District
Alafia	2,455,400	2.50	$1,385,340
Coastal	12,090,000	12.85	$6,690,047
Hillsborough	5,192,900	7.00	$6,086,335
Manasota	23,368,720	138.00	$6,015,300
NW Hillsborough	8,605,400	5.00	$4,039,333
Peace	15,035,550	0.60	$5,146,634
Pinellas-Anclote	39,255,405	29.50	$33,262,015
Withlacoochee	1,530,000	3.75	$591,952
Governing Board	28,017,900	182.00	$17,454,208
Total	135,551,275	381.20	$80,671,164

A more specific breakdown of retrofit programs and reuse projects indicating the type of project, location and associated local entity, etc., is provided in TABLES 4 and 5 respectively. A retrofit program involves the replacement of older plumbing fixtures with newer, water-conserving fixtures. The disparity in cost-per-kit for different projects generally results from the scope of work specified in the interlocal agreement. In some contracts, installation fees are included; in others they are not. In some of the ongoing projects, the actual cost has not yet been determined, nor has an analysis of the actual savings been performed. This explains blank entries. In both tables, if the project is complete the amount reimbursed by the District is indicated. If the amount reimbursed column is blank, the project is ongoing.

TABLE 6 is a summary of DEFUNCT PROJECTS. These are projects which have been funded but have been canceled by the local cooperator for various reasons.

APPENDIX A is an index of reuse projects. It provides a brief description of each project and lists the customer(s) with an estimated usage in gallons per day. Projects are listed in ascending numerical sequence by project number.

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	[illegible]	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	[illegible]	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	[illegible]	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	[illegible]	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

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

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 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		93	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

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 (QPD)	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

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
P7120		87	City of Largo	Pinellas-Anclote	RDO	N/A	N/A	N/A	N/A	$38,000	$18,000	$18,000
P033		90	City of Largo	Pinellas-Anclote	RDC	No	0.00	29,125	1,034,000	$1,322,867	$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 Bch., So. Pasadena	Pinellas-Anclote	RDC	Yes	0.00	67,700	2,500,000	$6,124,000	$3,394,500	
P096		95	St. Petersburg Bch., 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						$1,339,750	
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		$4,650,000	$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	$1,587,857	
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	
			*P309 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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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

EXHIBIT (MF-3)
PAGE 11 OF 23

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	$3,500,000	$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

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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

EXHIBIT
PAGE 12 OF 23

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)	Hillsborough	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

Proj Num: Project tracking number assigned by SWFWMD Finance Department
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)
- RFC (retrofit commercial)
- RFM (retrofit municipal)
- RFR (retrofit residential)

EXHIBIT (MFR)
PAGE 13 OF 23

APPENDIX A:

INDEX OF REUSE PROJECTS

APPENDIX A: INDEX OF REUSE PROJECTS
Page A-1

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

APPENDIX A: INDEX OF REUSE PROJECTS
Page A-2

Project	Description	Customers
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

APPENDIX A: INDEX OF REUSE PROJECTS
Page A-3

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

APPENDIX A: INDEX OF REUSE PROJECTS
Page A-4

Project	Description	Customers
P220	Charlotte County Reuse Feasibility Study	N/A
P232	Polk County Construction of Reclaimed Water Transmission Line Expansion at Southwest Regional Wastewater Treatment Plant	County park, Golden Lakes G and CC, Scott Lake and Valley View Elementary Schools
P236	City of Winter Haven Construction of Reclaimed Water Transmission Line from Winter Haven's Inman Park to Central Park - Phase II	Central Park, MLK Park, City Hall
P242	Pasco County Construction of Reclaimed Water Storage Tank, Pump Station, and Transmission Line to the Price Altman Citrus Groves in Vicinity of San Antonio	Price and Altman Groves (425,000 gpd)
P244	City of Wildwood Design and Construction of the City's Reclaimed Water System	Golf course (695,000 gpd)
P279	Museum of Science and Industry (MOSI) Design and Construction of an On-Site Educational Waste Water Treatment Facility	
P286	City of Plant City Design of the City's Reclaimed Water System - Phase I	N/A
P288	Pasco County Construction of Reclaimed Water Storage Tank, Pump Station, and Transmission Line in Wesley Chapel	Saddlebrook GC, Quail Hollow GC, residential
P300	Pinellas County Construction of Reclaimed Water Transmission Line to Tierra Verde	Residential
P301	City of Largo Construction of Reclaimed Water Transmission Line from Jake Rush Field to Vonn Road - Phase V	Residential
P302	Pinellas County Construction of Reclaimed Water Storage Tanks, Pump Station, and Transmission Lines as part of the South Cross Bayou Reclaimed Water System	Residential
P305	City of Tarpon Springs Construction of Reclaimed Water Transmission Line to Complete the South Loop Portion of the City's Reclaimed Water System	8,000 residential

APPENDIX A: INDEX OF REUSE PROJECTS
Page A-5

Project	Description	Customers
P309	City of St. Petersburg Aquifer Storage and Recovery Feasibility Study	N/A
P232	Polk County Construction of Reclaimed Water Transmission Line Expansion at Southwest Regional Wastewater Treatment Plant	County park, Golden Lakes G and CC, Scott Lake and Valley View Elementary Schools
P236	City of Winter Haven Construction of Reclaimed Water Transmission Line from Winter Haven's Inman Park to Central Park - Phase II	Central Park, MLK Park, City Hall
P242	Pasco County Construction of Reclaimed Water Storage Tank, Pump Station, and Transmission Line to the Price Altman Citrus Groves in Vicinity of San Antonio	Price and Altman Groves (425,000 gpd)
P244	City of Wildwood Design and Construction of the City's Reclaimed Water System	Golf course (695,000 gpd)
P279	Museum of Science and Industry (MOSI) Design and Construction of an On-Site Educational Waste Water Treatment Facility	
P286	City of Plant City Design of the City's Reclaimed Water System - Phase I	N/A
P288	Pasco County Construction of Reclaimed Water Storage Tank, Pump Station, and Transmission Line in Wesley Chapel	Saddlebrook GC, Quail Hollow GC, residential
P300	Pinellas County Construction of Reclaimed Water Transmission Line to Tierra Verde	Residential
P301	City of Largo Construction of Reclaimed Water Transmission Line from Jake Rush Field to Vonn Road - Phase V	Residential
P302	Pinellas County Construction of Reclaimed Water Storage Tanks, Pump Station, and Transmission Lines as part of the South Cross Bayou Reclaimed Water System	Residential
P305	City of Tarpon Springs Construction of Reclaimed Water Transmission Line to Complete the South Loop Portion of the City's Reclaimed Water System	8,000 residential

APPENDIX A: INDEX OF REUSE PROJECTS
Page A-6

Project	Description	Customers
P389	Hillsborough County Design and Construction of five (5) Reclaimed Water Transmission Lines to Expand the Dale Mabry Reclaimed Water System	2,000 commercial/residential
P404	Hillsborough County Design and Construction of Northwest Regional Reclaimed Water Storage Tank and Pump Station	N/A
P439	Pinellas County Construction of Reclaimed Water Transmission Line in South Cross Bayou Service Area	Pinellas County Resource Recovery Facility (1,500,000 gpd) Residential
P443	City of Oldsmar Construction of Reclaimed/Storm Water Transmission Line to Expand Existing Reclaimed Water System to S.R. 586 in Area of the Lake Tarpon Outfall Canal	Commercial, residential
P445	City of Pinellas Park Construction of Reclaimed Water Transmission Lines to Expand Pinellas County Reclaimed Water System to Residential Areas of Pinellas Park - Phase I	Residential
P447	Pinellas County Design and Construction of Reclaimed Water Storage Tank, Pump Station, and Transmission Line to Expand Pinellas County's Reclaimed Water System to the Southeast Area of Largo	Commercial, residential
P456	Pasco County Design and Construction of Reclaimed Water Storage Tank at Hudson WWTP and Transmission Line Segment of the West Pasco Reclaimed Water System	Golf courses, condominiums, schools
P458	City of Zephyrhills Construction of the City's Reclaimed Water System	Municipal golf course (270,000 gpd) Krusen Field Athletic Complex
P467	City of Brooksville Design and Construction of Reclaimed Water Pump Station and Transmission Line to McKeethan Park and a Proposed Municipal Golf Course	McKeethan Park (235,000 gpd) Proposed golf course (145,000 gpd)
P469	Southern States Utilities, Inc. Design and Construction of Reclaimed Water Transmission Line to Timber Pines Golf Course	Timber Pines (690,000 gpd)

APPENDIX A: INDEX OF REUSE PROJECTS
Page A-7

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

APPENDIX A: INDEX OF REUSE PROJECTS
Page A-8

Project	Description	Customers
P587	Pasco County Design and Construction East Pasco and Central Pasco Reclaimed Water Systems Interconnect	
P629	City of North Port Design and Construction of Reclaimed Water Pump Station and Transmission Lines for Residential Irrigation. Includes Refurbishment of Existing 600,000 Gallon Storage Tank	2,200 Residential
P665	City of Ocala Construction of Reclaimed Water System Extension to Ocala Regional Airport (Florida Emergency Training Facility) and Ocala Sportsplex	Ocala Sportsplex (135,000 gpd)
P666	City of Plant City Reuse Feasibility Study	
P680	Southern States Utilities, Inc. Design and Construction of Reclaimed Water Transfer Pumps, Piping, and Wet Weather Storage Ponds	
P683	Pasco County Design and Construction of a Vapor Recovery Facility to Remove Chlorides from Processing Water at the Shady Hills Resource Recovery Facility	
F002 NWSI	City of Plant City Design and Construction of Reclaimed Water Transmission Line to C.F. Industries	C.F. Industries (2,000,000 gpd) Agricultural Wetlands restoration/wellfield recharge
F003 NWSI	Hillsborough County Design and Construction of Reclaimed Water Pump Station and Interconnect between the Falkenburg WWTP and the Valrico WWTP	Cargill Fertilizer (5,000,000 gpd) IMC Agrico (3,000,000) Nitram (400,000 gpd)
F007 NWSI	Manatee County Aquifer Storage and Recovery Feasibility Study	N/A
F009 NWSI	City of Tampa Reuse Implementation Plan for the Tampa Resource Recovery Project	Hillsborough River resupply
F010 NWSI	Pasco County/WCRWSA Wellfield Reuse Recharge Feasibility Study (Pasco Rainbow)	Wetlands restoration/wellfield recharge

APPENDIX A: INDEX OF REUSE PROJECTS
Page A-9

Project	Description	Customers
F011 NWSI	City of St. Petersburg Design and Construction of Reclaimed/Storm Water Transmission Line at Section 21 Wellfield	Wetlands restoration/wellfield recharge
F014 NWSI	Manatee County Design and Construction of Reclaimed/Storm Water Pump Station, Transmission Lines, and Storage Ponds to Serve Agricultural Users Along S.R. 62	L3 Partnership (8,843,000 gpd) Pursley Turf Farm (1,173,000 gpd) H & G Farms (1,163,000 gpd) Pacific Tomato (7,420,000 gpd) Anderson Nurseries (1,062,000 gpd) Florida Power & Light (1,710,000 gpd) Turner Foods Corp (1,730,000 gpd) McClure Farms (2,167,000 gpd) Patrice R. Pochez (1,340,000 gpd) Whisenant Shore, Inc. (1,570,000 gpd) Rutland Ranch Farms (12,700,000 gpd) 73 commercial, agricultural
F017 NWSI	Sarasota County, Central County, Atlantic Utilities Design and Construction of Reclaimed Water Storage Ponds, Pump Stations, and Transmission Lines to Interconnect Sarasota County Utilities, Central County Utilities, and Atlantic Utilities Creating a Regional Reclaimed Water System	Sunrise Golf Club (215,600 gpd) Serona Golf Course (324,000 gpd) Foxfire Golf Club (214,000 gpd) Mission Valley Golf Club (234,000 gpd) Calusa Lakes Golf Club (271,700 gpd) Bayside Sod Company (557,800 gpd) Sarasota Square Mall (85,900 gpd) John M. Albritton (899,000 gpd)
F020 NWSI	Hillsborough County Design and Construction of Reclaimed Water Pump Stations, Storage Tanks, and Transmission Lines to Interconnect the Dale Mabry Waste Water Treatment Plant, River Oaks Waste Water Treatment Plant, Northwest Regional Water Reclamation Facility, and the Van Dyke Waste Water Treatment Plant	Agricultural (540,000 gpd) Commercial (580,000 gpd) Golf Courses (1,400,000 gpd) Parks & Recreation Complexes (710,000 gpd) Residential (3,690,000 gpd) Wetland Augmentation (1,005,000 gpd) Wellfield Rehydration (2,000,000 gpd) Transfer to Other Service Area (1,000,000 gpd)