

**RECOMMENDATIONS FOR PREPARING
WATER SUPPLY AND FACILITY DATA AND ANALYSIS
TO SUPPORT
LOCAL COMPREHENSIVE PLAN AMENDMENTS**

Florida Department of Community Affairs
Division of Community Planning

November 2007

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I. INTRODUCTION

Enacted by the 2005 Florida Legislature, Senate Bill 360 (Chapter 2005-290, Laws of Florida) amended Section 163.3177(6)(a), Florida Statutes (F.S.), by adding the availability of water supplies and public facilities to the list of surveys, studies and data upon which the Future Land Use Element (FLUE) and the Future Land Use Map (FLUM) must be based. The 2004 Legislature had earlier added a requirement that a local government comprehensive plan address the water supply sources necessary to meet and achieve the existing and projected water use demand for the established planning period (Section 163.3167(13), F.S.). These revisions to the growth management requirements were intended to improve the correlation between a local government's projected growth and the water supply sources and facilities needed to support and accommodate that growth.

The purpose of this document is to describe the water supply and facilities data and analysis that local governments should submit with proposed comprehensive plan amendments, particularly those that would change the FLUM to increase density or intensity. The examples provided in this guide describe the basic information and analysis that local governments should consider to support the adoption of a proposed land use change. Complex water supply scenarios should be discussed with the appropriate water management district and the Florida Department of Community Affairs (DCA or Department) to determine the level and detail of data and analysis necessary to support a proposed land use amendment. The examples contained in Section IV are provided for purposes of illustration only, and do not purport to cover all conceivable situations.

The discussion will concentrate on three major areas of concern: (1) the amount of potable water needed to support development of a proposed land use change; (2) whether the local government has an adequate supply of potable water to meet the proposed demand; and (3) whether the local government has adequate "public facilities" (i.e., water treatment, storage and distribution facilities) to support the proposed use.

This guide serves as a technical assistance document for local governments to assist with the preparation of appropriate data and analysis to support comprehensive plan amendments submitted for review to DCA. DCA prepared this guide with assistance from water management district staff involved in the review of comprehensive plan amendments and water resource and intergovernmental program staff of the Florida Department of Environmental Protection (DEP). A list of agency contacts is appended as Attachment A.

For more information about water supply planning requirements and amending a local comprehensive plan to comply with those requirements, please refer to *A Guide for Local Governments in Preparing Water Supply Comprehensive Plan Amendments and Water Supply Facilities Work Plans* available from the Department's website at <http://www.dca.state.fl.us/fdcp/dcp/publications/index.cfm>.

II. GENERAL OVERVIEW

A local government proposing to adopt a plan amendment that includes map or policy changes to the land uses allowed on the FLUM must submit data and analysis to demonstrate that sufficient water supplies and water supply facilities will be available to meet the water demand for development allowed by the proposed land use change. The sections below provide a general description of the data and analysis that should be provided to support proposed land use changes that may impact water supply availability, together with examples of how the local government can demonstrate that adequate water supplies and facilities are (or will be) available to meet projected water demands.

Water supply is one of many factors DCA considers when reviewing comprehensive plan amendments. In general, all requirements in Chapter 163, Part II, F.S., and Rule 9J-5, Florida Administrative Code (F.A.C.) are considered in the review, including impacts to other public facilities such as roads, wastewater, solid waste, and recreation facilities. Urban sprawl, the amount of existing vacant land available to meet growth projections, and consistency with the goals, objectives and policies of the local comprehensive plan are other important considerations.

It should be noted that DCA does not make a concurrency determination when it reviews proposed land use changes. Instead, its review of the information submitted by the local government evaluates whether the local government is adequately planning for its water supply needs through the long-term planning period established in the comprehensive plan, which is 10 years at a minimum. The Department's review acts as a check to ascertain whether the local government should undertake additional water supply planning, update its water withdrawal or consumptive use permit, plan for new or expanded treatment and delivery facilities, or seek new alternative water resources. If a local government monitors its water use and plans for necessary improvements, it can avoid potential limitations on development that could otherwise result from concurrency requirements.

III. DATA AND ANALYSIS NECESSARY TO SUPPORT A PROPOSED LAND USE CHANGE

A. Potable Water Supplies and Treatment Facilities

In its supporting data and analysis, the local government should indicate how it will provide potable water to the site of the proposed land use change, which must be either self-supplied or supplied by one or more utilities. The water supplier and the area it serves, as well as any water treatment facilities that will provide the needed water supply, should also be identified.

Two permits are involved in determining whether adequate water supply will be available to serve a proposed land use: one that regulates the withdrawal of raw water from a groundwater, surface water or alternative water source, and one that regulates the operating capacity of the treatment facility that provides the finished water (i.e., drinking water). Through issuance of a water use or consumptive use permit (CUP), the water management districts (WMDs) regulate the amount of raw water that can be withdrawn from a water source for treatment and distribution as finished water. Raw water is processed in a water treatment facility designed and built to treat a specific quantity of water. The Florida Department of Environmental Protection (DEP) regulates the operating capacity of each water treatment facility (i.e., the amount of finished water that can be treated and distributed

by the facility), which may be owned and operated by a local government utility or another public or private utility. Section D below describes the basic calculations for determining if raw water supplies and water treatment facility capacity are available to serve a proposed land use.

The amount of finished water produced by a treatment facility is not necessarily equal to the amount of raw water withdrawn from the permitted source, because some volume may be lost during treatment. In many cases, the disparity is not enough to warrant consideration in the review of comprehensive plan amendments. A differential of five percent or more is significant, however, and should be taken into account when determining the amount of finished water that will be available. If the treatment loss is five percent or more, three separate calculations should be included in the information submitted with the proposed land use amendment: the raw water supply calculation, the finished water supply calculation, and the water treatment facility operating capacity calculation.

The water supplier should be able to provide the following information necessary for determining available water supplies and treatment facility capacity:

- The amount of water that can be withdrawn from the source identified in the utility's CUP (including any timing and limiting conditions);
- The amount of water being withdrawn to meet current demand (including all distribution system losses);
- The total permitted operating capacity of the water treatment facility; and
- The amount of finished water currently being delivered from the facility.

B. Calculating the Projected Water Demand for a Proposed Land Use Change

The local government should provide the following data and analysis to support a proposed land use change: the adopted level-of-service standard(s) for potable water; the acreage of the area subject to the land use change; the sub-acreage for each proposed land use; the maximum density and intensity established in the comprehensive plan for each proposed land use; and a description of any density and intensity transfers from non-developable areas such as wetlands and floodplains. If a mixed-use land use is proposed, the residential and nonresidential components must be calculated separately and added together to determine the projected water demand.

When evaluating the water use demand for a proposed land use change, the local government should review its reserved and planned-for water supplies and facility capacities to determine whether the existing land use and the proposed change are already covered by those raw water allocations and planned facilities. An increase in development density or intensity on a site that already has water service reserved must only account for the increased water demand created by the change in land use. That is, if water supply and facility capacity have been reserved for a 20-acre parcel approved for five units per acre and the proposed land use change will increase density to 10 units per acre, the submitted data and analysis would need to demonstrate the availability of water supply and public facilities to meet the demand created by the additional 100 residential units rather than the entire 200 units being proposed.

For a proposed annexation, the data and analysis must demonstrate that adequate water supply and facility capacity are (or are planned to be) available to serve the parcel to be annexed, if not previously reserved for the site prior to annexation. The appropriate data and analysis must be submitted even if the density and intensity of development on the site remain unchanged.

If a proposed land use change has the potential to increase the demand for water on the site, the following calculations (and the data on which they are based) should be submitted with the proposed amendment:

To calculate the water supply needs for a residential development, first determine the maximum development potential of the site by multiplying the proposed acreage by the maximum density allowed by the comprehensive plan for the land use category or categories proposed for the site. Then, multiply the maximum development potential by the adopted potable water level-of-service standard, assuming that the established standard is on a per-residential-unit basis. If the adopted level-of-service standard is a per-capita value, the standard must first be multiplied by the number of persons per household (to obtain the demand for each residential unit), then multiplied by the total number of residential units.

A similar process should be used to determine water needs for non-residential land uses, but some conversion may be necessary. For example, if the land area is expressed in acres and the level-of-service standard is expressed on a per-square-foot basis, the acreage must first be converted to square feet (total acres x 43,560 square feet per acre) before multiplying by the maximum established intensity of use – usually a floor area ratio (F.A.R.). After converting the land area to square feet, the land area square footage should first be multiplied by the applicable F.A.R., then by the level-of-service standard to determine the total water needs for the non-residential development. If separate level-of-service standards for each type of non-residential land use have not been adopted, appropriate standard utility rates for the land use types may be used if they would constitute best available data. Note: if the projected demand includes water supply to serve the site at the existing density or intensity, then the amount of water available for the proposed land use change only needs to apply to the increased demand created by the increase in density or intensity.

C. Calculation of Reserved Allocations and Projected Growth Needs

When calculating whether adequate water supply will be available to serve a proposed land use change, the local government needs to account for the amount of water supply reserved for developments that have been approved but not yet built, as well as the projected water needs for the remaining long-term planning time frame established in the comprehensive plan. The amount of reserved water would be the total of (1) existing water demands, including allocation commitments under the local government's concurrency management system, and (2) other service encumbrances or commitments for approved site plans, subdivisions and other developments (including developments of regional impact). The latter commitments are usually provided through enforceable development agreements. The local government should provide the total amount of water subject to encumbrance and the timeframes covered by those commitments.

The local government must also account for the water demands projected to occur within its long-term planning period but not otherwise accounted for in the reserved water calculation. Those projected

If the numbers in Lines 7. and g. above are greater than or equal to the amount of water supply and facility capacity necessary to serve the proposed land use, then the availability of the water supply sources and treatment facilities will be considered sufficient to meet the projected demand associated with the proposed amendment. Each proposed amendment should be similarly evaluated and a cumulative assessment of impacts on water supply and water supply facilities included with the amendments. Although this approach is fairly simple to apply, unless the proposed land use changes involve small land areas or very low densities and intensities, the demand for water will often exceed the amount of water that is available in the CUP, and in some cases may exceed the residual capacity of the water treatment facility.

If either of the above calculations determines that there will not be sufficient water supply or facility capacity to serve the proposed land use, the local government must explain how both raw and finished water will be made available to meet the projected demand associated with the proposed amendment (see Example C. on pages 12-14). The explanation can include planning strategies to increase the supply of water through the development of new sources of water supply (including alternative sources), use of reclaimed water, increased conservation, capital improvements to increase treatment plant capacity (as established in a financially feasible Five-Year Schedule of Capital Improvements) or through an enforceable development agreement. Most of the foregoing alternatives will require amending the comprehensive plan, such as the adoption of site- or project-specific policies and/or projects, to ensure the availability of water supplies and public facilities consistent with the timing of the demands from the proposed land use. If the utility service area is within an area addressed by a WMD's Regional Water Supply Plan, the latest plan update provides an important starting place to identify potential water supply sources and projects that could be utilized to meet those demands.

If the local government cannot demonstrate that sufficient water supplies and water treatment facility capacity will be available to support the proposed land use change, it should not propose or adopt the amendment authorizing the land use change. However, a local government can also provide data and analysis – based upon professionally accepted and applied methodologies – to demonstrate that water supplies and facilities are (or will be) available due to a change in any of the following:

- growth projections,
- the evaluation of the impacts of the proposed land use change over the long-term planning period of the comprehensive plan (e.g., subdivision infill); or
- any phasing of the project necessary to coincide with the availability of the water supply and public facilities, including planned capital improvements.

The level of data and analysis to be provided will depend upon indicators such as the scale of development, the growth rate, whether the local government has adopted its 10-year water supply facilities work plan, and whether the local government is subject to a regional water supply plan.

E. Additional Considerations Regarding Impacts to Potable and Non-Potable Water Supplies and Public Facilities

In addition to evaluating water supply, treatment facilities, and distribution lines for potable water, local governments that were required to adopt a 10-Year Water Supply Facilities Work Plan should also address the availability of treatment facilities and transmission lines for non-potable water (e.g.,

water use demands can be calculated on the basis of growth projections for residential and non-residential development reflected in the local government's comprehensive plan for the five- and 10-year planning periods (or for a longer planning time frame established in the comprehensive plan).

D. Basic Calculations for Determining Available Potable Water Supply and Public Facilities to Support a Proposed Land Use Change

Whether adequate raw water supply is available to serve a proposed land use change can be determined by completing the following calculation (using consistent units such as gallons/day):

- | | | | |
|----|-------------------------------------------------------------|---|-------|
| 1. | Current water use allocation (CUP issued by WMD): | | _____ |
| 2. | Plus any raw water purchased from other suppliers: | + | _____ |
| 3. | Less current demands, including distribution system losses: | - | _____ |
| 4. | Less allocation(s) committed to other water suppliers: | - | _____ |
| 5. | Less reserved allocations: | - | _____ |
| 6. | Less projected demand: | - | ===== |
| 7. | Equals amount available for proposed land use change: | = | _____ |

Reserved allocations (Line 5) is the amount of water supply set aside for approved development, such as committed water service guaranteed through an enforceable development agreement and committed water service for any additional development not included in the five- and 10-year projected demands reflected on Line 6.

Projected demand (Line 6) is the water supply needed to meet anticipated growth based upon projections of residential and nonresidential development for both the short-term planning horizon (the next five years, coinciding with the local government's capital improvements plan) and the long-term planning period established in the local comprehensive plan (minimum 10-year period). Note: if the projected demand (Line 6) includes water supply to serve the site at the existing density or intensity, then the amount of water available for the proposed land use change (Line 7) only needs to apply to the increased demand created by the increase in density or intensity.

As noted earlier, if the water treatment loss is five percent or more, both the raw water supply calculation (shown above) and a finished water supply calculation should be included in the information submitted. The finished water facility operating capacity calculation (shown below) is a separate and distinct computation that should also be submitted.

The availability of finished water facility capacity to serve a proposed land use change can be calculated using the following formula:

- | | | | |
|----|---------------------------------------------------------------------|---|-------|
| a. | Current water treatment facility permitted capacity: | | _____ |
| b. | Plus any finished water purchased from other suppliers | + | _____ |
| c. | Less amount of finished water allocated to existing development: | - | _____ |
| d. | Less quantity of finished water committed to other water suppliers: | - | _____ |
| e. | Less quantity of finished water reserved for approved development: | - | _____ |
| f. | Less quantity of finished water for projected demand: | - | ===== |
| g. | Equals amount of finished water facility capacity available: | = | _____ |

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quick facts on...

Linking Land and Water Planning

10-YEAR WATER SUPPLY FACILITY WORK PLANS

OCTOBER 2005

The South Florida Water Management District is a regional, governmental agency that oversees the water resources in the southern half of the state. It is the oldest and largest of the state's five water management districts.

Our Mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems, and water supply.

New 2005 Legislation

With freshwater demands increasing to meet the needs of a booming population, the 2005 Florida Legislature strengthened the coordination of water supply and land use planning in Senate Bills 360 and 444. For the first time, a direct statutory linkage was created between the state's five water management districts' regional water supply plans and local government comprehensive plans throughout the state.

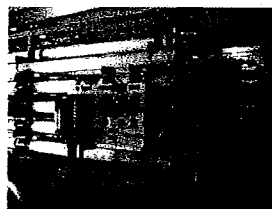
Local governments are encouraged to assist water management districts in the development of regional water supply plans, including proposed inclusions of specific, locally preferred alternative water supply projects into the plans. Subsequent selection by a local government of an alternative water supply project listed in the resulting regional water supply plan is eligible for state and district funding, and provides a new degree of planning consistency between the development of water management district plans and local government comprehensive plans.

Each local government is to now include, in its comprehensive plan's potable water element, a minimum 10-year work plan for building all public, private and regional water supply facilities necessary to serve existing and new development within its jurisdiction. Building upon the water management district's regional water supply plan efforts, these local government 10-year water supply facility work plans must project future water supply demands, identify the water supply sources available to meet those demands and identify all water supply projects that need to be constructed. They will also include the schedules for permitting, constructing and operating all needed public, private and

regional water supply facilities within the local government's jurisdiction.

Other associated comprehensive plan amendments include:

- (1) **POTABLE WATER ELEMENT:** The identification of the alternative water supply project or projects selected from the regional water supply plan, any traditional water supply projects to be undertaken and the conservation and reuse programs that local governments will implement to meet projected demands.
- (2) **CAPITAL IMPROVEMENTS ELEMENT:** Any necessary amendments to the local government's comprehensive plan five year schedule of capital improvements to build local government water supply facilities.



Reverse Osmosis (RO) membranes can treat water from a variety of sources, including the nanofiltration of fresh groundwater, brackish water and even seawater.

What are alternative water supplies?

These are non-traditional sources of public water supply. In the new law these include such sources as

brackish surface and groundwater; reclaimed water; surface water captured predominately during wet-weather flows in reservoirs or aquifer storage and recovery systems; saltwater and other sources made available through the addition of new storage capacity for surface or groundwater.

Florida's Water
It's Worth Saving

sfwmd.gov

When are the work plans due?

All local governments within the South Florida Water Management District (SFWMD) must prepare and adopt a minimum 10-year water supply facility work plan into their comprehensive plans within 18 months following the approval of an update to an existing regional water supply plan by the SFWMD governing board (except for local governments located within the Wekiva River Study Area, which have a new December 1, 2006 deadline). The SFWMD regional water supply plan updates are all currently scheduled to be approved during fiscal year 2006. This would mean that local government 10-year water supply facility work plans, and related amendments, would need to be incorporated into comprehensive plans during 2007 or early 2008. The amendments are exempt from the normal twice-a-year restriction on comprehensive plan amendments.



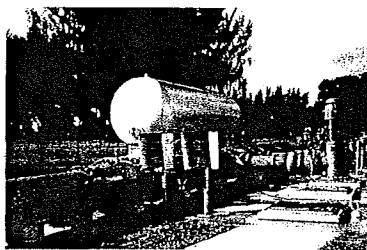
Wastewater reclamation facilities can be conveniently added to existing treatment sites to provide an additional water resource to growing cities.

Where can I get help with this effort?

The Department of Community Affairs (DCA) is planning a set of growth management workshops during the fall of 2005 to discuss the new growth management legislation in each regional planning council area.

During 2006, after the approval of each SFWMD regional water supply plan, DCA and SFWMD are planning to hold regional water supply plan workshops in each of the four regions covered

by the plans. The purpose of these workshops will be to explain the new water supply requirements, identify what information will be needed and is available in the regional water supply plans to address these requirements, and discuss what comprehensive plan amendments will be required. Local government planners, utilities and water supply representatives will be invited to these workshops and will be given an opportunity to discuss the potential problems local governments and their water suppliers foresee in meeting these requirements.



Distinctive "purple pipes" identify reclaimed water lines for irrigation use and other purposes not requiring drinking water.

SFWMD is working with DCA, Florida's other four water management districts and the Department of Environmental Protection in preparing a technical assistance document that will include guidelines for preparing comprehensive plan amendments in response to these new 10-year water supply facility work plan requirements.

These informal guidelines will assist local governments in the preparation of their 10-year water supply facility work plans. These guidelines address how to prepare the work plan, what information to include and when to adopt the work plan.

Once prepared, the new guidelines will be found on the DCA Water Supply Planning web page:

<http://www.dca.state.fl.us/fdcp/dcp/WaterSupplyPlanning/index.cfm>

and the South Florida Water Management District's Evaluation & Appraisal Report (EAR) & 10-year work plan technical assistance web page:

<http://www.sfwmd.gov/org/wsd/ear/index.html>

These web sites also provide an abundance of general and technical information regarding the new legislation, new funding available from water management districts for alternative water supply development, regional water supply plans and the 10-year water supply facility work plans. Additionally, both agencies have designated specific agency staff to assist local governments with these efforts:

Department of Community Affairs

Bob Dennis (850) 922-1765
bob.dennis@dca.state.fl.us

South Florida Water Management District

Henry Bittaker (561) 682-6792
hbittak@sfwmd.gov

Contact lists for assistance from the other four water management districts can be found on the DCA Water Supply Planning web page:

<http://www.dca.state.fl.us/fdcp/dcp/WaterSupplyPlanning/index.cfm>



CT100705

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Big Cypress Basin/Naples
239-597-1505
Broward
954-713-3200
Florida Keys (Plantation Key)
305-853-3219 or 800-464-5067
Lower West Coast
239-338-2929 or 800-248-1201

Martin/St. Lucie
772-223-2600 or 800-250-4100
Miami-Dade
305-377-7274 or 800-250-4300
Okeechobee
863-462-5260 or 800-250-4200
Orlando
407-858-6100 or 800-250-4250
Palm Beach County
800-432-2045

**A GUIDE FOR LOCAL GOVERNMENTS IN PREPARING
WATER SUPPLY COMPREHENSIVE PLAN AMENDMENTS
AND WATER SUPPLY FACILITIES WORK PLANS**

Florida Department of Community Affairs
Division of Community Planning

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A. INTRODUCTION

In four of the five water management districts, traditional water supply sources will not be sufficient to meet demands of the growing population and the needs of the environment, agriculture and industry. Only the Suwannee River Water Management District has demonstrated that traditional water supplies will be sufficient for the next twenty years. In response to this water supply issue, the Florida Legislature enacted bills in 2002, 2004 and 2005 to more effectively address the state's water supply situation by improving the coordination between local land use planning and water supply planning.

The focus of the 2002 legislation was to add requirements to Chapter 163, Florida Statutes (F.S.), for local governments to prepare 10-year water supply facilities work plans and to incorporate certain portions of the work plans into their comprehensive plans. This legislative change emphasized the need for local work plans to consider the applicable regional water supply plans prepared by the water management districts. In 2004, the Legislature further amended Chapter 163 to give local governments until December 1, 2006, to prepare the 10-year water supply facilities work plans.

In 2005, the Florida Legislature enacted Senate Bills 360 and 444. The legislation significantly changed Chapters 163 and 373, F.S., to improve the coordination of water supply and land use planning. The legislation strengthened the statutory linkage between the regional water supply plans prepared by the water management districts and comprehensive plans prepared by the local governments.

This Guide has been prepared to help local governments understand their responsibilities under current law with regard to water supply planning. The Guide addresses the scope and content of the comprehensive plan amendments required to comply with the current provisions of Chapter 163, F.S., the data and analysis that local governments must provide to support the amendments, the sources of information available to local governments, and the deadlines for adopting the required amendments.

In addition to this Guide, a second technical assistance document (*Recommendations for Preparing Water Supply and Facility Data and Analysis to Support Local Comprehensive Plan Amendments*) has been prepared to explain the water supply and facilities data and analysis that should be included with comprehensive plan amendments submitted for review to the Department of Community Affairs (Department). The *Recommendations* will soon be available from the Division of Community Planning and will be available on the Department's website (www.dca.state.fl.us).

B. STATUTORY REQUIREMENTS

With regard to water supply, current statutory provisions direct each local government to:

1. Coordinate appropriate aspects of its comprehensive plan with the appropriate water management district's regional water supply plan. [s. 163.3177(4)(a), F.S.]

2. Ensure that its future land use plan is based upon the availability of adequate water supplies and public facilities and services. [s. 163.3177(6)(a), F.S., effective July 1, 2005.] Data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands must accompany all proposed Future Land Use Map amendments submitted to the Department for review. The submitted package must also include an amendment to the Capital Improvements Element, if necessary, to demonstrate that adequate public facilities will be available to serve the proposed Future Land Use Map modification.
3. Ensure that adequate water supplies and facilities are available to serve new development no later than the date on which the local government anticipates issuing a certificate of occupancy and consult with the applicable water supplier prior to approving a building permit, to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy. [s. 163.3180(2)(a), F.S., effective July 1, 2005.] Local governments should update their comprehensive plans and land development regulations as soon as possible to address this water supply concurrency requirement.
4. Revise the General Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element (hereafter the "Infrastructure Element"), within 18 months after the water management district approves an updated regional water supply plan, to:
 - a. Identify and incorporate the alternative water supply project(s) selected by the local government from projects identified in the updated regional water supply plan, or the alternative project proposed by the local government under s. 373.0361(7), F.S. [s. 163.3177(6)(c), F.S.];
 - b. Identify the traditional and alternative water supply projects and the conservation and reuse programs necessary to meet current and future water use demands within the local government's jurisdiction [s. 163.3177(6)(c), F.S.]; and
 - c. Include a water supply facilities work plan for at least a 10-year planning period for construction of public, private, and regional water supply facilities, which are identified in the element as necessary to serve existing and new development. [s. 163.3177(6)(c), F.S.] Amendments to incorporate the water supply facilities work plan into the comprehensive plan are exempt from the twice-a-year amendment limitation. [s. 163.3177(6)(c), F.S.]
5. To the extent necessary to maintain internal consistency after making changes described in Paragraphs 1 through 4 above, revise the Conservation Element to assess projected water needs and sources for at least a 10-year planning period, considering the appropriate regional water supply plan(s) or, in the absence of an approved regional water supply plan, the applicable District Water Management Plan. [s. 163.3177(6)(d), F.S.]

If the established planning period of a comprehensive plan is greater than ten years, the plan must address the water supply sources necessary to meet and achieve the existing and projected water use demand *for the established planning period*, considering the appropriate regional water supply plan. [s. 163.3167(13), F.S.]

6. To the extent necessary to maintain internal consistency after making changes described in Paragraphs 1 through 4 above, revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with applicable regional water supply plans and regional water supply authorities' plans. [s. 163.3177(6)(h)1., F.S.]
7. Address in its Evaluation and Appraisal Report (EAR) the extent to which the local government has implemented the 10-year water supply facilities work plan, including the development of alternative water supplies, and determine whether the identified alternative water supply projects, traditional water supply projects, and conservation and reuse programs are meeting local water use demands. [s. 163.3191(2)(l), F.S.]

C. OVERVIEW OF WATER SUPPLY PLANNING REQUIREMENTS

1. Effective July 1, 2005, **all local governments** must meet water supply concurrency requirements and ensure that their future land use plans (the Future Land Use Element and Future Land Use Map) are based upon the availability of adequate water supplies and associated public facilities. [See Paragraphs B.2.-3. above.] All local governments are advised to update their comprehensive plans and land development regulations as soon as possible to address the water supply concurrency requirement. [See Section D below.] Data and analysis to demonstrate that adequate water supplies and associated public facilities are (or will be) available to meet projected growth demands must accompany all proposed Future Land Use Map amendments submitted to the Department for review. [See *Recommendations for Preparing Water Supply and Facility Data and Analysis to Support Local Comprehensive Plan Amendments.*]
2. **Local governments subject to a regional water supply plan** must revise their comprehensive plans within 18 months after the water management district approves a regional water supply plan or its update, to ensure that:
 - a. The Infrastructure Element identifies alternative and traditional water supply projects, and conservation and reuse programs necessary to meet the project water demands identified within the local government's jurisdiction; incorporates the alternative water supply project or projects the local government has selected from the regional water supply plan or proposed as an alternative under s. 373.0361(7)(b), F.S.; and includes a minimum 10-year work plan for building public, private, and regional water supply facilities necessary to serve existing and new development.

- b. The financially feasible 5-Year Schedule of Capital Improvements in the Capital Improvements Element includes projects listed in the 10-year water supply facilities work plan that are to be implemented in the first five years.
- c. The Conservation Element reflects an assessment of current and projected water needs and sources for a minimum 10-year period, considering the appropriate regional water supply plan. If the established planning period of the comprehensive plan is greater than ten years, the assessment must address the water supply needs and sources *for the longer planning period*.
- d. The Intergovernmental Coordination Element addresses coordination of the comprehensive plan with the applicable regional water supply plan(s) and regional water supply authorities.

For local governments that lie within more than one water management district, the due date for adopting the amendments is 18 months from the approval date of the last regional water supply plan (or update) applicable to the local government.

See Attachment A for a map depicting areas that are subject to regional water supply plans and the anticipated approval dates for the applicable regional water supply plans (or updates). Attachment B identifies the dates by which amendments to local comprehensive plans must be adopted to incorporate the 10-year water supply facilities work plans. See Attachment C for an overview of the regional water supply plans.

See Section F for additional information about revising the Infrastructure, Conservation, Intergovernmental Coordination, and Capital Improvements Elements.

3. **Local governments in the Wekiva Study Area** must proceed on an accelerated schedule to meet the statutory deadline for updating certain portions of their comprehensive plans. Chapter 2005-106, Laws of Florida (Senate Bill 908), requires local governments in the Wekiva Study Area to amend their comprehensive plans **by December 1, 2006**, to include a minimum 10-year water supply facilities work plan for building potable water facilities that are necessary to serve existing and new development and for which they are responsible.

To create meaningful 10-year work plans, local governments in the Wekiva Study Area need to know what alternative water supply projects will be included in the updated regional water supply plans and include the selected alternative water supply projects in their 10-year work plans. The St. Johns River Water Management District approved its regional water supply plan on February 7, 2006. The South Florida Water Management District anticipates approving its updated plan in the fall of 2006.

See Section F for additional information about revising the Infrastructure, Conservation, Intergovernmental Coordination, and Capital Improvements Elements.

4. **Local governments that are not subject to a regional water supply plan** (*see* Attachment A) must address the following in their next Evaluation and Appraisal Reports (EARs) and adopt the necessary EAR-based amendments to ensure that:
 - a. The Conservation Element identifies their current and projected water needs and sources for a minimum 10-year period, considering the appropriate district water management plan. If the established planning period of a comprehensive plan is greater than ten years, the assessment must address the water supply needs and sources *for the longer planning period*.
 - b. The Intergovernmental Coordination Element addresses coordination with regional water supply authorities.

See Section G for additional information about addressing water supply issues in Evaluation and Appraisal Reports.

D. ADDITIONAL AMENDMENTS TO THE COMPREHENSIVE PLAN

All local governments must revise their comprehensive plans to address water supply concurrency and ensure their 5-year schedules of capital improvements are financially feasible. Senate Bill 360 (Ch. 2005-290, Laws of Florida, effective July 1, 2005) amended s. 163.3180(2)(a), F.S., to add the water supply concurrency requirement. The legislation also revised s. 163.3177(6)(a), F.S., to require that the future land use plan be based on the availability of water supplies and public facilities, and added a definition of “financial feasibility” (s. 163.3164(32), F.S.). This section provides guidance for addressing requirements associated with concurrency and the financial feasibility of the 5-year schedule of capital improvements. See Paragraphs B.2. and C.1. for requirements associated with changes to the Future Land Use Element.

1. **Water Supply Concurrency:** The local government’s concurrency management system (procedure) will also require revision to formalize the consultation between the local government and the water supplier. The goals, objectives, and policies that establish the local government’s concurrency management system and the land development regulations that implement the concurrency management system must both be revised to address the water supply concurrency requirements. The concurrency management system could be revised as follows:

The local permitting entity could be required to seek and obtain from the water supplier a written statement regarding the availability of water to serve the proposed project. The water supplier should provide information about current demand, including capacity for approved projects not yet built; the amount of water necessary to meet the growth projections for the year; the amount of water withdrawals allowed and remaining through the consumptive use permit issued by

the water management district; the capacity of available facilities; and any capital improvement projects scheduled to come online during the development time frame of the project.

The goals, objectives, and policies would provide the guidelines for the water supply concurrency management system as well as provide the basis for the more detailed land development regulations.

2. **Annual Updates to the 5-Year Schedule of Capital Improvements:** All local governments must update their 5-year schedules of capital improvements annually to maintain financial feasibility. The annual updates should include water supply development projects; new potable water facilities and upgrades; and publicly funded capital improvement projects needed to achieve and maintain adopted level-of-service standards. Any privately funded projects must also be included in the schedule if the local government intends to rely on the projects to achieve and maintain adopted level-of-service standards when approving new development. An amendment to the comprehensive plan is required to update the schedule on an annual basis or to eliminate, defer, or delay the construction of any facility listed in the 5-year schedule.

E. PREPARING THE WORK PLAN AMENDMENT

1. **The Work Plan Amendment:** Local governments *subject to a regional water supply plan* must complete the comprehensive plan updates and related amendments described in Section B.4. of these guidelines within 18 months after a water management district approves a regional water supply plan or its update. That set of amendments will hereafter be referred to as the “Work Plan Amendment,” due to the importance of the statutory requirement that the Infrastructure Element include a minimum 10-year work plan for building public, private, and regional water supply facilities to serve existing and new development within the local government’s jurisdiction. All local governments should refer to Sections D and G of this Guide for other required water supply planning-related amendments.
2. **Objective of the Work Plan Amendment:** The amendment should ensure the construction of public, private, and regional water supply facilities, including the development of alternative water supplies, and conservation and reuse programs that are necessary to serve existing and new development for at least a 10-year planning period. In areas where local governments rely on regional water supply authorities or other public or private water suppliers to provide all or a portion of the community’s water supply, the amendment must address both the provider’s plans and the local government’s own water infrastructure needs (*i.e.*, address each utility that provides water and infrastructure within the local government’s jurisdiction). The amendment is intended to strengthen the coordination between local government land use planning, water supply infrastructure planning, and water resource development.

3. **Adoption Deadlines:** Each local government must determine the date by which its Work Plan Amendment must be adopted (*see* Section C and Attachment B of this Guide). The local government must then determine the date by which it must transmit the *proposed* amendment in order to adopt the final amendment by the scheduled due date. The proposed amendment should be completed prior to the hearing dates scheduled by the local planning agency and local government. The Work Plan Amendment is exempt from the twice-per-year amendment limitation. [s.163.3177(6)(c), F.S.]
4. **Coordination With Water Management Districts:** When preparing the Work Plan Amendment, the local government should coordinate with the water management district regarding population and water supply demand projections, as well as the use of traditional and alternative water supplies and water conservation and reuse strategies to meet projected demand.

The local government should identify one person at the water management district as a point-of-contact for information and assistance. A single point-of-contact will greatly facilitate coordination between the local government and the district. Close coordination between the parties can help avoid questions or concerns that could otherwise surface when the district reviews the proposed Work Plan Amendment.

Districts' regional water supply plans are prepared for 20-year planning horizons and include water use demand projections for 5-year increments, such as 2010, 2015, 2020, and 2025. In developing the Work Plan Amendment, the local government should consult with the appropriate water management district(s) to determine the feasibility of using compatible planning increments to facilitate the sharing of consistent data.

5. **Coordination with Water Suppliers:** In addition to coordinating with the water management district, each local government should also work closely with local water utilities that supply water to the community. This could be a city or county water department, the water utility of another local government, a private water supplier, a regional water supply authority or some combination thereof. After identifying the water supplier(s) that serve the community, the local government should request the designation of a single point-of-contact to assist with preparation of the Work Plan Amendment.

Section 163.3177(6)(c), F.S., encourages local governments, public and private utilities, regional water supply authorities, special districts, and water management districts to cooperatively plan for multijurisdictional water supply facilities, including the development of alternative water sources to supplement traditional sources of ground and surface water. Planning for the use of multijurisdictional water supply facilities on a countywide or multi-county basis is recommended, especially for the development of alternative water supply sources.

Many small developments, such as trailer parks and condominiums, are self-supplied or serviced by small public supply systems. These small utilities should be inventoried and reported in the data and analysis submitted with the proposed Work Plan Amendment, but need not be considered for planning purposes due to their limited development potential.

6. **Define Extent of Responsibility:** Each local government should determine the extent to which it plans to be involved in the planning, financing, construction and operation of the water supply facilities that will serve the community, whether the facilities will be provided by a local government utility, a regional water supply authority, or another public or private water supplier. Local government involvement can range from none to total control of the withdrawal, treatment and distribution of potable water and reclaimed water. The local government must address all of the water supply, treatment, and distribution facilities that are planned by all entities providing service within its jurisdiction, regardless of ownership or responsibility for the individual facilities. It must also address any infrastructure or water supply, including bulk sales, that it will provide outside its own jurisdiction.
7. **Information to Obtain from Water Suppliers:** The following information should be obtained from all water suppliers serving the local government:
 - a. The current consumptive use permit (CUP) number, authorized average and maximum daily withdrawals under the CUP, and the CUP expiration date.
 - b. Projected demand by type of water use for at least a 10-year planning period; the local government's projected demand and the water suppliers' projected demand should be in agreement.
 - c. A map that shows existing and future areas to be served by each water supplier.
 - d. Identification of existing and planned future water sources. The source(s) of water identified by each supplier should correlate with those described in the regional water supply plan, including the alternative water supply projects to be implemented. Each local government should coordinate with the water management district regarding the ability of the water supplier to meet the projected need, particularly with respect to water sources and the use of appropriate water conservation and reuse strategies.
 - e. Identification of water supply facilities needed to serve the agreed-upon projected need.
 - f. If another local government is a water supplier, verify that its 10-year work plan identifies the sources and facilities needed to meet the recipient governments projected needs for the area served.

8. **Review Current Comprehensive Plan:** Local governments should review their comprehensive plans to identify the goals, objectives and policies that address any aspect of the development of water supply sources and facilities, as well as conservation and reuse programs. Typically, the elements of the comprehensive plan that would be affected are the Infrastructure (particularly the Potable Water and Sanitary Sewer Sub-Elements), Conservation, Capital Improvements and Intergovernmental Coordination, but others could also be affected. Those are the principal elements that must be updated in the Work Plan Amendment.

F. INFORMATION TO INCLUDE IN THE WORK PLAN AMENDMENT

Like all plan amendments, the Work Plan Amendment must be based upon information relevant to each local government's unique circumstances. At a minimum, the amendment must include the following:

1. **Infrastructure Element – Data and Analysis:**
 - a. Provide an inventory of all potable and reuse water service providers within the jurisdiction of the local government, including small public supply systems. Describe the extent to which the local government is (or plans to be) involved in the planning, financing, construction or operation of the facilities that will supply water within its jurisdiction, even if the facilities will be provided by regional water supply authorities or other public or private water suppliers. The local government's involvement can range from none to total responsibility for the withdrawal, treatment and distribution of potable water and reuse water.
 - b. Provide permitted service area maps of the potable and reuse water service providers, and indicate whether the areas depicted are different from the actual area currently served. Provide composite maps of potable and reuse service providers, if possible. Small public supply systems can be shown as points, if necessary. Indicate where private wells and septic systems are used and will continue to be used.
 - c. The term "water supply facilities" includes all infrastructure necessary to withdraw water from its source, and to transport, treat and distribute the water, together with any associated storage facilities. For each potable water service area other than those of the small public supply systems, identify the existing facilities (including the location of wells and intake points from surface water sources), treatment and storage facilities, and at least the major distribution mains. For each reuse service area, identify treatment and storage facilities, and at least the major distribution mains.
 - d. Provide information regarding the design capacity of the production and treatment facilities, the current demand on the facilities, the geographic area served, and relevant consumptive use permit conditions and duration. If the local

government is not responsible for all of the listed water supply facilities, identify the responsible entities by service area and describe existing and proposed agreements for any aspect of potable or reuse water service delivery, including agreements with other local governments, public and private utilities, regional water supply authorities, special districts, and water management districts.

- e. Identify conservation and reuse practices and regulations. Identify those that apply jurisdiction-wide and those that apply only to particular service areas.
- f. Determine future needs for each service area, other than those of the small public supply systems. Provide the following for the base planning year and for the next 5-year and 10-year increments, plus any additional increments necessary to cover the entire planning period established in the comprehensive plan:
 - (1) Population and water demand projection figures comparable to those used in the development of the applicable regional water supply plan, and to the level of service standards and population projections used by the local government for that portion of its jurisdiction located in the service area.
 - (2) A facility capacity analysis noting capacity surpluses and deficiencies for each facility and including relevant information for each facility, such as capacity in average daily flow and maximum daily flow, and relationship to permitted flows.

The following tables illustrate a convenient format for comparing projected demand, facility capacity and permit conditions. Table 1 reveals the need to increase permitted withdrawals to accommodate anticipated growth and system expansion. Table 2 shows one way to portray a situation where the permitted allocation is unlikely to be expanded due to source limitations and a deficit is avoided by planning to purchase raw water from an adjacent supplier.

TABLE 1

	2005	2008	2010	2015
Population Served	1,722	3,073	3,598	3,955
Avg. Daily Demand (GPD)	268,632	479,388	546,896	593,250
Demand per Capita (GPD)	156	156	152	150
Available Facility Capacity (GPD)	350,000	700,000	700,000	700,000
Facility Capacity Surplus (Deficit) ¹	81,368	220,612	153,104	106,750
Permitted Amount (GPD Annual Avg.)	300,000	300,000	300,000	300,000
Permitted Surplus (Deficit) ²	31,368	(179,388)	(246,896)	(293,250)
GPD = Gallons Per Day				
¹ Calculated by subtracting Average Daily Demand from Available Facility Capacity				
² Calculated by subtracting Average Daily Demand from Permitted Amount				

TABLE 2

	2005	2008	2010	2015
Population Served	21,935	28,733	29,867	32,828
Avg. Daily Demand (MGD)	3.40	4.31	4.48	4.76
Demand per Capita (GPD)	155	150	150	145
Available Facility Capacity (MGD)	8.712	9.360	9.360	10.152
Facility Capacity Surplus (Deficit) ³	5.312	5.05	4.88	5.392
Permitted Amount (MGD Annual Avg.)	3.46 ¹	5.88 ²	5.88 ²	5.88 ²
Permitted Surplus (Deficit) ⁴	0.06	1.57	1.40	1.12
MGD=Million Gallons Per Day; GPD=Gallons Per Day ¹ CUP for 3.46 MGD annual average expires September 2006 ² Includes CUP for 3.46 MGD and 2.42 MGD wholesale purchase from XYZ Utility ³ Calculated by subtracting Average Daily Demand from Available Facility Capacity ⁴ Calculated by subtracting Average Daily Demand from Permitted Amount				

- (3) Identify potable and reuse water supply sources and facilities needed to serve projected growth and development, including relevant information for each facility, such as capacity in average daily flow and maximum daily flow. Include any reuse, conservation, traditional, or alternative water supply projects, and conservation and reuse measures, selected from the regional water supply plan. Provide general planning-level detail for projects proposed as alternatives to the projects identified in the regional water supply plan. Identify the amount of water supply expected to be produced by each project.
- (4) Identify current and prospective conservation and reuse practices and regulations that will be utilized to meet projected demand. Identify those that apply jurisdiction-wide and those that apply only to particular service areas. Provide an estimate of the reduction in potable water use attributable to conservation and reuse.
- (5) Identify current or prospective participation in any county-wide or other multijurisdictional planning initiatives to meet future water supply needs, including the development of alternative water supplies.
- (6) Provide facilities maps showing the location of water sources (wells and surface waters), storage facilities (in-ground and above-ground), and the extent of the distribution system. The maps should be at a scale and level of detail appropriate to the local government's situation. For example, it would be impractical to depict the smallest lines serving individual customers in a county. For a small city, however, that information may be readily available and easily displayed.

In general, maps depicting the location of the largest utility lines (*e.g.*, 24"), the intermediate-sized lines (*e.g.*, 20", 16", 12" and 10") and the smaller lines (*e.g.*, 8" and 6") should be included. ArcView shape files can be created for each of the seven different line sizes. When combined, the seven files provide a good indication of the current service area (that portion of the community currently served by the facilities). Proposed facilities can be added to the appropriate extent and the results combined to depict the location of proposed facilities for various future time periods.

2. **Infrastructure Element – 10-year Work Plan:**

- a. A Work Plan covering at least a 10-year planning period must be adopted to ensure the construction of public, private, and regional water supply facilities, including the development of alternative water supplies, which are identified in the element as necessary to serve existing and new development.
- b. In areas where a local government relies on regional water supply authorities or other public or private water suppliers to provide all or a portion of the community's water supply, the Work Plan must address the supplier's plans and the local government's own water infrastructure needs. The Work Plan is intended to strengthen coordination between local government land use planning, water supply infrastructure planning, and water resource development.
- c. Based on the supporting data and analysis in the Infrastructure Element, the adopted Work Plan must:
 - (1) Indicate the extent to which conservation and reuse will reduce the projected potable water demand, and provide implementation dates for the components of the conservation and reuse programs that will result in that reduction. For each capital improvement, identify the funding source.
 - (2) Identify the major tasks required to build public, private, and regional water supply facilities, including alternative water supply projects, identified as necessary to serve existing and new development. Tasks may include agreements with other water supply entities (if needed), feasibility studies, water resource development projects (if needed), facilities and financial plans, and facilities design, permitting, and construction. Place the tasks in priority order by fiscal year and for each capital improvement, identify the funding source.
 - (3) Identify the source of water and provide the amount of finished water that will be produced by each traditional and alternative water supply development project. Indicate when that water will be used to meet demands, and the amount of raw water needed to produce the finished water.
 - (4) Indicate the amount of water that will be produced by reuse projects, and when that water will be used to meet demands.

3. **Infrastructure Element – Goals, Objectives and Policies:** In addition to the 10-year Work Plan, adopt new or updated goals, objectives and policies that address:
 - a. Current and proposed water conservation and reuse projects, practices and regulations, including the implementation date for those proposed.
 - b. Current and prospective cooperative efforts regarding any aspect of potable and reuse water supply service involving other local governments, public and private utilities, regional water supply authorities, special districts, or water management districts.
 - c. Current or prospective participation in any county-wide or other multijurisdictional planning initiatives relative to meeting future water needs, including the development of alternative water supplies.
4. **Capital Improvements Element – Data and Analysis:** Make revisions that are necessary to ensure consistency with changes made in the Infrastructure Element relative to projects and project funding. Address the facility needs identified for the initial 5-year planning period, as well as those identified for the remaining portion of the established planning period.
5. **Capital Improvements Element – Goals, Objectives and Policies:** Adopt new or updated goals, objectives and policies to ensure consistency with changes made in the Infrastructure Element regarding level-of-service standards, selection of water supply projects, prioritization of facility improvements and facility funding. For capital improvements that will be provided by a public supplier other than the recipient local government, or by a private utility, or that are funded through a development agreement, address the commitments and conditions of executed interlocal or development agreements with the service provider, the developer, or the recipient local government, as appropriate. Interlocal and development agreements should address the cost of the capital improvement, funding source, entity responsible for funding and constructing the improvement, and construction time line.
6. **Capital Improvements Element – Schedule of Capital Improvements:** Ensure consistency with the 10-Year Work Plan by adopting revisions to the financially feasible 5-year schedule of capital improvements to include projects identified in the Work Plan as necessary to achieve or maintain level-of-service standards during the next five years.

Privately funded projects must also be included in the schedule if the local government intends to rely on those projects to achieve and maintain adopted level-of-service standards when approving new development. For capital improvements funded by private or other public entities, financial feasibility must be demonstrated by an enforceable development, interlocal or other agreement. The agreement(s) must be reflected in the schedule if the capital improvement is necessary to serve development that will occur within the 5-year schedule.

If the local government intends to use planned revenue sources that require referenda or other actions to secure the revenue source, the plan must (in the event the referenda are not passed or required actions do not occur) identify other existing revenue sources that will be used to fund the capital projects or otherwise amend the schedule to ensure financial feasibility.

For the remaining portion of the established planning period, ensure the availability of water supply facilities needed to support development concurrent with the impacts of such development. Local governments do not need to demonstrate that funding is currently available or will be available through planned revenue sources to address water supply projects needed beyond the Five-Year Schedule of Capital Improvements. Instead, strategies should be included in the comprehensive plan policies that identify “the way in which programs and activities are conducted to achieve an identified goal” [Rule 9J-5.003(90), F.A.C.]. The policies should establish the programs that the local government intends to pursue to address these future needs. The programs may include a plan for new funding sources.

For more information about capital improvements planning, interested readers are referred to the Department’s technical assistance report, *A Guide to the Annual Update of the Capital Improvements Element*. This technical assistance report is available from the Division of Community Planning and posted on the Department’s website (www.dca.state.fl.us).

7. **Conservation Element – Data and Analysis:**

- a. Include an assessment of the projected water needs and sources for at least a 10-year planning period, considering the appropriate regional water supply plan. If the established planning period of a comprehensive plan is greater than ten years, the assessment must address the water supply needs and sources *for the longer planning period*.
- b. Make revisions necessary to ensure consistency with changes made in the Infrastructure Element with regard to the assessment of current and projected water needs and sources and the identification of water conservation and reuse practices and regulations.

8. **Conservation Element – Goals, Objectives and Policies:** Adopt new or update existing goals, objectives and policies to ensure consistency with changes made in the Infrastructure Element with regard to the selection of water sources and the implementation of water conservation and reuse practices and regulations. Each local government must address, in its comprehensive plan, the water supply sources necessary to meet and achieve the existing and projected water use demand for the established planning period.

9. **Intergovernmental Coordination Element – Data and Analysis:**

- a. Update or add a description of how your local government will coordinate its comprehensive plan with the plans of regional water supply authorities and water management districts.
- b. Make changes to ensure consistency with changes made in the Infrastructure Element regarding:
 - (1) Cooperative efforts relative to any aspect of potable and non-potable (including reuse) water service delivery with other local governments, public and private utilities, regional water supply authorities, special districts, and water management districts.
 - (2) Current or prospective participation in any county-wide or other multi-jurisdictional planning initiatives relative to meeting future water needs, including the development of alternative water supplies.

10. **Intergovernmental Coordination Element – Goals, Objectives and Policies:**

- a. Adopt new or update existing goals, objectives and policies that provide for the coordination of the local comprehensive plan with the plans of regional water supply authorities and the applicable regional water supply plans.
- b. Make changes to ensure consistency with changes made in the Infrastructure Element regarding:
 - (1) Cooperative efforts relative to any aspect of potable and non-potable (including reuse) water service delivery with other local governments, public and private utilities, regional water supply authorities, special districts, and water management districts.
 - (2) Current or prospective participation in any county-wide or other multi-jurisdictional planning initiatives relative to meeting future water needs, including the development of alternative water supplies.

11. **Other Elements:** Update data and analysis and adopt new or updated goals, objectives and policies based on the review of the current comprehensive plan described in Section E.8. of this Guide.

G. EVALUATION AND APPRAISAL REPORTS

All local governments must address water supply planning in the Evaluation and Appraisal Report (EAR) process and subsequently adopt amendments based on the EAR findings. In addition to EAR requirements applicable to all local governments, those that are subject to a regional water supply plan must also address the extent to

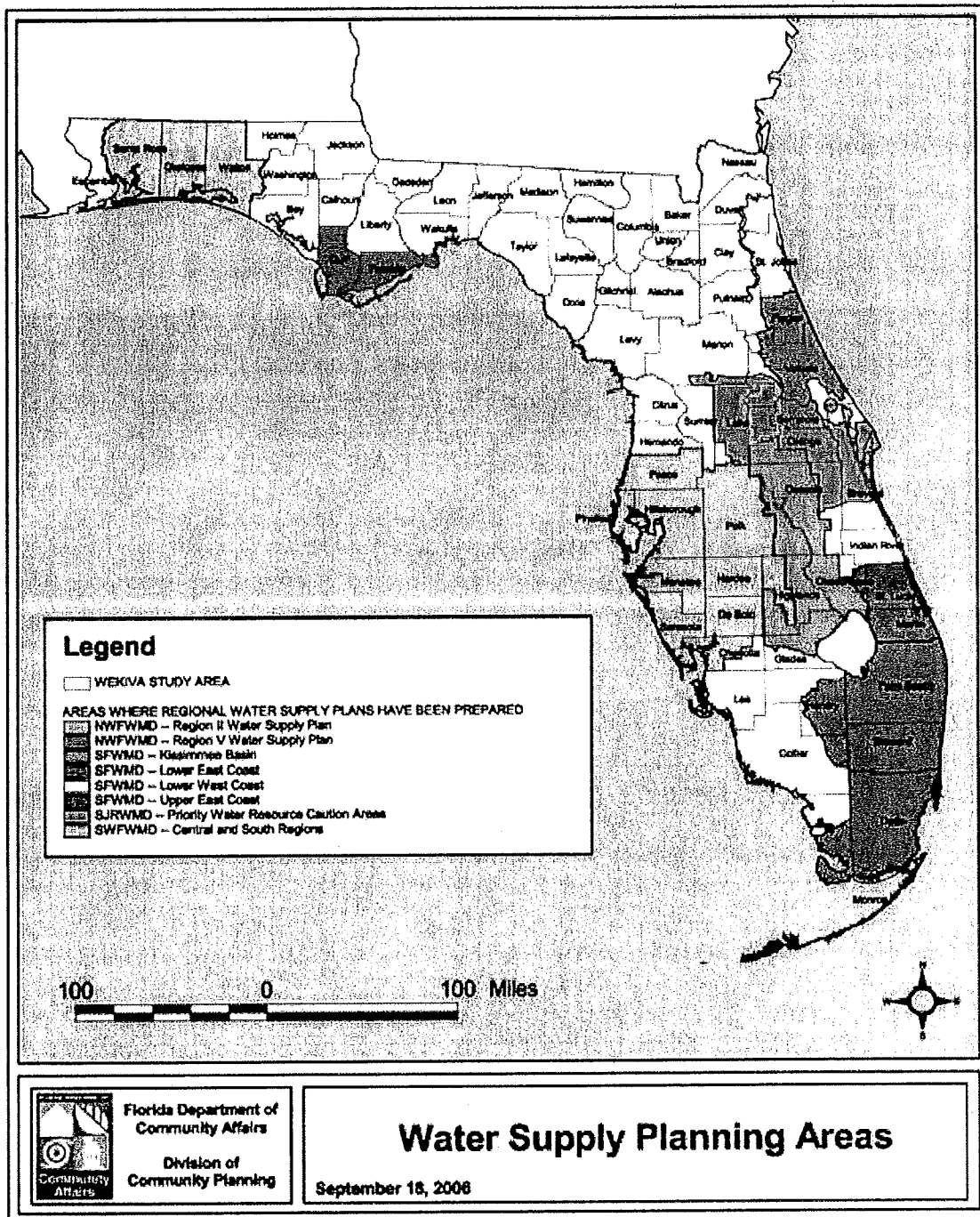
which they have implemented their 10-year water supply facilities work plans and identified water supply projects necessary to address the water needs identified in the applicable regional water supply plan. The two sets of requirements are provided below. For additional guidance regarding EAR requirements, please refer to the Department's web site at <http://www.dca.state.fl.us/fdcp/dcp/EAR/index.cfm>.

1. In the EAR process, local governments that are not subject to a regional water supply plan must:
 - a. Update the Infrastructure Element to address water needs and sources identified in the Conservation Element, water supply development, conservation, reuse, and cooperative planning efforts related to development of multijurisdictional water supply facilities, including development of alternative water sources to supplement traditional sources of groundwater and surface water supplies.
 - b. Update the Conservation Element to include an assessment of current and projected water needs and sources for at least a 10-year period, considering the applicable District Water Management Plan.
 - c. Update the Intergovernmental Coordination Element to address cooperative efforts with other local governments, public and private utilities, regional water supply authorities, special districts, and water management districts with regard to potable and reuse water service delivery. Any local government that relies on a regional water supply authority for its water supply must review this element to determine if coordination with the regional water supply authority has been addressed. If not, the comprehensive plan must be revised to address this requirement. The requirements for data and analysis and goals, objectives, and policies outlined in Rule 9J-5.015, F.A.C, for the preparation of the Intergovernmental Coordination Element can be used to address this requirement.
2. In the EAR process, local governments that are subject to a regional water supply plan must:
 - a. Address items 1.a. through 1.c., above.
 - b. Indicate the extent to which the local government has implemented the work plan for building public, private and regional water supply facilities, including the development of alternative water supplies, to meet local water use needs identified in the Infrastructure Element.
 - c. Indicate the extent to which the local government has been successful in identifying alternative water supply projects, traditional water supply projects, and conservation and reuse programs to meet the water needs identified in the applicable regional water supply plan.

[END OF TEXT PORTION OF THE GUIDE]

ATTACHMENT A

Map Regional Water Supply Planning Areas and Wekiva Study Area



ATTACHMENT B

Due Dates for Work Plan Amendments

1. The following local governments are located within the **Wekiva Study Area**. These local governments must prepare their 10-year water supply facilities work plans by December 1, 2006, for the facilities for which they are responsible. [s. 369.321, F.S.]
 - a. Lake County municipalities of Eustis and Mount Dora
 - b. Orange County and the municipalities of Apopka, Eatonville, Maitland, Oakland, Ocoee, Orlando, and Winter Garden
 - c. Seminole County and the municipalities of Altamonte Springs, Lake Mary, and Longwood
2. The following local governments are located in the **Northwest Florida Water Management District's** Region II Water Supply Planning Area. An update of the area's regional water supply plan is anticipated to be approved by the District's Governing Board by October 2006. The following local governments must therefore prepare their 10-year water supply facilities work plans and update their comprehensive plans by April 2008 (or 18 months after the District Governing Board approves the updated regional water supply plan) [s. 163.3177(6)(c), F.S.]:
 - a. Okaloosa County and all municipalities located in the county
 - b. Santa Rosa County and all municipalities located in the county
 - c. Walton County and all municipalities located in the county

The following local governments are located in the **Northwest Florida Water Management District's** Region V Water Supply Planning Area. The area's regional water supply plan is anticipated to be approved by the District's Governing Board in 2007. The following local governments must therefore prepare their 10-year water supply facilities work plans and update their comprehensive plans within 18 months after the District Governing Board approves the Region V regional water supply plan [s. 163.3177(6)(c), F.S.]:

- d. Franklin County and the municipalities of Apalachicola and Carrabelle
 - e. Gulf County and the municipalities of Port St. Joe and Wewahitchka
3. The following local governments are located in the **St. Johns River Water Management District's** Priority Water Resource Caution Area (PWRCA), a water supply planning region where existing and reasonably anticipated sources of water may not be adequate to supply water for all existing legal uses and anticipated future needs while sustaining water resources and related natural systems. The regional water supply plan for the PWRCA area (District Water Supply Plan 2005) was approved by the District Governing Board on February 7,

2006. The following local governments located within the PWRCA must therefore prepare their 10-year water supply facilities work plans and update their comprehensive plans by August 7, 2007 [s. 163.3177(6)(c), F.S.]

- a. Brevard County and the municipalities of Cape Canaveral, Cocoa, Cocoa Beach, Indialantic, Indian Harbour Beach, Melbourne, Melbourne Beach, Melbourne Village, Palm Shores, Rockledge, Satellite Beach, Titusville, and West Melbourne
 - b. Flagler County and all municipalities located in the county
 - c. Lake County and all municipalities located in the county
 - d. Marion County (partially, but no municipalities)
 - e. Orange County municipalities of Apopka, Belle Isle, Eatonville, Edgewater, Maitland, Oakland, and Winter Park (the unincorporated area of the County, and the municipalities of Edgewood, Ocoee, Orlando, Winter Garden are split with SFWMD – see item 5 below for applicable deadline)
 - f. Osceola County is split with SFWMD – see item 5 below for deadline
 - g. Seminole County and all municipalities located in the county
 - h. Volusia County and all municipalities located in the county
4. The following local governments are located in the **Southwest Florida Water Management District's** Central and Southern Region, a water supply planning area. An updated regional water supply plan for the Central and Southern Region is anticipated to be approved by the District Governing Board by December 2006. The following local governments located in the Central and Southern Region must therefore prepare their 10-year water supply facilities work plans and update their comprehensive plans by June 2008 (or 18 months after the District Governing Board approves the updated regional water supply plan) [s. 163.3177(6)(c), F.S.]
- a. Charlotte County and Punta Gorda
 - b. DeSoto County and Arcadia
 - c. Hardee County, Bowling Green, Wauchula, and Zolfo Springs
 - d. Highlands County, Avon Park, Lake Placid, and Sebring
 - e. Hillsborough County and all municipalities located in the county
 - f. Manatee County and all municipalities located in the county
 - g. Pasco County and all municipalities located in the county
 - h. Pinellas County and all municipalities located in the county

- i. Polk County and all municipalities located in the county
 - j. Sarasota County and all municipalities located in the county
5. Two of the four regional water supply plans for the **South Florida Water Management District** (the Upper East Coast plan and the Lower West Coast plan) were approved by the District's Governing Board on July 12, 2006. The following local governments located in one of those planning regions must prepare their 10-year water supply facilities work plans and update their comprehensive plans by January 12, 2008 (or 18 months after the District Governing Board approves each regional water supply plan) [s. 163.3177(6)(c), F.S.]
- a. Collier County, Everglades City, Marco Island, and Naples
 - b. Glades County and Moore Haven
 - c. Hendry County, Clewiston, and LaBelle
 - d. Lee County and all municipalities located in the county
 - e. Martin County and all municipalities located in the county
 - f. St. Lucie County, Fort Pierce, Port St. Lucie, and St. Lucie Village

The regional water supply plans for the Kissimmee Basin and the Lower East Coast are anticipated to be approved by the District's Governing Board in Fall 2006. The following local governments located in one of those planning regions must prepare their 10-year water supply facilities work plans and update their comprehensive plans by Spring 2008 (18 months after the District Governing Board approves each regional water supply plan). [s. 163.3177(6)(c), F.S.]

- g. Broward County and all the municipalities located in the county
- h. Miami-Dade County and all municipalities located in the county
- i. Monroe County and all municipalities located in the county
- j. Okeechobee County and Okeechobee City
- k. Orange County, Bay Lake, Lake Buena Vista, Ocoee, Orlando, Reedy Creek, Windermere, and Winter Garden
- l. Osceola County, Kissimmee, and St. Cloud
- m. Palm Beach County and all municipalities located in the county

ATTACHMENT C

Overview of Regional Water Supply Plans

The following briefly summarizes the content and application of regional water supply plans (RWSPs) and describes the type of information and assistance that is available from water management districts. The map in Attachment A depicts the areas of the state for which RWSPs have been prepared.

A RWSP includes a 20-year projection of future population and associated water supply demands, as well as an identification of water supply projects that could meet those demands. The RWSP is intended to provide the framework for future water supply decisions in areas where existing and reasonably anticipated sources of water and conservation efforts may not be adequate to provide for all existing legal users and reasonably anticipated future needs, while sustaining water resources and related natural systems.

For planning purposes, water use is separated into six categories: agriculture; public supply; domestic self-supply (including small public supply systems); commercial/industrial and mining/dewatering; thermoelectric power production; and recreational irrigation. The RWSP identifies potential sources of water capable of meeting projected demand and options for developing those sources. Typical sources include (1) new groundwater wellfields; (2) increased use of reclaimed water; (3) storage reservoirs; (4) surface water withdrawals; (5) aquifer storage and recovery; (6) reverse osmosis/desalination; and (7) conservation. The RWSP includes planning-level analyses for each of these potential sources of water to quantify available water supplies, identify project development options, and estimate costs associated with water supply development.

The RWSP identifies potential water supply development projects, including conservation, reuse, traditional, and alternative water supply projects that will exceed the needs projected by the district. The RWSP also estimates the associated costs for developing the projects. The water supply projects identified in the RWSP represent a “menu” of possible options from which each identified local government, government-owned and privately owned utility, self-supplier or other entity may choose to address its water supply needs. The individualized project options are provided as reasonable concepts that water users in the region can pursue through water supply planning. Water users may select a water supply development project presented in the plan or combine elements of different projects that better suit their water supply needs. Additionally, the plan provides information to assist water users in developing funding strategies to construct water supply development projects, and the inclusion of a specific *alternative* water supply project in the plan indicates that state and water management district funding assistance may be available for the project.

Each RWSP is to be updated at least every five years. All the districts are developing updated information that will be available in the 2006 RWSP updates. Local governments should consult with their respective districts to obtain the latest and most detailed information available.

ATTACHMENT D

Sources of Information and Contacts

Data and Information Sources:

1. Water Management District publications, such as Regional Water Supply Plans and District Water Management Plans.
2. Monthly Public Supply Water Withdrawal tables, available from the USGS. Contact Richard Marella at (850) 942-9500, for Northwest Florida WMD, Suwannee River WMD and South Florida WMD. Contact St. Johns River WMD and Southwest Florida WMD for similar tables.
3. Regional Water Supply Authority plans and publications.
4. Comprehensive plans of adjacent local governments if they supply water to portions of your jurisdiction.
5. Plans or other documents from public or private utilities serving areas within your jurisdiction.

Agency and District Contacts:

Florida Department of Community Affairs

Bob Dennis, Principal Planner
(850) 922-1765; Suncom 292-1765
E-mail: bob.dennis@dca.state.fl.us

Website: www.dca.state.fl.us

Florida Department of Environmental Protection

Janet Llewellyn, Deputy Director, Division of Water Resources
(850) 245-8676; Suncom 205-8676
E-mail: janet.llewellyn@dep.state.fl.us

Website: www.dep.state.fl.us

Northwest Florida Water Management District

Paul Thorpe, AICP, Director, Resource Planning Section
(850) 539-5999; (800) 913-1518; Suncom 771-2080, ext. 133
E-mail: paul.thorpe@nwfwmd.state.fl.us

Website: www.nwfwmd.state.fl.us

St. Johns River Water Management District

Geoffrey Sample, Policy Analyst
(386) 329-4436; (800) 451-7106; Suncom 860-4436
E-mail: gsample@sjrwmd.com

Peter Brown, Policy Analyst
(386) 329-4311; (800) 451-7106; Suncom 860-4311
E-mail: pbrown@sjrwmd.com

Website: www.sjrwmd.com

Suwannee River Water Management District

David Still, Deputy Executive Director
(386) 362-1001 or (800) 226-1066
E-mail: still_d@srwmd.state.fl.us

Steven Minnis, Senior Resource Development Coordinator
(386) 362-1001 or (800) 226-1066
E-mail: minnis_s@srwmd.state.fl.us

Website: www.srwmd.state.fl.us

Southwest Florida Water Management District

Richard Owen, AICP, Planning Director
(352) 796-7211, or (800) 423-1476, ext. 4400
E-mail: Richard.Owen@watermatters.org

Rand Frahm, AICP, Planning Manager
(352) 796-7211 or (800) 423-1476, ext. 4411
E-mail: Rand.Frahm@watermatters.org

Miki Renner, AICP, Planning Manager
(352) 796-7211 or (800) 423-1476, ext. 4413
E-mail: Miki.Renner@watermatters.org

Website: www.watermatters.org

South Florida Water Management District

Jim Jackson, AICP, Senior Supervising Planner
(561) 682-6334; (800) 432-2045, ext. 6334; Suncom 229-6334
E-mail: jjackson@sfwmd.gov

Jane Bucca, Alternative Water Supply Program Manager
(561) 682-6791; (800) 432-2045, ext. 6791; Suncom 229-6791
E-mail: jbucca@sfwmd.gov

Henry Bittaker, AICP, Senior Planner
Comprehensive Planning Issues
(561) 682-6792; (800) 432-2045, ext. 6792; Suncom 229-6792
E-mail: hbittak@sfwmd.gov

Website: www.sfwmd.gov

Lower East Coast Regional Water Supply Plan

Barbara Powell, Plan Manager
(561) 682-2236
E-mail: bpowell@sfwmd.gov

Kissimmee Basin Regional Water Supply Plan

Chris Sweazy, Plan Manager
(407) 858-6100, ext. 3822
E-mail: csweazy@sfwmd.gov

Upper East Coast Regional Water Supply Plan

Linda Hoppes, Plan Manager
(561) 682-2213
E-mail: lhoppes@sfwmd.gov

Lower West Coast Regional Water Supply Plan

Jim Jackson, AICP, Senior Supervising Planner
(561) 682-6334; (800) 432-2045, ext. 6334; Suncom 229-6334
E-mail: jjackson@sfwmd.gov

Regional Water Supply Authorities

Peace River/Manasota Regional Water Supply Authority

(Charlotte, DeSoto, Manatee and Sarasota Counties)

Patrick J. Lehman, Executive Director

(941) 316-1776

E-mail: peacemana@aol.com

Website: www.regionalwater.org

Tampa Bay Water

(Hillsborough, Pasco, and Pinellas Counties and the Cities of New Port Richey, Tampa and St. Petersburg)

Paula Dye, AICP, Chief Environmental Planner

(727) 796-2355

E-mail: pdye@tampabaywater.org

Website: www.tampabaywater.org

Walton/Okaloosa/Santa Rosa Regional Utility Authority

(Okaloosa, Santa Rosa and Walton Counties)

Terry A. Joseph, Executive Director

(850) 595-8910

E-mail: josepht@wfrpc.dst.fl.us

Website: www.wfrpc.dst.fl.us

Withlacoochee Regional Water Supply Authority

(Citrus, Hernando, and Sumter Counties and all municipalities in those Counties, and the City of Ocala)

Jackson E. Sullivan

(850) 385-0220

E-mail: jsullivan@carltonfields.com

Website: www.wrwsa.cc

**ADMINISTRATIVE CODE
BOARD OF COUNTY COMMISSIONERS**

CATEGORY: Department of Community Development/Building Department	CODE NUMBER: AC-12-4
TITLE: Single Family and Duplex Permitting Procedures.	ADOPTED: 01/27/82
	AMENDED: 08/31/94; 08/09/05
	ORIGINATING DEPARTMENT: Department of Community Development/Building Department & County Attorney

PURPOSE/SCOPE:

This Administrative Code sets out the minimum submission requirements necessary to successfully complete the permitting process for single family and duplex dwellings. It also sets out some of the basic requirements concerning the job site.

POLICY/PROCEDURE:

1. Three (3) copies of a plot plan will be required with the building permit application showing roof overhang as well as the basic structure outline, showing setbacks from the lot lines to the building(s), showing all easements (utility, drainage, access, etc.), also showing placement of driveways, and (where applicable) septic tank and drainfield.
2. For construction in flood zones or seaward of the coastal construction control line, a certified survey indicating the flood zone(s), coastal construction control line and elevation of existing land will be necessary. If the construction is seaward of the coastal construction control line and a state permit is required, a copy of the Department of Environmental Protection permit will be needed prior to issuance of the permit.
3. One (1) copy of an application variance or other special approvals must be provided.
4. Application for septic tank may be applied for at the time of building application. A well affidavit, ensuring that potable water is available to the construction site prior to construction, must be signed and notarized. A well permit and well inspection will be necessary before a certificate of occupancy will be issued. Should an existing well be present on the site, an Existing Well Inspection will be required to ensure the well meets Health Department and Lee County Well Requirements for Domestic Use. If construction is located on private water and/or sewer, a letter must be submitted from the private utility company verifying availability for site submitted.

AC-12-4 (Continued)

5. Plans must be signed and sealed by a Florida Registered Architect or Engineer or in compliance with SSTD 10-99 and a 10-99 checklist submitted for each set. Plans must be submitted on standardized sheets drawn to scale. The plans must bear the following specific information:
 - (a) Elevation for front, rear, right and left sides
 - (b) Foundation plan
 - (c) Floor plan
 - (d) Lateral breakdown (typical wall section from roofing through to foundation and NGVD Elevation)
 - (e) Duplex must have a tenant separation wall of UL Design or equal rating
 - (f) Location of electric and plumbing
 - (g) Conventional roof framing layout
 - (h) Windows and garage doors installation
 - (i) Energy calculations and cover sheet
6. Any dwelling located in a Coastal Zone must have plans designed in accordance with the Lee County Coastal Construction Code and be certified by a Florida Registered Architect or Engineer.
7. Building permit application completed in its entirety. Prior to a permit being issued, a State licensed contractor must be registered with Lee County Contractor Licensing and have provided evidence of current Workers Compensation Insurance and General Liability Insurance coverage. A locally licensed contractor must possess a current Lee County Certificate of Competency in good standing.
8. An owner/builder must sign an affidavit of self-use to be submitted at the time of requesting a building permit. He must be able to do all the work himself or use a State licensed contractor, registered with Lee County Contractor Licensing (with current Workers Compensation Insurance and General Liability Insurance coverage), or an appropriate, locally licensed contractor with a current Lee County Certificate of Competency in good standing.
9. Additional permits will be required for LP gas, well, septic tank, lawn sprinkler system, pool, pool enclosure, fence, solar heating and interior fire sprinkler systems, if applicable.
10. After issuance of building permit and before footing inspection is requested, the job site must have sanitary facilities for workers and a trash container.
11. Permits must be posted in plain view at the job site and protected from the weather.
12. All changes to the approved drawings must be submitted and approved prior to commencement of work.
13. Reinspection fees will be charged for all failed inspections. A reinspection fee is due and payable within 30 calendar days from the date of the failed inspection.
14. Buildings may not be occupied until the final inspection has been completed and a certificate or occupancy issued, at which time the power company will be notified to connect permanent power.

Gonzalez, Brandy L.

From: Marcia Wilson [MWILSON@leeclerk.org]
Sent: Monday, January 14, 2008 12:38 PM
To: Gonzalez, Brandy L.
Subject: Admin Code Request
Attachments: Amin Code Request.pdf

Brandy,

This is the only thing I could find. I hope it's what you're looking for.
Let me know if it's too light & I'll try to darken it for you.

Marcia Wilson
Minutes Document Processing Clerk
Minutes Office
239-533-2328

Florida has a very broad Public Records Law. Most written communications to or from State and Local Officials regarding State or Local business are public records available to the public and media upon request. Your email communications may therefore be subject to public disclosure.

1/14/2008

anything about it. If the State does not act within 120 days, ownership reverts completely to Lee County, and the barge could be disposed of in a manner acceptable to the Board. Commissioner Rodda moved to return the barge to the State and authorize the Chairman to sign the letter, seconded by Commissioner Roeder, called and carried.

MOBILE
HOME
PERMIT

Chairman Roberts addressed the other members of the Board regarding Administrative Action Request No. 18 - Miscellaneous, (k), a request from Donna Battista of Battista Farms for a temporary mobile home permit for a mobile home to be located off of U. S. 41, Estero, subject to the applicant filing for a special exception. The Chairman explained that Battista Farms is a tree and plant nursery in Bonita Springs that is moving to a new place further north of its present location. The owners have been using a mobile home to keep someone on the property to protect the plants, etc., from vandalism or theft. Ms. Battista has asked to be able to move this mobile home to the new location. Chairman Roberts reported that he had received a note from Mrs. Pamela Houck, Director of Current Planning, that Staff sees no objection to this. Chairman Roberts moved to allow this request, seconded by Commissioner Rodda, called and carried.

POLICY

County Attorney James Yaeger addressed the Board concerning Administrative Action Request No. 18 - Miscellaneous, (l), relating to building permits and assurance of adequate water supply and water pressure. Attorney Yaeger stated that he and the County Fire Official have been reviewing Policy No. F-0022; and they have no problems with its concept; however, there are problems with the actual mechanics of the policy as to how it will work and the effects it will have on development and utilities. One of the problems is the letter being asked of the utilities to make a determination that they can supply adequate water pressure for required fire flow. Attorney Yaeger suggested that it would be fair for either the utility companies or the fire departments in that area to merely make a statement as to what the water pressure is; then it will be up to the Code Enforcement officials to determine whether that is sufficient. Another problem area, as it is now worded, if there is a determination that the utility company cannot supply this pressure for the fire flow requirements, there is a mechanism for alternate methods to meet the requirements; however, these on an individual case by case basis need to come before the Board or County Commissioners. The Board may want to consider having this worded so this flexibility is to be determined by the Code Enforcement Fire Official, subject to an appeal to the Board or County Commissioners. In the ensuing discussion between the board members, concerns expressed included the possibility that the recommendations of the County Attorney might still leave the situation open to interpretation; any policy should be taken away from the Certificate of Occupancy position and concentrate on future development; the necessity to look to the long range solution to solve this problem and to set up a standard and some alternatives; whether there is a conflict between the County's Ordinance and the Uniform Fire Code; and the need for reliance on the Legislative Fire Districts who are responsible for fighting those fires. Mr. Rick Gutknecht, County Fire Official, stated that the tools contained in the Fire Code are really not a matter of interpretation and reviewed sections contained in the Standard Fire Prevention Code and referred to the Insurance Office's Flow Chart procedure. Commissioner Rodda moved that we

rescind the portion of this particular policy that deals with fire flow, seconded by Commissioner Scaife. Following discussion, the motion was called and carried.

Commissioner Rodda then moved that as a part of this policy statement, that prior to issuance of a building permit, we require the builder to be able to meet one of the alternatives listed in our Fire Code for fire protection of his structure, or in lieu of that, a letter from the Fire District stating that they can adequately defend that building and the methods how; or if they can't, that they also state the reasons they cannot. The motion was seconded by Commissioner Scaife. Following clarification of his motion by Commissioner Rodda, in answer to questions asked by other Board members, he amended his motion further that the method listed in the letter be subject to the approval of our Fire Marshall. Commissioner Scaife further expounded upon the motion as it relates to the Legislative Fire Districts. During discussion on the motion, Attorney Howard Rhoads explained how he has been caught up in this problem personally and his inability to obtain his building permit to build on his lot in Executive Park. He reviewed his contacts with Florida Cities Water Company, the County Fire Official, and Chief Landrum, of the Fort Myers Beach Fire District. Attorney Rhoads said that the letter he obtained from Chief Landrum indicates what the gallons were - 870 gallons per minute, with Chief Landrum concluding that this should be enough water to protect the building in question. Attorney Rhoads said he hopes that this letter suffices; in the last analysis, he feels it is a question of whether the Fire Marshall can give reasonable assurance that he can put a fire out, and that should suffice. Commissioner Rodda explained that the intent of his motion is that the Fire Marshall not only indicate that he can defend that building, but also what his means would be. Mr. Gutknecht briefly reviewed for the Board some changes in wording in the water section of the Uniform Fire Code which he would like to propose to the Board in the very near future. Mr. Gutknecht also commented on Attorney Rhoad's particular situation. The motion was then called and carried.

POLICY

FOR PHOTO COPY OF POLICY NO. F-0023 SEE PAGE 30-A

Commissioner Rodda moved to approve the following Addendum to Administrative Action Request No. 7 - Competitive Negotiations, seconded by Commissioner Roeder, called and carried.

- (a) File with the Board the following list of firms who filed proposals for service as investment banker for the issuance of owner-occupied single-family and multi-family mortgage revenue bonds.

FOR PHOTO COPY OF LIST SEE PAGE 30-B

- (b) Authorize the receipt of Letters of Interest in Competitive Negotiations from Engineers to Update the Lee County Resource Recovery and Management Plan dated May, 1979.

PROPOSALS
RE:
INVESTMENT
BANKER

LETTERS
OF INTEREST

Commissioner Rodda moved to approve the following Addendum to Administrative

30-A

BOARD OF COUNTY COMMISSIONERS

39

ADMINISTRATIVE CODE

Lee County, Florida

Category DEVELOPMENT POLICIES	Policy Number F-0023
Title or Scope BUILDING PERMITS - ASSURANCE OF ADEQUATE WATER SUPPLY AND WATER PRESSURE.	
<p><u>POTABLE WATER:</u></p> <p>Prior to the issuance of a building permit for structures other than single family and duplexes, the builder requesting same shall submit a letter to the Lee County Code Enforcement Department from the appropriate utility company that states that this utility company can supply adequate potable water for this purpose.</p> <p>This statement is required prior to the issuance of the building permit for all of the unincorporated area of Lee County.</p> <p><u>FIRE FLOW REQUIREMENTS:</u></p> <p>Prior to the issuance of a building permit for all structures, other than single family and duplexes, the builder shall comply with one of the methods outlined in the Fire Code for adequate fire protection OR furnish a letter from the appropriate Fire District as to their official position in furnishing fire protection to the structure.</p> <p>If the Fire District can furnish fire protection methods, said protection must be outlined within the contents of the letter.</p> <p>If the Fire District can't furnish fire protection, the letter should contain information listing reasons why and recommended methods of compliance or requirements of builder to receive a letter of acceptance by the Fire District.</p> <p>All methods and recommendations are to be approved by the County Fire Official.</p>	
Chm. Bd. County Commissioners <i>Robert D. Roberts</i>	County Administrator <i>Lynn Wusker</i>
Supersedes Policy No. F-0022	Dated 8-19-81 Date Effective 9-2-81 Page 1 of 1

John

**ADMINISTRATIVE CODE
BOARD OF COUNTY COMMISSIONERS**

CATEGORY:

CODES AND BUILDING SERVICES

CODE NUMBER:

AC 12-3

TITLE:

BUILDING PERMITS - ASSURANCE OF ADEQUATE WATER
SUPPLY AND WATER PRESSURE

ADOPTED:

9/2/81

ORIGINATOR:

COUNTY ADMIN:

LAVON WISHER

BOARD CHAIRPERSON:

ROLAND ROBERTS

PURPOSE/SCOPE:

POTABLE WATER: Prior to the issuance of a building permit for structures other than single family and duplexes, the builder requesting same shall submit a letter to the Lee County Code Enforcement Department from the appropriate utility company that states that this utility company can supply adequate potable water for this purpose.

This statement is required prior to the issuance of the building permit for all of unincorporated area of Lee County.

POLICY/PROCEDURE:

FIRE FLOW REQUIREMENTS: Prior to the issuance of a building permit for all structures, other than single family and duplexes, the builder shall comply with one of the methods outlined in the Fire Code for adequate fire protection OR furnish a letter from the appropriate Fire District as to their official position in furnishing fire protection to the structure.

If the Fire District can furnish fire protection methods, said protection must be outlined within the contents of the letter.

If the Fire District can't furnish fire protection, the letter should contain information listing reasons why and recommended methods of compliance or requirements of builder to receive a letter of acceptance by the Fire District.

All methods and recommendations are to be approved by the County Fire Official.

ATTACHMENTS:

NO

ADMINISTRATIVE CODE
BOARD OF COUNTY COMMISSIONERS

CATEGORY:

Codes and Building Services

CODE NUMBER:

AC-12-4

TITLE:

Single Family and Duplex Permitting Procedures

ADOPTED:

1/27/82

AMENDED:

8/31/94

ORIGINATING DEPARTMENT:

Codes and Building Services/Attorney

PURPOSE/SCOPE:

This Administrative Code sets out the minimum submission requirements necessary to successfully complete the permitting process for single family and duplex dwellings. It also sets out some of the basic requirements concerning the job site.

POLICY/PROCEDURE:

1. Three (3) copies of plot plan showing roof overhang as well as the basic structure outline, showing setbacks from the lot lines to the building(s) also showing placement of driveways, septic tank, drainfield, will be required with building permit application.
2. For construction in flood zones or seaward of the coastal construction line, a certified survey indicating the flood zone(s), coastal construction line and elevation of existing land will be necessary. If the construction is seaward of the coastal construction line and a state permit is required, a copy of the Department of Environmental Protection permit will be needed prior to issuance of the permit.
3. One (1) copy of an applicable variance or other special approvals must be provided.
4. Application for septic tank may be applied for at the time of building application. A well affidavit must be signed and notarized. A well permit and well inspection will be necessary before a certificate of occupancy will be issued. If construction is located on private water and/or sewer, a letter must be submitted from the private utility company verifying availability for site submitted.
5. Plans must be signed and sealed by a Florida Registered Architect or Engineer or in compliance with SSTO 10-93 and a 10-93 checklist submitted for each set. Plans must be submitted on standardized sheets drawn to scale. The plans must bear the following specific information:
 - (a) Elevation for front, rear, right and left sides
 - (b) Foundation plan
 - (c) Floor plan
 - (d) Lateral breakdown (typical wall section from roofing through to foundation and NGVD Elevation)
 - (e) Duplex must have a tenant separation wall of UL Design or equal
 - (f) Location of electric and plumbing

AC-12-4 Continued

- (g) Conventional roof framing layout
If trusses, include engineered truss layout from truss manufacturer
 - (h) Windows and garage doors installation
 - (i) Energy calculations and cover sheet
6. Any dwelling located in a Coastal Zone must have plans designed in accordance with the Lee County Coastal Construction Code and be certified by an architect or engineer registered in the State of Florida.
 7. Building permit application completed in its entirety. Contractor must show either State Certification or Lee County Certificate of Competency.
 8. An owner/builder must sign an affidavit of self-use to be submitted at the time of requesting a building permit. He must be able to do all the work himself or use a Lee County licensed contractor.
 9. Additional permits will be required for LP gas, well, septic tank, lawn sprinkler system, pool, pool enclosure, fence, solar heating and interior fire sprinkler systems, if applicable.
 10. After issuance of building permit and before footing inspection is requested, the job site must have sanitary facilities for workmen and a trash container.
 11. Permits must be posted in plain view at the job site and protected from the weather.
 12. All changes to the approved drawings must be submitted and approved prior to commencement of work.
 13. Reinspection fees will be charged for all recalls and turndowns.
 14. Buildings may not be occupied until the final inspection has been completed and a certificate of occupancy issued, at which time the power company will be notified to connect permanent power.

COMMUNITY DEVELOPMENT

PERMITTING PROCEDURE FOR NEW SINGLE FAMILY & DUPLEX RESIDENCES, ADDITIONS, ALTERATIONS, SHEDS, UTILITY BUILDINGS, GAZEBOS, POLE- BARNs & DETACHED GARAGES (eff. 12/1/06)

Plans that are prepared by a Florida registered architect or engineer shall be prepared in compliance with required wind loads and must contain a statement on the plan that the building/structure has been designed according to the 2004 Florida Building Codes with the 2006 Amendments. The following information related to wind loads shall be shown on the construction drawings:

1. Basic wind speed, mph, (m/s).
2. Wind importance factor (I) and building category.
3. Wind exposure - if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated.
4. The applicable internal pressure coefficient.
5. Components and Cladding. The design wind pressures in terms of psf (kN/m²), to be used for the design of exterior component and cladding materials not specifically designed by the registered design professional.

1. APPLICATION FOR PERMIT

The application will not be accepted unless all paper work is complete. Required at time of application.

- a. Property owners' name
- b. Strap number (17 digit # found on your tax bill or available from the Lee County Property Appraiser's Office at 2480 Thompson St. 239-339-6150)
- c. Job site address and directions to the job
- d. Type of roof, i.e. shingle, tile, metal or built-up
- e. Electrical amps
- f. Air conditioning, SEER rating, KW's and Tonnage
- g. If property is located on a county maintained road, you will need a driveway permit.
- h. Contractor's license number, address, Contact person, **TELEPHONE AND FAX NUMBER**
- i. 2 Sets of self-addressed mailing labels, **if a fax number is not available**

2. PLOT/SITE PLAN

Three (3) copies of a plot/site plan drawn to scale (1/8" = 1' minimum). The scale and north arrow must be indicated. The following items must be on your plot/site plan:

- a. All four lot corners, lot lines and dimensions;
- b. Location and name of streets or drives bordering the lot;
- c. If there is a water body within 25 feet of your project, indicate the mean high tide line or the edge of water and label the type of water body (for example: lake, creek, canal, river, Gulf).
- d. The size of the existing and proposed building(s); the location of driveways; and the location of all easements on the lot.
- e. Setbacks of the buildings (and any proposed additions thereto) from the four lot lines and other existing structures. Setbacks must be taken from the closest point of the building to the closest point of the property line.
- f. The plans must show the roof line as well as the foundation. Roof lines may not encroach into or over easements.
- g. If the final grade of the lot on this project exceeds 18 inches above the crown of the road or any adjacent developed lot, a site grading plan complying with LDC Section 34-3104 must accompany the permit application.

3. COASTAL ZONE

- a. If the property is located within a coastal zone area, a certified sealed survey indicating both Coastal Construction Zone lines, the Flood Zone requirement for the zone, and existing elevation of grade must be submitted with the application.
- b. If the property is located on a BARRIER ISLAND, i.e. FT MYERS BEACH, CAPTIVA, UPPER CAPTIVA, BOCA GRANDE, BONITA GULF FRONT property, etc., the construction drawings must be sealed by a registered Florida architect or engineer and the certified survey must address the COASTAL CONSTRUCTION ZONE in addition to flood zone.
- c. A certified elevation certificate will be required indicating the NGVD elevation prior to tie beam inspection on CBS structures or framing inspection on wood structures.

NOTE: The form is to be completed by your surveyor and returned to the Inspection Department with the Building Permit number listed on the form.

4. **MASTERED BUILDINGS:** If you are planning on purchasing a garage, gazebo, pole barn, shed or utility building from a local distributor, please check with them to see what brands and model numbers are mastered with Lee County Development Services or the State of Florida. If the particular model that you want to buy is not mastered with Lee County Development Services or the State of Florida, the plans will have to be sealed. (See #5 Construction Details)
5. **CONSTRUCTION DETAIL (BLUEPRINTS)**
Plans that are prepared by a Florida registered architect or engineer shall be prepared in compliance with required wind loads and must contain a statement on the plan that the building/structure has been designed according to the 2004 Florida Building Codes with the 2006 Amendments. The following information related to wind loads shall be shown on the construction drawings:
1. Basic wind speed, mph, (m/s).
 2. Wind importance factor (I) and building category.
 3. Wind exposure - if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated.
 4. The applicable internal pressure coefficient.
 5. Components and Cladding. The design wind pressures in terms of psf (kN/m²), to be used for the design of exterior component and cladding materials not specifically designed by the registered design professional.
- If the construction is located in a coastal area specific to the limitations under The Lee County Land Development Code, Chapter 14, Article II, Division 2, Sea Turtles; also Chapter 6, Article III Coastal Construction Code, and Article IV Flood Hazard Reduction, the architect or engineer shall provide a statement of compliance with those applicable code sections
- Plans should be submitted on standardized sheets drawn to scale (1/8" or 3/32" = 1' is acceptable). Three (3) sets of construction drawings must be submitted. The plans must bear the following specific information:
- 1). Elevation for front, rear, right and left sides.
 - 2). Foundation plans.
 - 3). Floor plans. If an addition or enclosure, floor plans must identify rooms adjacent to the addition/enclosure as well as means of ingress/egress.
 - 4). Lateral breakdown (typical wall section from roofing through to foundation and NGVD Elevation.
 - 5). Duplex must have a tenant separation wall of UL Design or equal.
 - 6). Location of electric and plumbing.
 - 7). Conventional roof framing layout. If trusses, include engineered truss layout from truss manufacturer.
 - 8). If living area, three sets of 2004 energy calculations (revised) will be required.
 - 9). Indicate the state of Florida approval numbers for the windows, shutters, doors, garage doors and/or overhead doors.
 - 10). If construction requires sprinklers, plans must show compliance with State of Florida Administrative Code 61G15-32
6. **PUBLIC WATER/SEWER (SFR & DUPLEX ONLY)**
If construction is located on private or public water and sewer, a letter must be submitted from the appropriate utility company verifying availability to the site at the time of submittal of application.
7. **SEPTIC (SFR, DUPLEX, ADDITIONS, SANITARY FACILITIES)**
If construction is located on SEPTIC SYSTEM, applicant must apply for his Septic Permit at the Health Department prior to the submittal of the building permit. A copy of the paid receipt is required at submittal of building permit. If Septic is existing, you will need a letter from the Health Dept. stating it will be sufficient for size of dwelling at the time of submittal. (2295 Victoria Avenue 239-690-2100)
8. **WELL (SFR & DUPLEX ONLY)**
If property requires a well, a WELL affidavit must be signed and notarized at time of application of building permit. The Well permit must be obtained and inspection finalized before Certificate of Occupancy. If the well is existing, a letter from Natural Resources will be required at time of application stating compliance. (239-479-8114)
9. **ENERGY CALCULATIONS (SFR, DUPLEX AND/OR ALL LIVING AREA ADDITIONS)**
Three (3) copies of the 2004 energy calculations (revised) and one (1) cover sheet (copy of 1st page of energy calcs) must be submitted with your application.
10. **OWNER-BUILDER DECLARATION OF SELF USE (on back of application)**
An owner-builder must sign a declaration of self-use. He/She must be able to do all the work himself or hire licensed contractors.
11. **NOTICE OF COMMENCEMENT (if construction value is \$2500 or more)**
A Notice of Commencement must be recorded with the Lee County Clerk of Courts prior to issuance of the building permit. A copy of the recorded Notice of Commencement is required at issuance of your building permit. (Notice of Commencement phone # 239-335-2482)

12. **BUILDING ADDENDUM (if owner is not the builder).** Addendum on back of application must be completed.
13. **IMPACT LETTER (SFR & DUPLEX ONLY)** obtained from Development Services must be completed.
14. **DRAINAGE**
If the final grade on the lot exceeds 18 inches above the crown of the road or any adjacent developed lot, and is not in a subdivision subject to a current (active) Development Order, it will need to comply with the LDC Section 34-3104. A COPY OF THE SITE FILL GRADING PLAN **MUST** ACCOMPANY THE PERMIT APPLICATION.
15. **DRIVEWAYS, LANDSCAPING & IRRIGATION (DUPLEX)**
Permits for a duplex (two family or single family attached), and not in a subdivision subject to a current (active) Development Order, will be required to comply with the LDC Section 34-3107 and 34-3108, paved driveways, landscapes and irrigation.

BLUEPRINT PROCEDURE

1. Blueprints should be submitted in sets of three (3) & folded.
2. The following items should be stapled on the left hand side of each set of plans in the following order:
 - 1st - Plot plan (if separate)
 - 2nd - Energy calculations
 - 3rd - Truss/ Roof Layout
 - 4th - Window/ Door Cutsheets or Schedule
 - 5th - Shutter Cutsheets or Schedule
3. The Permit Technicians will attach all other pertinent information to the check off sheet. Please have this information stapled together in the following manner:
 - 1st - Recorded Warranty Deed (if applicable)
 - 2nd - Water/Sewer letters or Septic/Well Information
 - 3rd - Sealed survey (if applicable)
 - 4th - Impact Letter
 - 5th - Energy calculation cover sheet

FOR YOUR INFORMATION

1. WHO CAN PICK UP THE BUILDING PERMIT?

The application must be signed by the Contractor, an authorized agent or the contractor of the property owner in the presence of the Building Official or designee. Owner-builders must personally appear and sign for their permits. The only exception to this is with a legal, recorded, Power of Attorney.

NOTE: Contractors must be licensed and registered with Lee County Contractors Licensing.

2. TRACKING YOUR APPLICATION

Applicants can go to www.lee-county.com/econnect, our permitting website, or call (239) 479-8997 ext. 4 and enter the case number to track the progress of their application.

3. REVIEW PROCESS TIME

The review process time will vary with the department's workload (normal permitting time is anticipated to be 7 working days.)

4. REJECTED PLANS

Plans will be rejected if all required paper work is not complete. Customer will be notified in writing, mail or fax. The customer will come back to the office to pick-up the rejected plans at the Information Counter.

5. RE-SUBMITTING REJECTED PLANS

Once the plans have been corrected, re-submittal of rejected plans must be made at the Information Desk and will be processed through the normal procedure time.

6. HOW WILL I KNOW WHEN MY PERMIT IS READY?

Applicants will be notified by phone or fax when the permit is approved. At that time you will be given the required fees due and any other paperwork we may need.

7. CHANGES TO THE APPROVED PLANS (REVISIONS)

Any filed changes of outlets or fixtures, non-structural or structural changes must be submitted to the Information Desk for processing. If the original plans were sealed by an architect or engineer, the revisions must also be sealed. These must be submitted in plan form of three (3) copies and approved, prior to commencement of work.

8. POSTING THE PERMIT

Permits must be posted at eye-level, visible from the road and protected from the weather. There must also be a set of the approved plans on the job at the time of inspection(s).

9. INSPECTIONS & RE-INSPECTION FEES

You must call for inspections. Please call (239) 479-8997 to schedule an inspection.

When an inspection has failed, a fee will be charged for all recalls and turn-downs. Fees are \$25.00 per re-inspection.

10. SANITARY FACILITIES (PORTA JOHN)

Upon issuance of a building permit, and before the footing inspection is performed, the job site must have sanitary facilities and a trash retainer.

12. GARBAGE (Lee County Ordinance 95-19)

No Certificate of Occupancy can be issued on Residential units of four (4) or less until proof of payment has been received by Lee County Solid Waste, payment can be made at 1500 Monroe Street, Fort Myers located on the 1st floor (239-479-8539).

13. CERTIFICATE OF OCCUPANCY

The building may not be occupied until the final inspection has been completed and a Certificate of Occupancy is issued, at which time the power company will be notified to connect permanent power. Violators will be cited and temporary power will be disconnected.

14. ADDITIONAL PERMITS (if required)

Plumbing, Electrical, Air Conditioning, Roofing, Lawn Sprinkler system, Pools (including above-ground), Spas, Enclosures, Fences, Solar, Fire Sprinklers or Alarm Systems.

15. TERMITE CERTIFICATES

A Certificate for Termite Treatment is required on the permit board pursuant to Florida Building Code, Section 1816.1.

16. ELEVATION CERTIFICATES

Every building that is required to meet flood elevation must have an Elevation Certificate marked "Finished Construction." If an Elevation Certificate is marked "Building Under Construction", a second certificate is required before Final Framing Inspection.

The STRAP NUMBER will be 17 digits and is used to identify the land although the owners may change. The strap number is in the upper left hand of your tax bill or you can obtain it from the Property Appraiser by calling their office at (239) 339-6150.

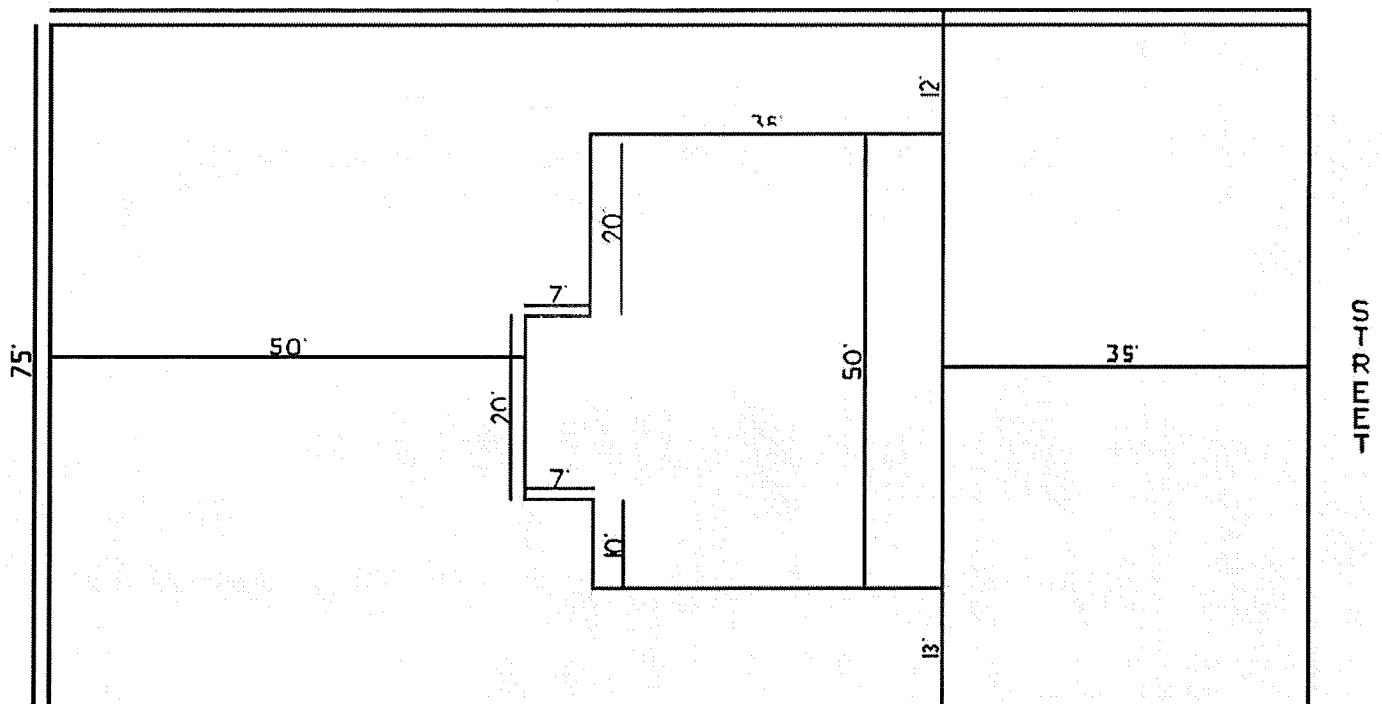
SAMPLE (18-25-15-16-00000.0010)

The following items must be on your plot plan:

1. Plot plan must be drawn to scale ($1/8" = 1'$, $1" = 10'$, $1" = 20'$, $1" = 30'$, $1" = 60'$) or if the lot is square or rectangular the dimensions may add up to the lot width and depth. Label the location of streets bordering your property.
2. All setbacks to structure and additions must be shown. Setbacks will be taken from the closest point of the building to the closest point of the property line. It helps to show the roof line as well as the foundation since the roof lines are not allowed to encroach easements.
3. If there is a water body within 25 feet of your project, please indicate the mean high tide line or the edge of water and label the type of water body (for example: lake, creek, canal, river, Gulf).

*** Setback or lot size information can be obtained through Community Development by calling 239-479-8394. Please have your strap number available.

SAMPLE PLOT PLAN



Sample Lot Size 75 x 127

FEE SCHEDULE

Plan Review	\$ 25.00
One and Two Family Dwellings (Total Square Footage)	\$.10 psf
A/C	\$.02 psf \$50.00 min.
Culvert (Driveway)	
Single	\$ 95.00
Double	\$ 120.00
Electrical	\$.15 amp \$40.00 min.
LP gas installation	\$ 50.00
Plumbing	\$.02 psf \$50.00 min.
Roofing	\$ 35.00
Sewer	\$ 35.00
Sprinkler (fire)	\$ 1.00 per head \$50. min.
Shutters	\$ 35.00
Permit Extensions	
First extension (3 months)	\$ 50.00
Subsequent extensions (3 months)	\$ 100.00
Radon	\$.005 per sq. ft.
Administrative	\$.005 per sq. ft.

Impact Fees

LAND DEVELOPMENT CODE/ARTICLE VI

Roads	Division 2
Regional Parks	Division 3
Community Parks	Division 4
Fire & EMS	Division 5
School	Division 6

Refunds

No refund on permits of \$50.00 or less, unless issued in error by the County.
 No refund on any permit will be granted if work has commenced or if permit has expired.
 Refund on all other permits will be at 75% of the permit fee.
 There will be no refund on any plan review fee.

GENERAL NOTE

Fees calculated per square foot will be assessed using the gross floor area. Questions on interpretation of method of measurement and inclusion of areas or items will be determined by the County Building Official.

**LEE COUNTY COMMUNITY DEVELOPMENT
PERMITTING PROCEDURES FOR
COMMERCIAL PROJECTS
NEW CONSTRUCTION & ADDITION**
(Eff. 12/01/06)

Plans that are prepared by a Florida registered architect or engineer shall be prepared in compliance with required wind loads and must contain a statement on the plan that the building/structure has been designed according to the 2004 Florida Building Codes with 2006 Amendments. The following information related to wind loads shall be shown on the construction drawings:

1. Basic wind speed, mph, (m/s).
2. Wind importance factor (I) and building category.
3. Wind exposure - if more than one wind exposure is used, the wind exposure and applicable wind direction shall be indicated.
4. The applicable internal pressure coefficient.
5. Components and Cladding. The design wind pressures in terms of psf (kN/m²), to be used for the design of exterior component and cladding materials not specifically designed by the registered design professional.

If the construction is located in a coastal area specific to the limitations under The Lee County Land Development Code, Chapter 14, Article II, Division 2, Sea Turtles; also Chapter 6, Article III Coastal Construction Code, and Article IV Flood Hazard Reduction, the architect or engineer shall provide a statement of compliance with those applicable code sections.

If plans are intended to be mastered, the engineer or architect shall indicate by a sealed letter or statement on the plans that he approves of the repetitive use of the plans for permitting or, if a case by case approval (by letter from the architect or engineer) specific to each application is required for permitting.

1. Commercial new construction and additions over 2500 square feet require four (4) sets of the following:
 - A. Site plans to identify location of building.
 - B. 2004 Energy Calcs (revised) signed and sealed by Florida registered architect or engineer.
 - C. Signed and sealed construction drawings.
 - D. The state of Florida approval numbers for the windows, shutters, doors, garage doors and/or overhead doors.
 - E. When applicable (out of a Fire District, requirement for Type of construction, or provision of a Development Order) note compliance with N.F.P.A.13D for fire sprinklers. Plans must show compliance with State of Florida Administrative Code 61G15-32.
 - F. If structure is a Modular Building four (4) sets of Department of Community Affairs approved plans and a valid approval letter. Four (4) sets of signed and sealed foundation plans. Four (4) sets of construction details for the handicap ramp and or stairs.
 - G. Conventional roof framing layout. If trusses, include engineered truss layout from truss manufacturer.
2. If a **WELL** is to be used, a copy of the well permit must be submitted at time of application. A final well inspection must be obtained prior to Certificate of Occupancy. If the well is existing, a letter from Natural Resources is required at the time of application -- 1500 Monroe St. Fort Myers, FL 33901 (239) 479-8114.
3. If construction is serviced by a **SEPTIC SYSTEM**, a copy of the septic permit and perc test must be submitted at time of application. A final septic inspection is required prior to Certificate of Occupancy. If septic is existing, a letter from the Health Dept. is required stating approval for new structure at time of submittal. (2295 Victoria Ave., Fort Myers, FL 33901 (239) 690-2100.)

4. If your project deals with food, the project will need to be approved by the Dept. Of Business & Professional Regulations Hotels & Restaurants, 2830 Winkler Ave. Fort Myers (239) 278-7355. A final health inspection is required prior to Certificate of Occupancy. Our plans for construction do not require any approvals from their division.
5. Plan Review fees are due when submitting an application. Plan review fees are based at \$0.06 per square foot (minimum \$50.00). Commercial building permit fees are calculated at \$.15 psf. of the project with a minimum fee of \$200.00.
6. Impact fees are figured by the Impact Coordinator prior to issuance.
7. Additional permits could be required for gas, fire alarms, monitors, sprinkler systems, refrigeration, hoods, suppression, underground tanks and others.
8. Copy of vegetation permit is required before building permit issuance (if required by Development Review.)

ADDITIONS UNDER 2500 SQ. FT. AND INTERIOR REMODELING

1. Interior Remodel/Change of Use requires one (1) site plan with a parking layout and four (4) sets of floor plans.
Exterior remodels require four (4) site plans with a parking layout.
Additions require four (4) site plans with a parking layout and four (4) floor plans.
2. Four (4) sets of construction plans (interior remodels not necessary to be sealed unless architecturally designed, structural work is being done, or job value exceeds \$25,000). All additions require an architect/engineer seal.
3. Information needed is the same as numbers 2 thru 8 for new construction.
4. If work to be performed is under \$2500.00 a letter from owner of property (not the tenant) giving permission for work to be performed is required at time of issuance of permit.
5. Plan review fees for interior remodeling are also based on square footage. At time of submittal we require a minimum \$50.00 plan review fee. Plan review fees for additions are the same as #5
6. Zoning verification fees are \$75.00.

ADDITIONAL FEES THAT MAY BE REQUIRED

Plumbing	.02/ psf	min \$50.00
Electric	.15/ amp	min \$40.00
HVAC	.02/ psf	min \$50.00
Duct Work Only		\$35.00
Roof		\$75.00

Agenda

South Florida Water Management District
and
Department of Community Affairs

Technical Assistance Workshop on 10-Year Water Supply Facility Work Plans

Friday, June 8, 2007

9:00 - Noon

South Florida Water Management District
Lower West Coast Regional Service Center
2301 McGregor Boulevard, Fort Myers

1. Welcome
2. Linking Water Supply and Land Use Planning Jim Jackson, SFWMD
3. Lower West Coast Plan and the 10-Year Work Plan Jim Jackson, SFWMD
4. Water Supply Planning and Local Comprehensive Plans Bob Dennis, DCA
5. Adjourn

Questions and comments are welcome throughout the workshop

Linking Water Supply & Land Use Planning

Jim Jackson, AICP
Senior Supervising Planner
Water Supply Planning Division

June 8, 2007



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State Law Now Links Growth with Water Supply Components

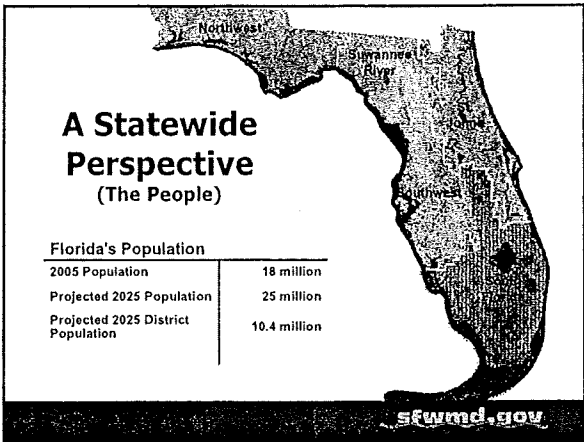


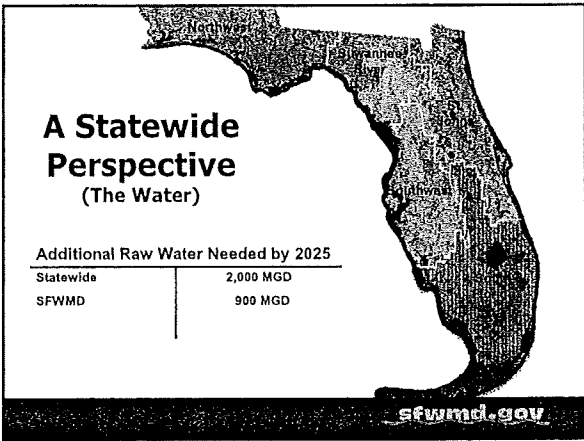
sfwmd.gov

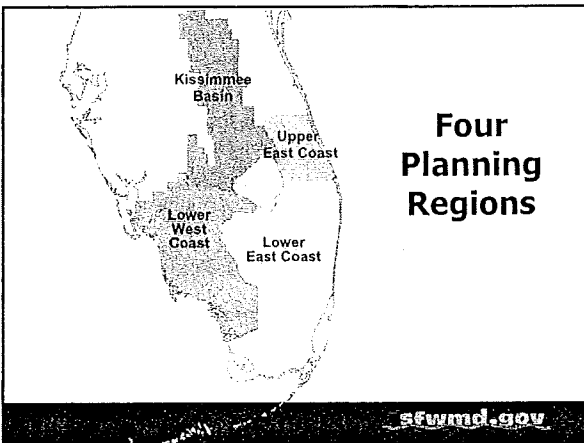
Linking Growth with Water Availability

- Increased focus on alternative water supplies
- Improved communication between utilities and planning departments
- Strengthened link between water supply plans and land use planning

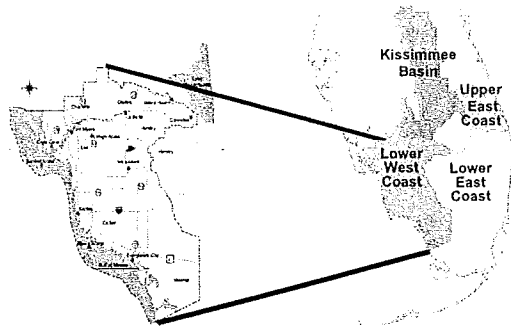
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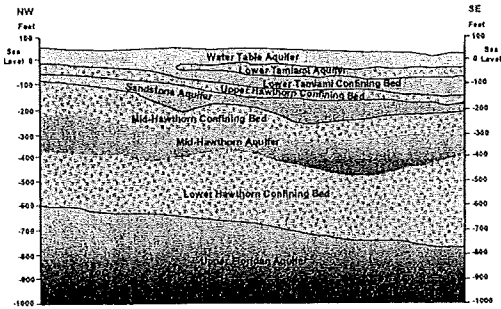


Planning Region





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LWC Cross Section



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LWC Planning Region Population

2005	2025
	
908,542	1,582,584

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Regional Plan Update Outline

Chapter

1. Introduction
2. Demand Estimates and Projections
3. Resource Analysis
4. Issue Identification
5. Evaluation of Water Source Options
6. Water Resource Development Projects
- * 7. Water Supply Development Projects

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Regional Plan Appendices

- A. Water Supply Development Projects
- B. Info. for Local Governments Comp. Plans
- C. Accomplishments
- D. Urban & Ag. Demand Projections
- E. Potable and Wastewater Facilities
- F. Rainfall Analysis
- G. Reg. Irrigation Dist. Phases 1, 2, & 3
- H. Cost Estimating and Economic Criteria
- I. Conservation

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By Vti) by Reg. - eligible for funding?

County:

Supply Entity:

Service Area:

Population and Supply Summary:

The annual supplies are categorized as 100 percent (combined fresh groundwater). The 2005
projections are projected to be 64 percent (combined fresh groundwater and 36 percent fresh

Item	2005 (Existing)	2015 (Projected)	2025 (Projected)
Population	54,722	62,557	70,035
Per Capita (gallons per day (inferred value))		321	
Water Demand (gallons per day (inferred value))	17,672	20,182	22,411
Potable Water Demand (average annual)	18.1	18.1	19.1
Volume from Alternative Sources	0.0	10.0	10.0
Water Demand Capacity Available ^a	0.0	11.9	11.7

^a - Maximum supply available for 2015 and 2025 (combined 27 MGD from the 4 water treatment facilities)

Project Summary:

Project Type	2015 (Existing)	2025 (Projected)	Estimated Capital Cost (\$ million)
Traditional	0.0	0.0	\$0.0
Alternative	2.7	2.7	\$0.2
Capitalized Storm Water / Surface Water	10.0	10.0	
Groundwater	0.0	0.0	
Reclaimed Water ^b	0.0	0.0	
Other (potable water ASR)	0.0	0.0	
Total	2.7	2.7	\$0.2

^a - An additional water supply capacity may be available for use for domestic or industrial purposes on an as-needed basis. This will be determined on a case-by-case basis during the permitting process.

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Lower West Coast Plan and the 10-Year Work Plan

Henry Bittaker, AICP
Water Supply Department

June 8, 2007



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Linking Growth with Water Availability

- 18-month time deadline for the 10-year work plan and related comprehensive plan amendments is January 12, 2008 EXCEPT Charlotte County which is due by May 30, 2008
- Local Governments must submit to DCA:
 - 10-Year Water Supply Facilities Work Plan
 - Proposed amendments to Capital Improvement Element (CIE)
 - Update projects in Potable Water Element

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Also New for Comp Plans

- Identify water supply sources for entire planning period - 163.3167(13)
- Base future land uses on availability of water supplies & facilities - 163.3177(6)(a)
- Ensure concurrency of water supply at building permit stage - 163.3180(2)(a)
- Report on 10-year work plan project implementation in EAR - 163.3191(2)(l)

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10-Year Water Supply Facilities Work Plan Issues

- Must address all water supply providers within jurisdiction
- Required even if jurisdiction does not provide water
- May require information from two regional water supply plans – possibly two WMDs
- Agreement on future utility service areas

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Water Supply Plans Provide Foundation for Linkage

- Water Supply Plans now identify *specific* projects to meet demands for next 20 years
- Appendix B of LWC Plan provides guidance and identifies sources of information needed by local governments
- Local governments incorporate projects into comprehensive plans within 18 months of water supply plans approval

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Population Projections

- Conflicting population projections between local plans, permits, and water supply plans
- Local government comprehensive plan future land uses are often not based on population projections
 - This can result in conflicting population projections-whether based on share of state's growth (BEBR) or land-use based
 - Increasing need for local governments to have alternative population projection methodology approved by DCA

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Irrigation Water Use Planning

- Irrigation can account for more than 50% of the water supply demands
- Reclaimed water typically not available at sufficient quantities during initial phases of developments
- Isn't always given the same level of attention as potable water

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Technical Assistance to Help Bring the Pieces Together

- Henry Bittaker
- E-mail: hbittak@sfwmd.gov
- Phone: 561-682-6792
- SFWMD website and assistance
 - www.sfwmd.gov/ear

sfwmd.gov

**Water Supply Planning
and
Local Comprehensive Plans**



Ft. Myers, Florida
June 8, 2007

General Requirements

- Local governments subject to a regional water supply plan prepared by the water management district are required to:
 - Prepare a water supply facilities work plan
 - Identify how future water supply needs will be met, and
 - Amend the local comprehensive plan to incorporate the work plan

Specific Requirements

- Collier County, Glades County, Henry County, Lee County and the municipalities in these counties must prepare 10-year water supply work plans and adopt comprehensive plan amendments by January 12, 2008
- Charlotte County and its municipalities are due by May 30, 2008

OCA
Encourages
this
option

Water Supply Plan

- > Preferred way to amend the comprehensive plan to incorporate the work plan:
 - * Include the plan as a "Sub-element"
- > Alternate ways:
 - Incorporate by reference in a policy
 - Include as a set of Goals, Objectives and Policies in the Infrastructure Element
 - Include as goals, objectives and policies throughout the comprehensive plan

Eye to internal Comp Plan
consistency ...

Water Supply Plan

- > The 10-year water supply facilities work plan should address:
 - Projections of water demand
 - Existing water sources and facilities
 - Alternative water sources, conservation, reuse, and the need for new and expanded facilities
 - * Cost analysis and funding for capital improvements projects

Internal Consistency

- > The work plan may require updates to several comprehensive plan elements
 - Future Land Use
 - Conservation
 - Infrastructure
 - Intergovernmental Coordination
 - Capital Improvements
 - Others, as needed

Additional Information

**Bob Dennis, Regional Planning
Administrator
Division of Community Planning
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100
Phone: (850) 922-1765
E-mail: bob.dennis@dca.state.fl.us**

Additional Information

**Comprehensive Plan Review for Glades,
Hendry, Collier and Monroe Counties**

**Christopher Stahl,
Environmental Specialist III
Office of Intergovernmental Programs
Phone: (850) 245-2169
E-mail: chris.stahl@dep.state.fl.us**

Additional Information

**Comprehensive Plan Review for Lee and
Charlotte Counties**

**Robin Branda, Environmental Specialist III
Office of Intergovernmental Programs
Phone: (850) 245-2182
E-mail: robin.branda@dep.state.fl.us**

[Implementation Update, September 2006](#) | [2005 Growth Management Reform Update](#) | [Florida's 2005 Growth Law](#)
[Department of Education](#) | [Department of Environmental Protection](#) | [Department of Transportation](#) | [Frequently Asked Questions](#) | [Century Commission](#) | [Impact Fee Review Task Force](#) | [Join our Mailing List](#) | [Partners and Links](#) | [Technical Assistance Publications](#) | [Growth Management Home](#)

Water Supply Planning FAQs

Alternative Water Supply Funding Assistance Program Sections 373.196, 373.1961 and 403.890, F.S. (2005)

[Funding-related Frequently Asked Questions](#)
[Planning-related Frequently Asked Questions](#)

Introduction

The 2005 Florida Legislature enacted landmark growth management legislation that will impact the quality of life in years to come. Senate Bills 360 and 444 contained significant modifications to Chapter 163, Part II (the state's growth management statute), as well as Chapters 373 and 403 with regard to water supply. Specifically with regard to water supply, the legislation:

- Better coordinates local government comprehensive planning with water management districts' regional water supply plans, which are currently being updated.
- Establishes a closer link between development decisions and the availability of water by requiring local governments to determine whether adequate water supplies will be available no later than issuance of a certificate of occupancy.
- Provides for more comprehensive regional water supply plans, permitting incentives for development of alternative water supplies, and alternative water supply development funding assistance.
- Provides \$200 million for fiscal year 2005-06 to fund alternative water supply water projects (\$100 million), the SWIM Program (\$50 million), the SWIM Program (\$25 million) and the Disadvantaged Small Community Wastewater Program (\$25 million). Beginning with the 2006-07 fiscal year, the annual funding will drop to \$100 million, with \$60 million being for alternative water supply development.

The state's water management districts are currently updating their respective regional water supply plans. During development of those plans, local governments and other water suppliers should meet and interact closely with water management district staff. Under the new legislation, local governments subject to a regional water supply plan must develop alternative water supply projects necessary to meet existing and future development needs. By working with the districts during the update of the plans, local governments and water suppliers will have an opportunity to provide input on water supply projects that they want to be included in the plan, as well as learn of other projects under consideration by the districts.

for inclusion in the updated plan.

Local governments should contact their water management district(s) to inquire about upcoming meetings and other opportunities to obtain information from district staff on its progress in updating the regional water supply plan(s) at the local government. Please see the answers to [Questions 20-21](#) for the names and contact information of water management district staff involved in the plan updates and alternative water supply funding.

Read a [background paper](#) on water supply planning.

Funding-related FAQs:

1. What kinds of water supply projects qualify for funding?

The new funding is for alternative water supply projects, defined in Section 373.019(1), F.S., as "salt water; brackish water; surface water captured predominantly during wet-weather flows; sources made available through the addition of new storage capacity for surface or groundwater; water that has been reclaimed after one or more public uses; municipal, industrial, commercial, or agricultural uses; the downstream augmentation of water bodies with reclaimed stormwater; and any other water source that is designated as nontraditional for a water supply planning region in the applicable regional water supply plan."

In most cases, the project should be included in the regional water supply plan of the water management district (WMD), although 20 percent of the funds may be allocated -- at the discretion of each WMD -- to projects that are not in the plan but are consistent with its goals. Funds are not available for traditional water supply projects or for purchasing water from other entities or jurisdictions.

2. What aspects of alternative water supply projects qualify for state and district funds?

Direct financial assistance provided under the Water Protection and Sustainability Program (Section 373.1961(3), F.S.) is for construction only. The WMDs may, however, choose to fund some non-construction activities, such as feasibility studies, from other district programs related to water resource and supply development.

3. Are reimbursements available for water projects completed before passage of the new law?

Program funding is only available for new alternative water supply projects or new phases of projects already initiated. Projects must be approved for program funding by the WMD governing board before expenditures are made.

4. What permitting requirements apply to an alternative water supply project approved for program funding?

All applicable permitting requirements (e.g., those of state, regional and local agencies) normally applicable to alternative water supply projects apply to these projects.

water supply projects will remain unchanged for projects funded under the new program. For additional information on WMD permitting requirements, please contact the WMD staff listed in the answer to Question 21 or see the appropriate district's website listed below:

<http://www.nwfwmd.state.fl.us/permits/permit.htm>

<http://www.srwmd.state.fl.us/services/permitting/default.htm>

<https://permitting.sjrwmd.com/epermitting/jsp/start.jsp>

<http://www.swfwmd.state.fl.us/permits/>

<http://www.sfwmd.gov/site/index.php?id=25>

5. What action can a local government take to implement an alternative water supply project if it is not listed in the current regional water supply plan?

Local governments should get involved in WMD activities that are currently under way for updating the regional water supply plans. Local governments and water suppliers should work closely with the WMDs over the next several months to review proposed projects included in the regional water supply plans as they are updated. Alternatively, Section 373.1961 F.S., provides that a district governing board may allocate up to 20 percent of the alternative water supply funding to "projects that are not identified or listed in the regional water supply plan but are consistent with the goals of the plan."

6. The statutory deadline for updating the regional water supply plans is December 31, 2006. Can the water management districts award funds under the new program prior to that deadline?

Yes. The districts are moving forward expeditiously to complete their regional water supply plan updates. The St. Johns River Water Management District expects to complete its plan update by February 1, 2006. The South Florida WMD and Southwest Florida WMD anticipate plan update approval in July 2006, and the Northwest Florida WMD update is expected in October 2006. Upon completion of the plan updates, the districts will use the current regional water supply plans as the guide for selecting projects for funding.

7. Can a WMD's regional water supply plan be updated more frequently than once every five years to accommodate alternative water supply projects?

Yes, if the WMD feels that additional projects need to be added, it may amend its regional water supply plan(s) as necessary.

8. If a WMD updates its regional water supply plan more frequently than once every five years, does each update trigger the requirement for the local government to update its comprehensive plan?

If the update adds new alternative water supply projects to the regional water supply plan's list of alternative water supply projects and indicates the entity recommended for implementation of the project, the WMD would have to notify the recommended entities. If the notified entity is a local government, it would have to update its comprehensive plan.

statutory 18-month time frame.

9. If a city/county falls in two water management districts, can we apply to both?

If a proposed water supply project would assist in providing water in more than one water management district, the applicant could seek funding from both districts. To allow the districts to coordinate their funding efforts, the application should state that a submittal has been made to both districts and clearly state the amount of funds sought from each district.

10. What if the applicant (local government or water supplier) is in one district, but the alternative water supply project it wants to develop is located in another?

The funding application should be submitted to the district where the water will be used, with a courtesy copy sent to the district where the project will be located. A consumptive use permit for the project must be obtained from the district where the water is withdrawn, as opposed to where the water is used.

11. Who can apply for the new funds?

Local governments, public and private utilities, industrial and agricultural operations, special districts and other public and private water users may all apply for program funds. While the primary focus during development of the legislation was public water supply, the program is not limited to that sector. Section 373.196(1)(f), F.S., provides: "It is in the public interest that county, municipal, industrial, agricultural, and other public and private water users, the Department of Environmental Protection, and the water management districts cooperate and work together in the development of alternative water supply to avoid the adverse effects of competition for limited supplies of water. Public moneys or services provided to private water users for alternative water supply development may constitute public purposes that also are in the public interest."

12. Can more than one jurisdiction apply together?

Yes. Local governments, special districts, and publicly or privately owned water utilities are encouraged to form multijurisdictional water supply entities to jointly develop alternative water supplies (Sections 373.019(12) and 373.196(1)(f), F.S.). One of the factors to be given significant weight by a WMD in selecting projects for funding is whether or not the project will be implemented by a multijurisdictional water supply entity or regional water supply authority.

13. Are the state funds matched by the water management districts?

The statute provides that it is the goal of the WMDs to match state funds on a dollar-for-dollar basis. Two types of funding allocations will count as match for the state funds. Under Section 373.196(6)(a), F.S., districts must include the following two separate allocations in their annual budgets:

- (1) Funds for alternative water supply projects selected for inclusion in the Water Protection and Sustainability Program. This district allocation will be combined with state funds provided through the Water Protection and Sustainability Program.

Sustainability Program Trust Fund under Section 403.890, F.S., and made available to water suppliers (through cost-sharing agreements) to assist them in constructing alternative water supply projects.

(2) Funds for "water resource development that supports alternative water supply development[.]" Although statutory definition of "water resource development" is very broad, the critical factor for purposes of determining what qualifies as match is the phrase, "that supports alternative water supply development." In general, water resource development that furthers the implementation of one or more specific alternative water supply project(s) may be appropriately counted as match. For example, district funds expended for project feasibility analysis, design engineering, or specific data collection necessary to support a particular alternative water supply project would qualify as match.

14. What is the local government contribution for project construction?

Section 373.1961(3)(e), F.S., states that applicants must pay at least 60% of the project's construction costs. Each governing board will determine the percentage of project construction costs to be provided by the program. In some cases, the level of program funding may be less than 40% of the construction costs, so that the governing board can maximize the number of projects that will receive construction funding assistance. Water management districts have the discretion (partially or totally) to waive the 60% requirement for projects sponsored by financially disadvantaged small local government management districts or basin boards may also use ad valorem or federal revenues to help an applicant meet the requirement.

15. Can local governments use other grant money, such as federal funds, for matching funds?

Federal, regional and local funds may be used as match for the alternative water supply funds provided by the state water management districts under Section 373.1961(3), F.S. Other state or district funds may not be used as match.

16. Who decides which projects will be funded by the new alternative water supply funding program established under Section 373.1961(3), F.S.?

The governing boards of the water management districts (Section 373.1961(3)(f), F.S.)

17. What factors will the governing board use to determine which projects to fund? Will the water management districts have additional factors of their own?

The statute provides two sets of factors that the WMD Governing Boards must consider when determining those projects that will be selected for funding. The legislation does not designate any one factor as a "precondition" for funding assistance. Rather, the Governing Board has the discretion to weigh each of the factors in its consideration of proposed projects. Section 373.1961(3)(f), F.S., provides factors that must be given significant weight in project selection. Section 373.1961(3)(g) provides a second list of factors that should also be considered. The Governing Board also has the discretion to establish additional factors.

additional factors. The statutory factors are not "minimum criteria"; rather, they serve to guide the WMD Governing their assessment of the relative benefits of potential projects.

Sections 373.1961(3)(f) and (g), F.S., provide:

(f) The governing boards shall determine those projects that will be selected for financial assistance. The governing boards may establish factors to determine project funding; however, significant weight shall be given to the following factors:

1. Whether the project provides substantial environmental benefits by preventing or limiting adverse water resource impacts.
2. Whether the project reduces competition for water supplies.
3. Whether the project brings about replacement of traditional sources in order to help implement a minimum flow or level or a reservation.
4. Whether the project will be implemented by a consumptive use permittee that has achieved the targets contained in a goal-based water conservation program approved pursuant to s. 373.227.
5. The quantity of water supplied by the project as compared to its cost.
6. Projects in which the construction and delivery to end users of reuse water is a major component.
7. Whether the project will be implemented by a multijurisdictional water supply entity or regional water supply authority.

(g) Additional factors to be considered in determining project funding shall include:

1. Whether the project is part of a plan to implement two or more alternative water supply projects, all of which will be operated to produce water at a uniform rate for the participants in a multijurisdictional water supply entity or regional water supply authority.
2. The percentage of project costs to be funded by the water supplier or water user.
3. Whether the project proposal includes sufficient preliminary planning and engineering to demonstrate that the project can reasonably be implemented within the timeframes provided in the regional water supply plan.

4. Whether the project is a subsequent phase of an alternative water supply project that is underway.

5. Whether and in what percentage a local government or local government utility is transferring water supply system revenues to the local government general fund in excess of reimbursements for services received from the general fund, including direct and indirect costs and legitimate payments in lieu of taxes.

18. If an alternative water supply project is listed in a regional water supply plan, does that mean the WMD it?

No, but the project would be eligible for funding under the program if selected by the Governing Board.

19. If a city or county has existing water capacity, can they apply for future projects in advance?

WMDs' regional water supply plans have 20-year planning horizons to identify whether additional water supply will be needed in the future. If a district has determined that certain jurisdictions will need additional water supplies in coming years, those jurisdictions should start planning for those sources and facilities now. Local governments' identification of projects needed to meet future demand would demonstrate its commitment to providing adequate facilities to serve future growth, encourage the WMD's inclusion of the project in its regional water supply plan, and local government's desire to obtain funds under the Water Protection and Sustainability Program. Alternative water projects can take seven to 12 years to plan, design and construct. Keeping in mind that funds from the new program will be used for construction, applicants should apply for funds well enough in advance to ensure that the facility can be operational in time to meet the projected need.

20. Whom should local governments contact to apply for funds?

The state's water management districts will administer the alternative water supply funds. The contacts for each water management district are listed below:

NWFWMD: Paul Thorpe, (850) 539-5999

paul.thorpe@nwfwmd.state.fl.us

SRWMD: David Still, (386) 362-1001 or 1-800-226-1066

still_d@srwmd.state.fl.us

Steve Minnis - (386) 362-1001 or 1-800-226-1066,

minnis_s@srwmd.state.fl.us

<http://www.mysuwanneeriver.com>

SJRWMD: John Wester, (386) 329-4457 or 1-800-451-7106

jwester@sjrwmd.com

SFWMD: Jane Bucca, (561) 682-6791 or 1-800-432-2045, x. 6791,
jbucca@sfwmd.gov
<http://www.sfwmd.gov/org/wsd/aws/index.html>

SWFWMD: Rand Baldwin, Tampa Service Office (Hillsborough, Pinellas, Pasco Counties), (813) 985-7481
rand.baldwin@watermatters.org

Jimmy Brooks, Lecanto Service Office (Levy, Marion,
Sumter, Citrus, Lake, Hernando), (352) 527-8131
jimmy.brooks@watermatters.org

Brett Cyphers, Bartow Service Office (Polk, Hardee, Highlands), (863) 534-1448 or 1-800-492-7862
brett.cyphers@watermatters.org

Sarasota Service Office (Manatee, Sarasota, Charlotte, DeSoto), (941) 377-3722 or 1-800-320-3503
<http://www.swfwmd.state.fl.us/business/coopfnd/guideln.htm>

21. Is assistance available to help with the application process?

Yes. Applicants should contact the following staff of the water management district in which the applicant is located (373.196(3)(f), F.S.):

NWFWMD: Ron Bartel, (850) 539-5999
ron.bartel@nwfwmd.state.fl.us
<http://www.nwfwmd.state.fl.us>

SRWMD: David Still, (386) 362-1001 or 1-800-226-1066,
still_d@srwmd.state.fl.us
<http://www.mysuwanneeriver.com>

SJRWMD: Barbara Vergara, (386) 329-4169 or 1-800-451-7106,
bvergara@sjrwmd.com
<http://www.sjrwmd.com/programs/watersupply.html>

SFWMD: Jane Bucca, (561) 682-6791 or 1-800-432-2045, x. 6791,
jbucca@sfwmd.gov
<http://www.sfwmd.gov/org/wsd/aws/index.html>

SWFWMD: Rand Baldwin, Tampa Service Office (Hillsborough, Pinellas, Pasco Counties), (813) 985-7481
rand.baldwin@watermatters.org

Jimmy Brooks, Lecanto Service Office (Levy, Marion, Sumter, Citrus, Lake, Hernando), (352) 527-8131
jimmy.brooks@watermatters.org

Brett Cyphers, Bartow Service Office (Polk, Hardee, Highlands), (863) 534-1448 or 1-800-492-7862
brett.cyphers@watermatters.org

Sarasota Service Office (Manatee, Sarasota, Charlotte, DeSoto), (941) 377-3722 or 1-800-320-3503
<http://www.swfwmd.state.fl.us/business/coopfnd/guideln.htm>

22. What deadlines exist for expending the funds?

Expenditures by the recipient must comply with the accounting requirements, procedures and deadlines established by the water management district from whom the funds were obtained.

23. Can local governments apply for phased funding to implement project construction over time?

Funds may be granted for a portion of a project or the entire project, depending on the length of time needed to complete the project, the complexity of the project, and other factors related to the particular funding cycle.

24. If an application is not funded, can it be resubmitted at a later date?

Projects that are not funded initially can be resubmitted at a later date, assuming the project is eligible for funding under the program and was not previously selected due to other higher priority projects, or the project application was amended to correct deficiencies previously identified by the WMD.

25. Once a local government is awarded funds to implement a project, can it modify the application to change the project or reschedule the project?

Any changes to the original application would have to be approved by the WMD. If a modification would affect the funding decision or result in a substantial delay, the district could redirect the funds to another project.

26. What are the obligations of the local government when it receives funding?

The local government must build and operate the project to produce water supplies from the alternative water supply in accordance with the project proposal approved by the WMD for funding. In addition, the local government must implement measures that promote water conservation and the use of alternative water supplies in accordance with Section 373.19 F.S. (2005).

Planning-related FAQs:

1. What are the new water supply requirements adopted by the 2005 Legislature that will affect local comprehensive planning programs?

Prior to the 2005 legislative session, local governments having responsibility for all or a portion of their water supply and located within an area for which the water management district had prepared a Regional Water Supply Plan were required to prepare a 10-Year Water Supply Facilities Work Plan. In addition, certain portions of the work plan were adopted into the local comprehensive plan by December 1, 2006. Local governments not within a regional water supply planning area were required to prepare their work plans and update their comprehensive plans as part of the comprehensive plan evaluation and appraisal review and amendment process.

In 2005, the Florida Legislature made significant changes to Chapters 163 and 373, F.S., to strengthen the link between land use and water supply planning. These changes were included in Senate Bill 360 (Chapter 2005-290, Laws of Florida) and Senate Bill 444 (Chapter 2005-291, Laws of Florida). The legislative changes encourage cooperation in the development of alternative water supplies and reemphasize the need for conservation and reuse. Additional changes include a revision of the line for preparing local supply facilities work plans for building public, private, and regional water supply facilities, the development of alternative water supplies, and new provisions to be addressed in local comprehensive plans. Funds have been appropriated to assist local governments with the construction of alternative water supply projects.

There were five water supply requirements adopted last year that affect local government comprehensive planning. These requirements relate to water supply concurrency, ensuring intergovernmental coordination with regional water authorities, ensuring that the local government's future land use plan (future land use element and future land use map) is based upon the availability of adequate water supplies, and the inclusion of selected alternative water supply projects in the local comprehensive plan. Future comprehensive plan evaluation and appraisal reports will be required to include a report on progress made in implementing the alternative water supply projects selected by the local government.

2. Is there a definition of alternative water supplies?

The definition of alternative water supplies as provided in Section 373.019, F.S., "means salt water; brackish surface water; groundwater; surface water captured predominately during wet-weather flows; sources made available through the new storage capacity for surface or groundwater, water that has been reclaimed after one or more public supply, nonpublic supply, industrial, commercial, or agricultural uses; the downstream augmentation of water bodies with reclaimed water; and any other water supply source that is designated as nontraditional for a water supply planning region in the approved regional water supply plan."

The regional water supply plans prepared by the water management districts will identify alternative water supply project options.

3. How has the 2005 legislation changed the comprehensive plan requirements for water supply planning?

All local governments are currently required to assess their current and projected water needs and sources for a minimum 10-year period, considering the appropriate regional water supply plan or, in the absence of a regional water supply plan, the water management district water management plan. This information is to be included in the Conservation Element of the comprehensive plan.

This part of the statute has not changed.

For those local governments not subject to a regional water supply plan, this update to the comprehensive plan will be part of the evaluation and appraisal review and amendment process.

Local governments subject to a regional water supply plan approved by the water management district will need to update their Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge (Infrastructure) Element to identify any alternative water supply project or projects they have selected from the regional water supply plan and identify any other alternative and traditional water supply projects, conservation and reuse programs necessary to meet projected water demands. Projects to be implemented in the first five years need to be included in the Five-Year Strategic Capital Improvements of the Capital Improvements Element.

Local governments and other water supply entities can select projects that are not included in the regional water supply plan, but the local government or water supply entity should request that the water management district include the projects in the regional water supply plan.

The 2005 legislation requires that the future land use element and the future land use map be based upon the available water supplies. In submitting future land use amendments, all local governments should include data and analysis that demonstrate that a sufficient supply of water is available to meet any increase in water demand created by the proposed land use change.

All local governments will need to address the water supply concurrency requirement adopted in 2005. Before issuing a building permit or its functional equivalent, the local government must "consult" with the applicable water supplier to determine that adequate water supplies will be available to serve the new development no later than the anticipated certificate of occupancy or its functional equivalent will be issued.

Section 163.3177(6)(h), F.S., currently requires the Intergovernmental Coordination Element of the local comprehensive plan to address the relationships and mechanisms for the "coordination of the adopted comprehensive plan with the plans of school boards and other units of local government providing services but not having regulatory authority over the unincorporated land..." This section has been revised to specifically include coordination with regional water supply authorities. All local governments that rely on a regional water supply authority for their water supply will need to review their comprehensive plans to determine if coordination with the regional water supply authority has been addressed in the Intergovernmental Coordination Element.

4. When are local governments required to implement the new water supply requirement? (Local governments within the Wekiva Study Area should also refer to the response to Question 5.)

The water supply concurrency requirement and ensuring coordination between the future land use element and future land use map with available water supplies have the most immediate dates for implementation. These changes were effective

July 1, 2005.

Local governments are advised to update their comprehensive plans and land development regulations as soon as possible to address the water supply concurrency requirement. Data and analysis to demonstrate that water supplies are sufficient to meet projected growth demands should be included with all new proposed amendments submitted to the Department for review.

Except for the local governments within the Wekiva Study Area, local governments located in an area subject to a management district regional water supply plan are required to prepare their 10-Year Water Supply Facility Work Plan and adopt revisions to their comprehensive plans within 18 months after the applicable regional water supply plan is approved by the water management district governing board. For those local governments located within more than one water management district, the 18-month time line begins with the last approved regional water supply plan applicable to the local government.

All local governments that rely on a regional water supply authority for their water supply will need to review their comprehensive plans to determine if the regional water supply authority has been included in the Intergovernmental Coordination Element. For those local governments subject to the regional water supply plan, any Intergovernmental Coordination Element that does not ensure coordination with the regional water supply authority will need to be updated as soon as possible. The Department recommends that the Intergovernmental Coordination Element be updated no later than 18 months after the appropriate water management district approves the regional water supply plan. Other local governments should update their Intergovernmental Coordination Elements as soon as possible, but no later than at the time the comprehensive plan is updated through the evaluation and appraisal review and amendment process.

In addition, the comprehensive plan Evaluation and Appraisal Report must address the extent to which the local government has implemented the work plan for building public, private and regional water supply facilities, including the development of alternative water supplies. The report must also include a determination as to whether the identified alternative water supply projects, traditional water supply projects, and the conservation and reuse programs have met local water use needs.

5. When are local governments in the Wekiva Study Area required to implement the new water supply requirements?

Local governments in the Wekiva Study Area will have to proceed on an accelerated schedule to meet the statutory requirements for updating certain portions of their comprehensive plans. Ch. 2005-106, Laws of Florida (SB 908), requires local governments in the Wekiva Study Area to prepare their 10-year water supply facility work plans and to incorporate relevant portions of the work plan into their comprehensive plans by December 1, 2006.

Under Chapter 2005-290, Laws of Florida (Senate Bill 360), a local government has 18 months after a water management district approves an updated regional water supply plan within which to prepare a 10-year water supply facilities work plan for building public, private, and regional water supply facilities and to amend its comprehensive plan to identify alternative water supply project(s), and the conservation and reuse programs that will be used to meet the water needs.

identified in the plan.

To create a meaningful 10-year work plan, the local governments in the Wekiva Study Area need to know what alternative water supply projects will be included in the updated regional water supply plans and include the relevant alternative supply projects in their 10-year water supply facility work plan. The St. Johns River Water Management District approved its regional water supply plan on February 7, 2006. The South Florida Water Management District anticipates approving its updated plan by July 2006.

To meet the statutory deadline of December 1, 2006, local governments in the Wekiva Study Area will only have a few months (rather than 18) within which to amend their comprehensive plans.

6. When are the Water Management District Governing Boards expected to approve their regional water supply plans?

The St. Johns River Water Management District approved its regional water supply plan on February 7, 2006.

The Northwest Florida and the Southwest Florida Water Management Districts anticipate updating their regional water supply plans by December 1, 2006.

The South Florida Water Management District expects to have its regional water supply plans updated by July 12, 2006.

The Suwannee River Water Management District has determined that the current water supply sources in its region are sufficient to meet projected needs for the next 20 years. As a result, this water management district has not identified areas for which a regional water supply plan is needed.

Local governments should coordinate with the appropriate water management district or districts on the development of their Regional Water Supply Plans to ensure their accuracy and completeness and to gain an understanding of the future water supply options available to them.

In addition to attending and participating in workshops and other information-exchange forums with water management district staff, local governments can undertake water use needs and water supply availability studies and provide that information to the districts for consideration. Local governments can also recommend alternative water supply projects to the water management districts, to be considered for inclusion in the regional water supply plans.

7. Are comprehensive plan amendments that address the water supply requirements exempt from the twice-a-year limitation on major amendments to the comprehensive plan?

Section 163.3177(6)(c), F.S., exempts any amendments to incorporate the local water supply plan into the comprehensive plan from the twice-a-year amendment limitation.

8. What technical assistance will be available to local governments?

The Department of Community Affairs and the Water Management Districts will be scheduling additional workshop of the five water management districts during development of each district's updated regional water supply plan. The purpose of the workshops will be to explain the new water supply requirements in more detail, to identify what information is needed in the 10-year water supply facility work plans and comprehensive plan elements, and what sources of information will be available to address those requirements. Local government and utility representatives will be invited to the workshops and there will be an opportunity to exchange information, discuss potential problems and solutions.

The Department, in coordination with the Water Management Districts and the Department of Environmental Protection, is also updating a report prepared in 2003 that will provide guidance for preparing comprehensive plan amendments in response to the revised water supply requirements. This guidance document is expected to be completed in May 2005.

9. Whom can I contact for more information?

Florida Department of Community Affairs

Bob Dennis, Principal Planner
(850) 922-1765; Suncom 292-1765
bob.dennis@dca.state.fl.us
www.dca.state.fl.us

Florida Department of Environmental Protection

Janet Llewellyn, Deputy Director, Division of Water Resources
(850) 245-8676; Suncom 205-8676
janet.llewellyn@dep.state.fl.us
www.dep.state.fl.us

South Florida Water Management District:

Jim Jackson, Senior Supervising Planning
(561) 682-6334; (800) 432-2045, ext. 6334; Suncom 229-6334
jjackson@sfwmd.gov

Jane Bucca, Alternative Water Supply Program Manager
(561) 682-6791; (800) 432-2045, ext. 6791; Suncom 229-6791
jbucca@sfwmd.gov

Henry Bittaker, Senior Planner

Comprehensive Planning Issues

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www.sfwmd.gov

Lower East Coast Regional Water Supply Plan

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bpowell@sfwmd.gov

Kissimmee Basin Regional Water Supply Plan

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(407) 858-6100, ext. 3822

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Upper East Coast Regional Water Supply Plan

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Lower West Coast Regional Water Supply Plan

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St. Johns River Water Management District

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Southwest Florida Water Management District

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(352) 796-7211, ext. 4400; (800) 423-1476
Richard.Owen@watermatters.org

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(352) 796-7211, ext. 4411; (800) 423-1476
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Miki Renner, AICP, Planning Manager
(352) 796-7211, ext. 4413; (800) 423-1476
Miki.Renner@watermatters.org
www.watermatters.org

Suwannee River Water Management District

David Still, Deputy Executive Director
(386) 362-1001 or (800) 226-1066
still_d@srwmd.state.fl.us

Steven Minnis, Senior Resource Development Coordinator
(386) 362-1001 or (800) 226-1066
minnis_s@srwmd.state.fl.us
www.srwmd.state.fl.us

Northwest Florida Water Management District

Paul Thorpe, AICP, Director, Resource Planning Section
(850) 539-5999; (800) 913-1518; Suncom 771-2080, ext. 133
paul.thorpe@nwfwmd.state.fl.us
www.nwfwmd.state.fl.us

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3/20/2008

<u>FRANCHISENAME</u>	<u>SHAPE_Area</u>	<u>Acres</u>	<u>PercentFranchise</u>
Bonita Springs Utilities			
Bonita Springs	1,144,436,170.32	26,272.64	0.73%
	425,487,714.59	9,767.85	0.27%
Bonita Springs Utilities	1,569,923,884.91	36,040.49	
Grand Total:	1,569,923,884.91		

Estimate of Population Served by Wells

Properties Not Served by Lee County Utilities and Not in another Franchise Area

Date of Report: 2/12/2009

Planning Community	Total Units	Single	Duplex	Apt	Mobile	RV	Population Permanent/Functional		
Fort Myers Beach	0	0	0	0	0	0	9	0	0
Sanibel	0	0	0	0	0	0	14	0	0
Cape Coral	1	1	0	0	0	0	6	2	2
Pine Island	9	9	0	0	0	0	16	13	17
Gateway/Airport	14	9	0	1	4	0	10	34	37
South Fort Myers	48	46	0	0	2	0	15	84	95
Fort Myers	146	146	0	0	0	0	8	329	352
Daniels Parkway	300	287	0	0	13	0	11	522	636
Fort Myers Shores	341	315	6	0	20	0	4	745	813
Southeast Lee County	467	267	32	0	168	0	18	1,087	1,115
Iona/McGregor	549	283	4	88	174	0	12	677	1,040
Lehigh Acres	919	857	62	0	0	0	17	2,119	2,248
Estero	961	69	0	0	341	551	21	1,211	1,826
Buckingham	1,040	901	4	0	135	0	20	2,874	2,895
Bayshore	1,327	952	6	2	370	0	22	3,091	3,198
Alva	1,436	1,112	18	0	306	0	1	3,371	3,486
Captiva	1,613	926	68	619	0	0	7	529	3,046
Burnt Store	1,884	772	42	1,072	0	0	5	2,090	3,446
North Fort Myers	1,886	632	4	0	1,251	0	19	3,089	3,731
San Carlos	1,994	1,738	242	0	14	0	13	4,237	4,715
Grand Total:	14,935	9,322	488	1,782	2,798	551		26,106	32,698

Population Served By Domestic Wells Permitted by Lee County Since May 1, 1986

<u>Planning Community</u>			<u>Population</u>	<u>Functional Population</u>	<u>Units</u>
Alva	0.89	2.68	1,903	1,999	798
Bayshore	0.87	2.79	1,772	1,889	730
Boca Grande	0.49	1.99	1	2	1
Bonita Springs	0.65	2.32	855	1,195	567
Buckingham	0.94	2.81	2,707	2,728	1,025
Burnt Store	0.74	2.13	164	208	104
Cape Coral	0.88	2.58	111	118	49
Captiva	0.17	1.99	88	494	260
Daniels Parkway	0.76	2.43	720	868	390
Estero	0.62	2.20	730	1,083	535
Fort Myers	0.88	3.14	1,056	1,109	382
Fort Myers Beach	0.41	2.11	2	4	2
Fort Myers Shores	0.84	2.54	521	574	244
Gateway/Airport	0.84	3.05	118	128	46
Iona/McGregor	0.62	2.07	393	595	306
Lehigh Acres	0.88	2.52	65,424	69,554	29,502
North Fort Myers	0.79	2.25	2,320	2,737	1,305
Pine Island	0.72	2.14	203	264	132
San Carlos	0.83	2.58	4,921	5,472	2,298
South Fort Myers	0.83	2.19	362	409	199
Southeast Lee County	0.60	2.55	695	1,012	454
Total Population Served by Lee County permitted Wells			85,064	92,443	39,329

N.A.

Population Served By Domestic Wells Permitted by Lee County Since May 1, 1986

Planning Community			Population	<u>Units</u>
Alva	0.89	2.68	1,903	798
Bayshore	0.87	2.79	1,772	730
Boca Grande	0.49	1.99	1	1
Bonita Springs	0.65	2.32	855	567
Buckingham	0.94	2.81	2,707	1,025
Burnt Store	0.74	2.13	164	104
Cape Coral	0.88	2.58	111	49
Captiva	0.17	1.99	88	260
Daniels Parkway	0.76	2.43	720	390
Estero	0.62	2.20	730	535
Fort Myers	0.88	3.14	1,056	382
Fort Myers Beach	0.41	2.11	2	2
Fort Myers Shores	0.84	2.54	521	244
Gateway/Airport	0.84	3.05	118	46
Iona/McGregor	0.62	2.07	393	306
Lehigh Acres	0.88	2.52	65,424	29,502
North Fort Myers	0.79	2.25	2,320	1,305
Pine Island	0.72	2.14	203	132
San Carlos	0.83	2.58	4,921	2,298
South Fort Myers	0.83	2.19	362	199
Southeast Lee County	0.60	2.55	695	454
Total Population Served by Lee County permitted Wells			85,064	39,329

Estimate of Population Served by Wells

Properties Not Served by Lee County Utilities and Not in another Franchise Area

Date of Report: 2/12/2009

PLANCOMMUN	RES_UN	SINGLE	DUPLEX	MULTI_FI	ANUFA	REC_VE	LAND	
Fort Myers Beach	0	0	0	0	0	0	9	0
Sanibel	0	0	0	0	0	0	14	0
Cape Coral	1	1	0	0	0	0	6	2
Pine Island	9	9	0	0	0	0	16	13
Gateway/Airport	14	9	0	1	4	0	10	34
South Fort Myers	48	46	0	0	2	0	15	84
Fort Myers	146	146	0	0	0	0	8	329
Daniels Parkway	300	287	0	0	13	0	11	522
Fort Myers Shores	341	315	6	0	20	0	4	745
Southeast Lee County	467	267	32	0	168	0	18	1,087
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Buckingham	1,040	901	4	0	135	0	20	2,874
Bayshore	1,327	952	6	2	370	0	22	3,091
Alva	1,436	1,112	18	0	306	0	1	3,371
Captiva	1,613	926	68	619	0	0	7	529
Burnt Store	1,884	772	42	1,072	0	0	5	2,090
North Fort Myers	1,886	632	4	0	1,251	0	19	3,089
San Carlos	1,994	1,738	242	0	14	0	13	4,237
Grand Total:	14,935	9,322	488	1,782	2,798	551		26,106

2030 Population Anticipated to be Served by Wells outside of Franchise Areas

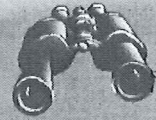
Lee County Population Outside of LCU

Service Area				Population Inside Service Area but not Expected to Be Served With Potable Water			
Permanent	Seasonal	Functional	Planning Community	Permanent	Seasonal	Functional	Notes
5,090	171	5,261	Alva				
3,816	126	3,942	Bayshore				
-		-	Boca Grande				
-		-	Buckingham	4,911	37	4,948	
-		-	Cape Coral				
530	2,443	2,973	Captiva				
-		-	Daniels Parkway	696	152	848	Briarcliff and Rural north of Daniels Pkwy
-		-	Estero				
-		-	Fort Myers				
1,275	120	1,395	Fort Myers Shores				
-		-	Gateway Airport				
-		-	Iona/McGregor				
1,243	75	1,318	Lehigh Acres				
420	79	499	North Fort Myers				
-		-	Pine Island				
320	36	356	San Carlos				
		-	South Fort Myers				
1,301	55	1,356	Southeast Lee County				
13,995	3,104	17,099	Total	5,607	189	5,796	

Population Not Served	
Permanent	19,602
Seasonal	3,294
Functional	22,895

Vision 2020 Comprehensive Plan

Seminole County, Florida



OBJECTIVE POT 3 LEVELS OF SERVICE

The County shall establish and maintain a set level of service for each County potable water facility by providing facilities with sufficient capacity to meet projected service demands.

Policy POT 3.1 Levels of Service Standards

The County shall maintain adopted levels of service standards through the day-to-day activities of the Department of Environmental Services and the implementation of the adopted Capital Improvements Element and the adopted annual budget. Current and proposed level of service standards shall be consistent both in this policy and in the Potable Water Element's Water Supply Facilities Work Plan.

(Revised: Amendment 06EX.TXT03.1.06, Ordinance 2007-XX45, 11/13/2007)

The following levels of service standards are adopted for each individual service area:

- A 350 gallons/day/Equivalent Residential Connection. Flow demands for commercial, industrial or other special developments differing from the flow values established by the serving utility shall be established from existing records or by estimated projections, using the best available data.
- B Fire flows in single family residential areas shall provide 600 gpm at a 20 psi residual pressure. Fire flows in commercial, institutional, industrial areas and apartment or multi-unit complexes shall provide 1,250 gpm at a 20 psi residual pressure.
- C Each peak treatment facility capacity shall be maintained at a minimum of two times (2) the permitted capacity.
- D These levels of service shall also be applied for planning purposes to private and city utilities serving unincorporated customers unless a different level of service is authorized by the Florida Department of Environmental Protection or as adopted in a comprehensive plan.
- E The County shall continue to operate in compliance with all rules and requirements of FDEP, as well as all other applicable laws, rules and regulations, including but not limited to peak day, peak hour and service pressure requirements.

Policy POT 3.2 Water Quality Master Plan

The County shall update the Water Quality Master Plan every five years. As part of the update, the County shall conduct a level of service review to determine if adjustment of the existing level is necessary based on, but not limited to, historical data and projected demand. The Water Supply Facilities Work Plan (Work Plan) shall be supported by the Water Quality Master Plan. The Work Plan shall be revised and updated as necessary to maintain consistency with the Master Plan.

(Revised: Amendment 06EX.TXT03.1.07, Ordinance 2007-XX45, 11/13/2007)

Policy POT 3.3 New and Replacement Equipment

The County shall maintain the established levels of potable water service through the acquisition of new and replacement equipment in accordance with the adopted five year Capital Improvements Element.

Policy POT 3.4 Transmission Lines

The County shall ensure that future transmission lines are sized to adequately meet the projected demands of development according to development phasing needs based



[Implementation Update, September 2006](#) | [2005 Growth Management Reform Update](#) | [Florida's 2005 Growth Law](#)
[Department of Education](#) | [Department of Environmental Protection](#) | [Department of Transportation](#) | [Frequently Asked Questions](#) | [Century Commission](#) | [Impact Fee Review Task Force](#) | [Join our Mailing List](#) | [Partners and Links](#) | [Technical Assistance Publications](#) | [Growth Management Home](#)

Water Supply Planning FAQs

Alternative Water Supply Funding Assistance Program Sections 373.196, 373.1961 and 403.890, F.S. (2005)

[Funding-related Frequently Asked Questions](#)
[Planning-related Frequently Asked Questions](#)

Introduction

The 2005 Florida Legislature enacted landmark growth management legislation that will impact the quality of life in years to come. Senate Bills 360 and 444 contained significant modifications to Chapter 163, Part II (the state's growth management statute), as well as Chapters 373 and 403 with regard to water supply. Specifically with regard to water supply, the legislation:

- Better coordinates local government comprehensive planning with water management districts' regional water supply plans, which are currently being updated.
- Establishes a closer link between development decisions and the availability of water by requiring local governments to determine whether adequate water supplies will be available no later than issuance of a certificate of occupancy.
- Provides for more comprehensive regional water supply plans, permitting incentives for development of alternative water supplies, and alternative water supply development funding assistance.
- Provides \$200 million for fiscal year 2005-06 to fund alternative water supply water projects (\$100 million), the SWIM Program (\$50 million), the SWIM Program (\$25 million) and the Disadvantaged Small Community Wastewater Program (\$25 million). Beginning with the 2006-07 fiscal year, the annual funding will drop to \$100 million, with \$60 million being for alternative water supply development.

The state's water management districts are currently updating their respective regional water supply plans. During development of those plans, local governments and other water suppliers should meet and interact closely with water management district staff. Under the new legislation, local governments subject to a regional water supply plan must develop alternative water supply projects necessary to meet existing and future development needs. By working with the districts during the update of the plans, local governments and water suppliers will have an opportunity to provide input on water supply projects that they want to be included in the plan, as well as learn of other projects under consideration by the districts.

for inclusion in the updated plan.

Local governments should contact their water management district(s) to inquire about upcoming meetings and other opportunities to obtain information from district staff on its progress in updating the regional water supply plan(s) at the local government. Please see the answers to [Questions 20-21](#) for the names and contact information of water management district staff involved in the plan updates and alternative water supply funding.

Read a [background paper](#) on water supply planning.

Funding-related FAQs:

1. What kinds of water supply projects qualify for funding?

The new funding is for alternative water supply projects, defined in Section 373.019(1), F.S., as "salt water; brackish water; surface water captured predominantly during wet-weather flows; sources made available through the addition of new storage capacity for surface or groundwater; water that has been reclaimed after one or more public uses; municipal, industrial, commercial, or agricultural uses; the downstream augmentation of water bodies with reclaimed stormwater; and any other water source that is designated as nontraditional for a water supply planning region in the applicable regional water supply plan."

In most cases, the project should be included in the regional water supply plan of the water management district (WMD), although 20 percent of the funds may be allocated -- at the discretion of each WMD -- to projects that are not in the plan but are consistent with its goals. Funds are not available for traditional water supply projects or for purchasing water from other entities or jurisdictions.

2. What aspects of alternative water supply projects qualify for state and district funds?

Direct financial assistance provided under the Water Protection and Sustainability Program (Section 373.1961(3), F.S.) is for construction only. The WMDs may, however, choose to fund some non-construction activities, such as feasibility studies, from other district programs related to water resource and supply development.

3. Are reimbursements available for water projects completed before passage of the new law?

Program funding is only available for new alternative water supply projects or new phases of projects already initiated. Projects must be approved for program funding by the WMD governing board before expenditures are made.

4. What permitting requirements apply to an alternative water supply project approved for program funding?

All applicable permitting requirements (e.g., those of state, regional and local agencies) normally applicable to alternative water supply projects apply to these projects.

water supply projects will remain unchanged for projects funded under the new program. For additional information on WMD permitting requirements, please contact the WMD staff listed in the answer to Question 21 or see the appropriate district's website listed below:

<http://www.nwfwmd.state.fl.us/permits/permit.htm>

<http://www.srwmd.state.fl.us/services/permitting/default.htm>

<https://permitting.sjrwmd.com/epermitting/jsp/start.jsp>

<http://www.swfwmd.state.fl.us/permits/>

<http://www.sfwmd.gov/site/index.php?id=25>

5. What action can a local government take to implement an alternative water supply project if it is not listed in the current regional water supply plan?

Local governments should get involved in WMD activities that are currently under way for updating the regional water supply plans. Local governments and water suppliers should work closely with the WMDs over the next several months to get proposed projects included in the regional water supply plans as they are updated. Alternatively, Section 373.1961 F.S., provides that a district governing board may allocate up to 20 percent of the alternative water supply funding to "projects that are not identified or listed in the regional water supply plan but are consistent with the goals of the plan."

6. The statutory deadline for updating the regional water supply plans is December 31, 2006. Can the water management districts award funds under the new program prior to that deadline?

Yes. The districts are moving forward expeditiously to complete their regional water supply plan updates. The St. Johns River Water Management District expects to complete its plan update by February 1, 2006. The South Florida WMD and Southwest Florida WMD anticipate plan update approval in July 2006, and the Northwest Florida WMD update is expected in October 2006. Upon completion of the plan updates, the districts will use the current regional water supply plans as the guide for selecting projects for funding.

7. Can a WMD's regional water supply plan be updated more frequently than once every five years to accommodate additional alternative water supply projects?

Yes, if the WMD feels that additional projects need to be added, it may amend its regional water supply plan(s) as necessary.

8. If a WMD updates its regional water supply plan more frequently than once every five years, does each update trigger the requirement for the local government to update its comprehensive plan?

If the update adds new alternative water supply projects to the regional water supply plan's list of alternative water supply projects and indicates the entity recommended for implementation of the project, the WMD would have to notify the recommended entities. If the notified entity is a local government, it would have to update its comprehensive plan.

statutory 18-month time frame.

9. If a city/county falls in two water management districts, can we apply to both?

If a proposed water supply project would assist in providing water in more than one water management district, the applicant could seek funding from both districts. To allow the districts to coordinate their funding efforts, the application should state that a submittal has been made to both districts and clearly state the amount of funds sought from each district.

10. What if the applicant (local government or water supplier) is in one district, but the alternative water supply project it wants to develop is located in another?

The funding application should be submitted to the district where the water will be used, with a courtesy copy sent to the district where the project will be located. A consumptive use permit for the project must be obtained from the district where the water is withdrawn, as opposed to where the water is used.

11. Who can apply for the new funds?

Local governments, public and private utilities, industrial and agricultural operations, special districts and other public and private water users may all apply for program funds. While the primary focus during development of the legislation was public water supply, the program is not limited to that sector. Section 373.196(1)(f), F.S., provides: "It is in the public interest that county, municipal, industrial, agricultural, and other public and private water users, the Department of Environmental Protection, and the water management districts cooperate and work together in the development of alternative water supply to avoid the adverse effects of competition for limited supplies of water. Public moneys or services provided to private water users for alternative water supply development may constitute public purposes that also are in the public interest."

12. Can more than one jurisdiction apply together?

Yes. Local governments, special districts, and publicly or privately owned water utilities are encouraged to form multijurisdictional water supply entities to jointly develop alternative water supplies (Sections 373.019(12) and 373.196(1)(f), F.S.). One of the factors to be given significant weight by a WMD in selecting projects for funding is whether or not the project will be implemented by a multijurisdictional water supply entity or regional water supply authority.

13. Are the state funds matched by the water management districts?

The statute provides that it is the goal of the WMDs to match state funds on a dollar-for-dollar basis. Two types of funding allocations will count as match for the state funds. Under Section 373.196(6)(a), F.S., districts must include the following two separate allocations in their annual budgets:

- (1) Funds for alternative water supply projects selected for inclusion in the Water Protection and Sustainability Program. This district allocation will be combined with state funds provided through the Water Protection and Sustainability Program.

Sustainability Program Trust Fund under Section 403.890, F.S., and made available to water suppliers (through cost-sharing agreements) to assist them in constructing alternative water supply projects.

(2) Funds for "water resource development that supports alternative water supply development[.]" Although statutory definition of "water resource development" is very broad, the critical factor for purposes of determining what qualifies as match is the phrase, "that supports alternative water supply development." In general, water resource development that furthers the implementation of one or more specific alternative water supply projects may be appropriately counted as match. For example, district funds expended for project feasibility analysis, design engineering, or specific data collection necessary to support a particular alternative water supply project would qualify as match.

14. What is the local government contribution for project construction?

Section 373.1961(3)(e), F.S., states that applicants must pay at least 60% of the project's construction costs. Each governing board will determine the percentage of project construction costs to be provided by the program. In some cases, the level of program funding may be less than 40% of the construction costs, so that the governing board can maximize the number of projects that will receive construction funding assistance. Water management districts have the discretion (partially or totally) to waive the 60% requirement for projects sponsored by financially disadvantaged small local governments. Water management districts or basin boards may also use ad valorem or federal revenues to help an applicant meet the requirement.

15. Can local governments use other grant money, such as federal funds, for matching funds?

Federal, regional and local funds may be used as match for the alternative water supply funds provided by the state. Water management districts under Section 373.1961(3), F.S. Other state or district funds may not be used as match.

16. Who decides which projects will be funded by the new alternative water supply funding program established by Section 373.1961(3), F.S.?

The governing boards of the water management districts (Section 373.1961(3)(f), F.S.)

17. What factors will the governing board use to determine which projects to fund? Will the water management districts have additional factors of their own?

The statute provides two sets of factors that the WMD Governing Boards must consider when determining those projects that will be selected for funding. The legislation does not designate any one factor as a "precondition" for funding assistance. Rather, the Governing Board has the discretion to weigh each of the factors in its consideration of proposed projects. Section 373.1961(3)(f), F.S., provides factors that must be given significant weight in project selection. Section 373.1961(3)(g) provides a second list of factors that should also be considered. The Governing Board also has the discretion to establish additional factors.

additional factors. The statutory factors are not "minimum criteria"; rather, they serve to guide the WMD Governing their assessment of the relative benefits of potential projects.

Sections 373.1961(3)(f) and (g), F.S., provide:

(f) The governing boards shall determine those projects that will be selected for financial assistance. The governing boards may establish factors to determine project funding; however, significant weight shall be given to the following factors:

1. Whether the project provides substantial environmental benefits by preventing or limiting adverse water resource impacts.
2. Whether the project reduces competition for water supplies.
3. Whether the project brings about replacement of traditional sources in order to help implement a minimum flow or level or a reservation.
4. Whether the project will be implemented by a consumptive use permittee that has achieved the targets contained in a goal-based water conservation program approved pursuant to s. 373.227.
5. The quantity of water supplied by the project as compared to its cost.
6. Projects in which the construction and delivery to end users of reuse water is a major component.
7. Whether the project will be implemented by a multijurisdictional water supply entity or regional water supply authority.

(g) Additional factors to be considered in determining project funding shall include:

1. Whether the project is part of a plan to implement two or more alternative water supply projects, all of which will be operated to produce water at a uniform rate for the participants in a multijurisdictional water supply entity or regional water supply authority.
2. The percentage of project costs to be funded by the water supplier or water user.
3. Whether the project proposal includes sufficient preliminary planning and engineering to demonstrate that the project can reasonably be implemented within the timeframes provided in the regional water supply plan.

4. Whether the project is a subsequent phase of an alternative water supply project that is underway.
5. Whether and in what percentage a local government or local government utility is transferring water supply system revenues to the local government general fund in excess of reimbursements for services received from the general fund, including direct and indirect costs and legitimate payments in lieu of taxes.

18. If an alternative water supply project is listed in a regional water supply plan, does that mean the WMD will fund it?

No, but the project would be eligible for funding under the program if selected by the Governing Board.

19. If a city or county has existing water capacity, can they apply for future projects in advance?

WMDs' regional water supply plans have 20-year planning horizons to identify whether additional water supply will be needed in the future. If a district has determined that certain jurisdictions will need additional water supplies in coming years due to projected growth, those jurisdictions should start planning for those sources and facilities now. Local governments' identification of projects needed to meet future demand would demonstrate its commitment to providing adequate facilities to serve future growth, encourage the WMD's inclusion of the project in its regional water supply plan, and local government's desire to obtain funds under the Water Protection and Sustainability Program. Alternative water supply projects can take seven to 12 years to plan, design and construct. Keeping in mind that funds from the new program can be used for construction, applicants should apply for funds well enough in advance to ensure that the facility can be operational in time to meet the projected need.

20. Whom should local governments contact to apply for funds?

The state's water management districts will administer the alternative water supply funds. The contacts for each water management district are listed below:

NWFWMD: Paul Thorpe, (850) 539-5999
paul.thorpe@nwfwmd.state.fl.us

SRWMD: David Still, (386) 362-1001 or 1-800-226-1066
still_d@srwmd.state.fl.us

Steve Minnis - (386) 362-1001 or 1-800-226-1066,
minnis_s@srwmd.state.fl.us
<http://www.mysuwanneeriver.com>

SJRWMD: John Wester, (386) 329-4457 or 1-800-451-7106
jwester@sjrwmd.com

SFWMD: Jane Bucca, (561) 682-6791 or 1-800-432-2045, x. 6791,
jbucca@sfwmd.gov
<http://www.sfwmd.gov/org/wsd/aws/index.html>

SWFWMD: Rand Baldwin, Tampa Service Office (Hillsborough, Pinellas, Pasco Counties), (813) 985-7481
rand.baldwin@watermatters.org

Jimmy Brooks, Lecanto Service Office (Levy, Marion,
Sumter, Citrus, Lake, Hernando), (352) 527-8131
jimmy.brooks@watermatters.org

Brett Cyphers, Bartow Service Office (Polk, Hardee, Highlands), (863) 534-1448 or 1-800-492-7862
brett.cyphers@watermatters.org

Sarasota Service Office (Manatee, Sarasota, Charlotte, DeSoto), (941) 377-3722 or 1-800-320-3503
<http://www.swfwmd.state.fl.us/business/coopfnd/guideln.htm>

21. Is assistance available to help with the application process?

Yes. Applicants should contact the following staff of the water management district in which the applicant is located (373.196(3)(f), F.S.):

NWFWMD: Ron Bartel, (850) 539-5999
ron.bartel@nwfwmd.state.fl.us
<http://www.nwfwmd.state.fl.us>

SRWMD: David Still, (386) 362-1001 or 1-800-226-1066,
still_d@srwmd.state.fl.us
<http://www.mysuwanneeriver.com>

SJRWMD: Barbara Vergara, (386) 329-4169 or 1-800-451-7106,
bvergara@sjrwmd.com
<http://www.sjrwmd.com/programs/watersupply.html>

SFWMD: Jane Bucca, (561) 682-6791 or 1-800-432-2045, x. 6791,
jbucca@sfwmd.gov
<http://www.sfwmd.gov/org/wsd/aws/index.html>

SWFWMD: Rand Baldwin, Tampa Service Office (Hillsborough, Pinellas, Pasco Counties), (813) 985-7481
rand.baldwin@watermatters.org

Jimmy Brooks, Lecanto Service Office (Levy, Marion, Sumter, Citrus, Lake, Hernando), (352) 527-8131
jimmy.brooks@watermatters.org

Brett Cyphers, Bartow Service Office (Polk, Hardee, Highlands), (863) 534-1448 or 1-800-492-7862
brett.cyphers@watermatters.org

Sarasota Service Office (Manatee, Sarasota, Charlotte, DeSoto), (941) 377-3722 or 1-800-320-3503
<http://www.swfwmd.state.fl.us/business/coopfnd/guideln.htm>

22. What deadlines exist for expending the funds?

Expenditures by the recipient must comply with the accounting requirements, procedures and deadlines established by the water management district from whom the funds were obtained.

23. Can local governments apply for phased funding to implement project construction over time?

Funds may be granted for a portion of a project or the entire project, depending on the length of time needed to complete the project, the complexity of the project, and other factors related to the particular funding cycle.

24. If an application is not funded, can it be resubmitted at a later date?

Projects that are not funded initially can be resubmitted at a later date, assuming the project is eligible for funding under the program and was not previously selected due to other higher priority projects, or the project application was amended to correct deficiencies previously identified by the WMD.

25. Once a local government is awarded funds to implement a project, can it modify the application to change the project or reschedule the project?

Any changes to the original application would have to be approved by the WMD. If a modification would affect the funding decision or result in a substantial delay, the district could redirect the funds to another project.

26. What are the obligations of the local government when it receives funding?

The local government must build and operate the project to produce water supplies from the alternative water supply in accordance with the project proposal approved by the WMD for funding. In addition, the local government must implement water conservation measures and promote water conservation and the use of alternative water supplies in accordance with Section 373.19 F.S. (2005).

Planning-related FAQs:

1. What are the new water supply requirements adopted by the 2005 Legislature that will affect local comprehensive planning programs?

Prior to the 2005 legislative session, local governments having responsibility for all or a portion of their water supply and located within an area for which the water management district had prepared a Regional Water Supply Plan were required to prepare a 10-Year Water Supply Facilities Work Plan. In addition, certain portions of the work plan were adopted into the local comprehensive plan by December 1, 2006. Local governments not within a regional water supply planning area were required to prepare their work plans and update their comprehensive plans as part of the comprehensive plan evaluation and appraisal review and amendment process.

In 2005, the Florida Legislature made significant changes to Chapters 163 and 373, F.S., to strengthen the link between land use and water supply planning. These changes were included in Senate Bill 360 (Chapter 2005-290, Laws of Florida) and Senate Bill 444 (Chapter 2005-291, Laws of Florida). The legislative changes encourage cooperation in the development of alternative water supplies and reemphasize the need for conservation and reuse. Additional changes include a revision of the line for preparing local supply facilities work plans for building public, private, and regional water supply facilities, in the development of alternative water supplies, and new provisions to be addressed in local comprehensive plans. Funds have been appropriated to assist local governments with the construction of alternative water supply projects.

There were five water supply requirements adopted last year that affect local government comprehensive planning. These requirements relate to water supply concurrency, ensuring intergovernmental coordination with regional water management authorities, ensuring that the local government's future land use plan (future land use element and future land use map) is based upon the availability of adequate water supplies, and the inclusion of selected alternative water supply projects in the local comprehensive plan. Future comprehensive plan evaluation and appraisal reports will be required to include a report on progress made in implementing the alternative water supply projects selected by the local government.

2. Is there a definition of alternative water supplies?

The definition of alternative water supplies as provided in Section 373.019, F.S., "means salt water; brackish surface water; groundwater; surface water captured predominately during wet-weather flows; sources made available through the new storage capacity for surface or groundwater, water that has been reclaimed after one or more public supply, residential, industrial, commercial, or agricultural uses; the downstream augmentation of water bodies with reclaimed water; and any other water supply source that is designated as nontraditional for a water supply planning region in the approved regional water supply plan."

The regional water supply plans prepared by the water management districts will identify alternative water supply project options.

3. How has the 2005 legislation changed the comprehensive plan requirements for water supply planning?

All local governments are currently required to assess their current and projected water needs and sources for a minimum 10-year period, considering the appropriate regional water supply plan or, in the absence of a regional water supply plan, the district water management plan. This information is to be included in the Conservation Element of the comprehensive plan.

This part of the statute has not changed.

For those local governments not subject to a regional water supply plan, this update to the comprehensive plan will be part of the evaluation and appraisal review and amendment process.

Local governments subject to a regional water supply plan approved by the water management district will need to update their Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge (Infrastructure) Element to identify any alternative water supply project or projects they have selected from the regional water supply plan and identify any other alternative and traditional water supply projects, conservation and reuse programs necessary to meet projected water demands. Projects to be implemented in the first five years need to be included in the Five-Year Strategic Capital Improvements of the Capital Improvements Element.

Local governments and other water supply entities can select projects that are not included in the regional water supply plan, but the local government or water supply entity should request that the water management district include the projects in the regional water supply plan.

The 2005 legislation requires that the future land use element and the future land use map be based upon the available water supplies. In submitting future land use amendments, all local governments should include data and analysis to demonstrate that a sufficient supply of water is available to meet any increase in water demand created by the proposed land use change.

All local governments will need to address the water supply concurrency requirement adopted in 2005. Before issuing a building permit or its functional equivalent, the local government must "consult" with the applicable water supplier to determine that adequate water supplies will be available to serve the new development no later than the anticipated certificate of occupancy or its functional equivalent will be issued.

Section 163.3177(6)(h), F.S., currently requires the Intergovernmental Coordination Element of the local comprehensive plan to address the relationships and mechanisms for the "coordination of the adopted comprehensive plan with the plans of school boards and other units of local government providing services but not having regulatory authority over the unincorporated land..." This section has been revised to specifically include coordination with regional water supply authorities. All local governments that rely on a regional water supply authority for their water supply will need to review their comprehensive plans to determine if coordination with the regional water supply authority has been addressed in the Intergovernmental Coordination Element.

4. When are local governments required to implement the new water supply requirement? (Local governments within the Wekiva Study Area should also refer to the response to Question 5.)

The water supply concurrency requirement and ensuring coordination between the future land use element and future land use map with available water supplies have the most immediate dates for implementation. These changes were effective

July 1, 2005.

Local governments are advised to update their comprehensive plans and land development regulations as soon as possible to address the water supply concurrency requirement. Data and analysis to demonstrate that water supplies are sufficient to meet projected growth demands should be included with all new proposed amendments submitted to the Department for review.

Except for the local governments within the Wekiva Study Area, local governments located in an area subject to a management district regional water supply plan are required to prepare their 10-Year Water Supply Facility Work Plan and adopt revisions to their comprehensive plans within 18 months after the applicable regional water supply plan is approved by the water management district governing board. For those local governments located within more than one water management district, the 18-month time line begins with the last approved regional water supply plan applicable to the local government.

All local governments that rely on a regional water supply authority for their water supply will need to review their comprehensive plans to determine if the regional water supply authority has been included in the Intergovernmental Coordination Element. For those local governments subject to the regional water supply plan, any Intergovernmental Coordination Element that does not ensure coordination with the regional water supply authority will need to be updated as soon as possible. The Department recommends that the Intergovernmental Coordination Element be updated no later than 18 months after the appropriate water management district approves the regional water supply plan. Other local governments should update their Intergovernmental Coordination Elements as soon as possible, but no later than at the time the comprehensive plan is updated through the evaluation and appraisal review and amendment process.

In addition, the comprehensive plan Evaluation and Appraisal Report must address the extent to which the local government has implemented the work plan for building public, private and regional water supply facilities, including the development of alternative water supplies. The report must also include a determination as to whether the identified alternative water supply projects, traditional water supply projects, and the conservation and reuse programs have met local water use needs.

5. When are local governments in the Wekiva Study Area required to implement the new water supply requirements?

Local governments in the Wekiva Study Area will have to proceed on an accelerated schedule to meet the statutory requirements for updating certain portions of their comprehensive plans. Ch. 2005-106, Laws of Florida (SB 908), requires local governments in the Wekiva Study Area to prepare their 10-year water supply facility work plans and to incorporate relevant portions of the work plan into their comprehensive plans by December 1, 2006.

Under Chapter 2005-290, Laws of Florida (Senate Bill 360), a local government has 18 months after a water management district approves an updated regional water supply plan within which to prepare a 10-year water supply facilities work plan for building public, private, and regional water supply facilities and to amend its comprehensive plan to identify alternative water supply projects, traditional water supply project(s), and the conservation and reuse programs that will be used to meet the water needs.

identified in the plan.

To create a meaningful 10-year work plan, the local governments in the Wekiva Study Area need to know what alternative water supply projects will be included in the updated regional water supply plans and include the relevant alternative supply projects in their 10-year water supply facility work plan. The St. Johns River Water Management District approved its regional water supply plan on February 7, 2006. The South Florida Water Management District anticipates approving its updated plan by July 2006.

To meet the statutory deadline of December 1, 2006, local governments in the Wekiva Study Area will only have a few months (rather than 18) within which to amend their comprehensive plans.

6. When are the Water Management District Governing Boards expected to approve their regional water supply plans?

The St. Johns River Water Management District approved its regional water supply plan on February 7, 2006.

The Northwest Florida and the Southwest Florida Water Management Districts anticipate updating their regional water supply plans by December 1, 2006.

The South Florida Water Management District expects to have its regional water supply plans updated by July 12, 2006.

The Suwannee River Water Management District has determined that the current water supply sources in its region are sufficient to meet projected needs for the next 20 years. As a result, this water management district has not identified areas for which a regional water supply plan is needed.

Local governments should coordinate with the appropriate water management district or districts on the development of their Regional Water Supply Plans to ensure their accuracy and completeness and to gain an understanding of the future water supply options available to them.

In addition to attending and participating in workshops and other information-exchange forums with water management district staff, local governments can undertake water use needs and water supply availability studies and provide that information to the districts for consideration. Local governments can also recommend alternative water supply projects to the water management districts, to be considered for inclusion in the regional water supply plans.

7. Are comprehensive plan amendments that address the water supply requirements exempt from the twice-a-year limitation on major amendments to the comprehensive plan?

Section 163.3177(6)(c), F.S., exempts any amendments to incorporate the local water supply plan into the comprehensive plan from the twice-a-year amendment limitation.

8. What technical assistance will be available to local governments?

The Department of Community Affairs and the Water Management Districts will be scheduling additional workshop of the five water management districts during development of each district's updated regional water supply plan. The purpose of the workshops will be to explain the new water supply requirements in more detail, to identify what information is needed in the 10-year water supply facility work plans and comprehensive plan elements, and what sources of information will be available to address those requirements. Local government and utility representatives will be invited to the workshops and there will be an opportunity to exchange information, discuss potential problems and solutions.

The Department, in coordination with the Water Management Districts and the Department of Environmental Protection, is also updating a report prepared in 2003 that will provide guidance for preparing comprehensive plan amendments in response to the revised water supply requirements. This guidance document is expected to be completed in May 2005.

9. Whom can I contact for more information?

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Florida Department of Environmental Protection

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Lower West Coast Regional Water Supply Plan

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Northwest Florida Water Management District

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A Objective 2.2

be in place and available to serve new development no later than the issuance by the local government of a certificate of occupancy or its functional equivalent. Prior to approval of a building permit or its functional equivalent, the local government shall consult with the applicable water supplier to determine whether adequate water supplies to serve the new development will be available no later than the anticipated date of issuance by the local government of a certificate of occupancy or its functional equivalent.

(b) Consistent with the public welfare, and except as otherwise provided in this section, parks and recreation facilities to serve new development shall be in place or under actual construction no later than 1 year after issuance by the local government of a certificate of occupancy or its functional equivalent. However, the acreage for such facilities shall be dedicated or be acquired by the local government prior to issuance by the local government of a certificate of occupancy or its functional equivalent, or funds in the amount of the developer's fair share shall be committed no later than prior to issuance by the local government's approval to commence construction ~~government of a certificate of occupancy or its functional equivalent.~~

(c) Consistent with the public welfare, and except as otherwise provided in this section, transportation facilities ~~designated as part of the Florida Intrastate Highway System~~ needed to serve new development shall be in place or under actual construction within 3 not more than 5 years after the local government approves a building permit or its functional equivalent that results in traffic generation ~~issuance by the local government of a certificate of occupancy or its functional equivalent. Other transportation facilities needed to serve new development shall be in place or under actual construction no more than 3 years after issuance by the local government of a certificate of occupancy or its functional equivalent.~~

(4)

(c) The concurrency requirement, except as it relates to transportation facilities and public schools, as implemented in local government comprehensive plans, may be waived by a local government for urban infill and redevelopment areas designated pursuant to s. 163.2517 if such a waiver does not endanger public health or safety as defined by the local government in its local government comprehensive plan. The waiver shall be adopted as a plan amendment pursuant to the process set forth in s. 163.3187(3)(a). A local government may grant a concurrency exception pursuant to subsection (5) for transportation facilities located within these urban infill and redevelopment areas.

(5)(a) The Legislature finds that under limited circumstances dealing with transportation facilities, countervailing planning and public policy goals may come into conflict with the requirement that adequate public facilities and services be available concurrent with the impacts of such development. The Legislature further finds that often the unintended result of the concurrency requirement for transportation facilities is the discouragement of urban infill development and redevelopment. Such unintended results directly conflict with the goals and policies of the state comprehensive plan and the intent of this part. Therefore, exceptions from the concur-

163.3180 Concurrency.--

(1)(a) Sanitary sewer, solid waste, drainage, potable water, parks and recreation, schools, and transportation facilities, including mass transit, where applicable, are the only public facilities and services subject to the concurrency requirement on a statewide basis. Additional public facilities and services may not be made subject to concurrency on a statewide basis without appropriate study and approval by the Legislature; however, any local government may extend the concurrency requirement so that it applies to additional public facilities within its jurisdiction.

(b) Local governments shall use professionally accepted techniques for measuring level of service for automobiles, bicycles, pedestrians, transit, and trucks. These techniques may be used to evaluate increased accessibility by multiple modes and reductions in vehicle miles of travel in an area or zone. The Department of Transportation shall develop methodologies to assist local governments in implementing this multimodal level-of-service analysis. The Department of Community Affairs and the Department of Transportation shall provide technical assistance to local governments in applying these methodologies.

(2)(a) Consistent with public health and safety, sanitary sewer, solid waste, drainage, adequate water supplies, and potable water facilities shall be in place and available to serve new development no later than the issuance by the local government of a certificate of occupancy or its functional equivalent. Prior to approval of a building permit or its functional equivalent, the local government shall consult with the applicable water supplier to determine whether adequate water supplies to serve the new development will be available no later than the anticipated date of issuance by the local government of a certificate of occupancy or its functional equivalent. A local government may meet the concurrency requirement for sanitary sewer through the use of onsite sewage treatment and disposal systems approved by the Department of Health to serve new development.

(b) Consistent with the public welfare, and except as otherwise provided in this section, parks and recreation facilities to serve new development shall be in place or under actual construction no later than 1 year after issuance by the local government of a certificate of occupancy or its functional equivalent. However, the acreage for such facilities shall be dedicated or be acquired by the local government prior to issuance by the local government of a certificate of occupancy or its functional equivalent, or funds in the amount of the developer's fair share shall be committed no later than the local government's approval to commence construction.

(c) Consistent with the public welfare, and except as otherwise provided in this section, transportation facilities needed to serve new development shall be in place or under actual construction within 3 years after the local government approves a building permit or its functional equivalent that results in traffic generation.

163.3177 Required and optional elements of comprehensive plan; studies and surveys.--

(6) In addition to the requirements of subsections (1)-(5) and (12), the comprehensive plan shall include the following elements:

(a) A future land use plan element designating proposed future general distribution, location, and extent of the uses of land for residential uses, commercial uses, industry, agriculture, recreation, conservation, education, public buildings and grounds, other public facilities, and other categories of the public and private uses of land. Counties are encouraged to designate rural land stewardship areas, pursuant to the provisions of paragraph (11)(d), as overlays on the future land use map. Each future land use category must be defined in terms of uses included, and must include standards to be followed in the control and distribution of population densities and building and structure intensities. The proposed distribution, location, and extent of the various categories of land use shall be shown on a land use map or map series which shall be supplemented by goals, policies, and measurable objectives. The future land use plan shall be based upon surveys, studies, and data regarding the area, including the amount of land required to accommodate anticipated growth; the projected population of the area; the character of undeveloped land; the availability of water supplies, public facilities, and services; the need for redevelopment, including the renewal of blighted areas and the elimination of nonconforming uses which are inconsistent with the character of the community; the compatibility of uses on lands adjacent to or closely proximate to military installations; and, in rural communities, the need for job creation, capital investment, and economic development that will strengthen and diversify the community's economy. The future land use plan may designate areas for future planned development use involving combinations of types of uses for which special regulations may be necessary to ensure development in accord with the principles and standards of the comprehensive plan and this act. The future land use plan element shall include criteria to be used to achieve the compatibility of adjacent or closely proximate lands with military installations. In addition, for rural communities, the amount of land designated for future planned industrial use shall be based upon surveys and studies that reflect the need for job creation, capital investment, and the necessity to strengthen and diversify the local economies, and shall not be limited solely by the projected population of the rural community. The future land use plan of a county may also designate areas for possible future municipal incorporation. The land use maps or map series shall generally identify and depict historic district boundaries and shall designate historically significant properties meriting protection. For coastal counties, the future land use element must include, without limitation, regulatory incentives and criteria that encourage the preservation of recreational and commercial working waterfronts as defined in s. 342.07. The future land use element must clearly identify the land use categories in which public schools are an allowable use. When delineating the land use categories in which public schools are an allowable use, a local government shall include in the categories sufficient land proximate to residential development to meet the projected needs for schools in coordination with public school boards and may establish differing criteria for schools of different type or size. Each local government shall include lands contiguous to existing school sites, to the maximum extent possible, within the land use categories in which public schools are an allowable use. The failure by a local government to comply with these school siting requirements will result in the prohibition of the local government's ability to amend the local comprehensive plan, except for plan

amendments described in s. 163.3187(1)(b), until the school siting requirements are met. Amendments proposed by a local government for purposes of identifying the land use categories in which public schools are an allowable use are exempt from the limitation on the frequency of plan amendments contained in s. 163.3187. The future land use element shall include criteria that encourage the location of schools proximate to urban residential areas to the extent possible and shall require that the local government seek to collocate public facilities, such as parks, libraries, and community centers, with schools to the extent possible and to encourage the use of elementary schools as focal points for neighborhoods. For schools serving predominantly rural counties, defined as a county with a population of 100,000 or fewer, an agricultural land use category shall be eligible for the location of public school facilities if the local comprehensive plan contains school siting criteria and the location is consistent with such criteria. Local governments required to update or amend their comprehensive plan to include criteria and address compatibility of adjacent or closely proximate lands with existing military installations in their future land use plan element shall transmit the update or amendment to the department by June 30, 2006.

(b) A traffic circulation element consisting of the types, locations, and extent of existing and proposed major thoroughfares and transportation routes, including bicycle and pedestrian ways. Transportation corridors, as defined in s. 334.03, may be designated in the traffic circulation element pursuant to s. 337.273. If the transportation corridors are designated, the local government may adopt a transportation corridor management ordinance.

(c) A general sanitary sewer, solid waste, drainage, potable water, and natural groundwater aquifer recharge element correlated to principles and guidelines for future land use, indicating ways to provide for future potable water, drainage, sanitary sewer, solid waste, and aquifer recharge protection requirements for the area. The element may be a detailed engineering plan including a topographic map depicting areas of prime groundwater recharge. The element shall describe the problems and needs and the general facilities that will be required for solution of the problems and needs. The element shall also include a topographic map depicting any areas adopted by a regional water management district as prime groundwater recharge areas for the Floridan or Biscayne aquifers. These areas shall be given special consideration when the local government is engaged in zoning or considering future land use for said designated areas. For areas served by septic tanks, soil surveys shall be provided which indicate the suitability of soils for septic tanks. Within 18 months after the governing board approves an updated regional water supply plan, the element must incorporate the alternative water supply project or projects selected by the local government from those identified in the regional water supply plan pursuant to s. 373.0361(2)(a) or proposed by the local government under s. 373.0361(7)(b). If a local government is located within two water management districts, the local government shall adopt its comprehensive plan amendment within 18 months after the later updated regional water supply plan. The element must identify such alternative water supply projects and traditional water supply projects and conservation and reuse necessary to meet the water needs identified in s. 373.0361(2)(a) within the local government's jurisdiction and include a work plan, covering at least a 10 year planning period, for building public, private, and regional water supply facilities, including development of alternative water supplies, which are identified in the element as necessary to serve existing and new development. The work plan shall be updated, at a minimum, every 5 years within 18 months after the

governing board of a water management district approves an updated regional water supply plan. Amendments to incorporate the work plan do not count toward the limitation on the frequency of adoption of amendments to the comprehensive plan. Local governments, public and private utilities, regional water supply authorities, special districts, and water management districts are encouraged to cooperatively plan for the development of multijurisdictional water supply facilities that are sufficient to meet projected demands for established planning periods, including the development of alternative water sources to supplement traditional sources of groundwater and surface water supplies.




LEE COUNTY

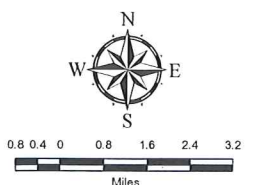
Existing Land Use
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Lee County
Utilities

Residential
Other Use

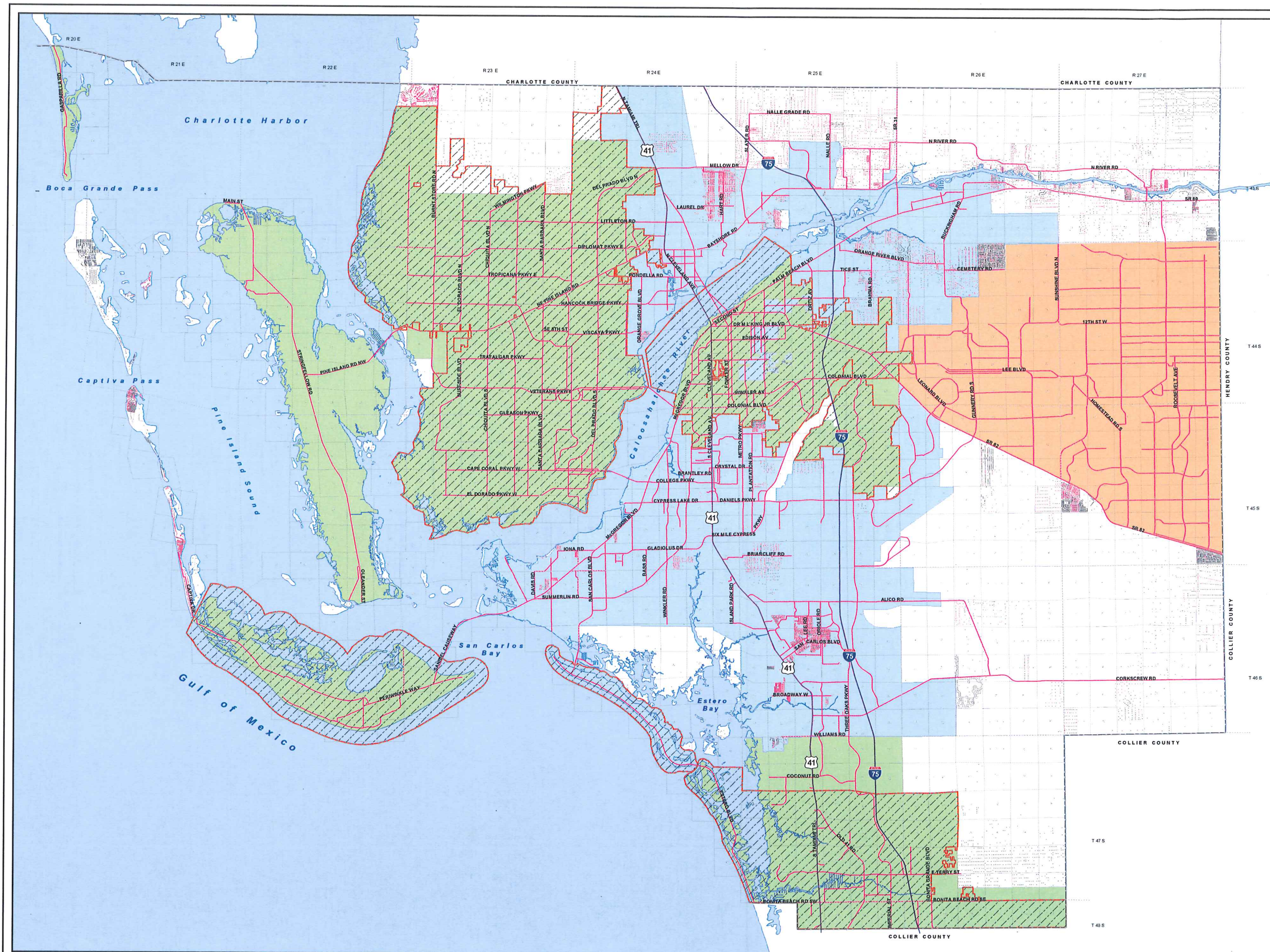
 City Limits

Franchise Name

 City/Pine Island/Bonita Springs
 FGUA
 Served by Lee County Utilities



Map Generated: November 2008
City Limits current to date of map generation

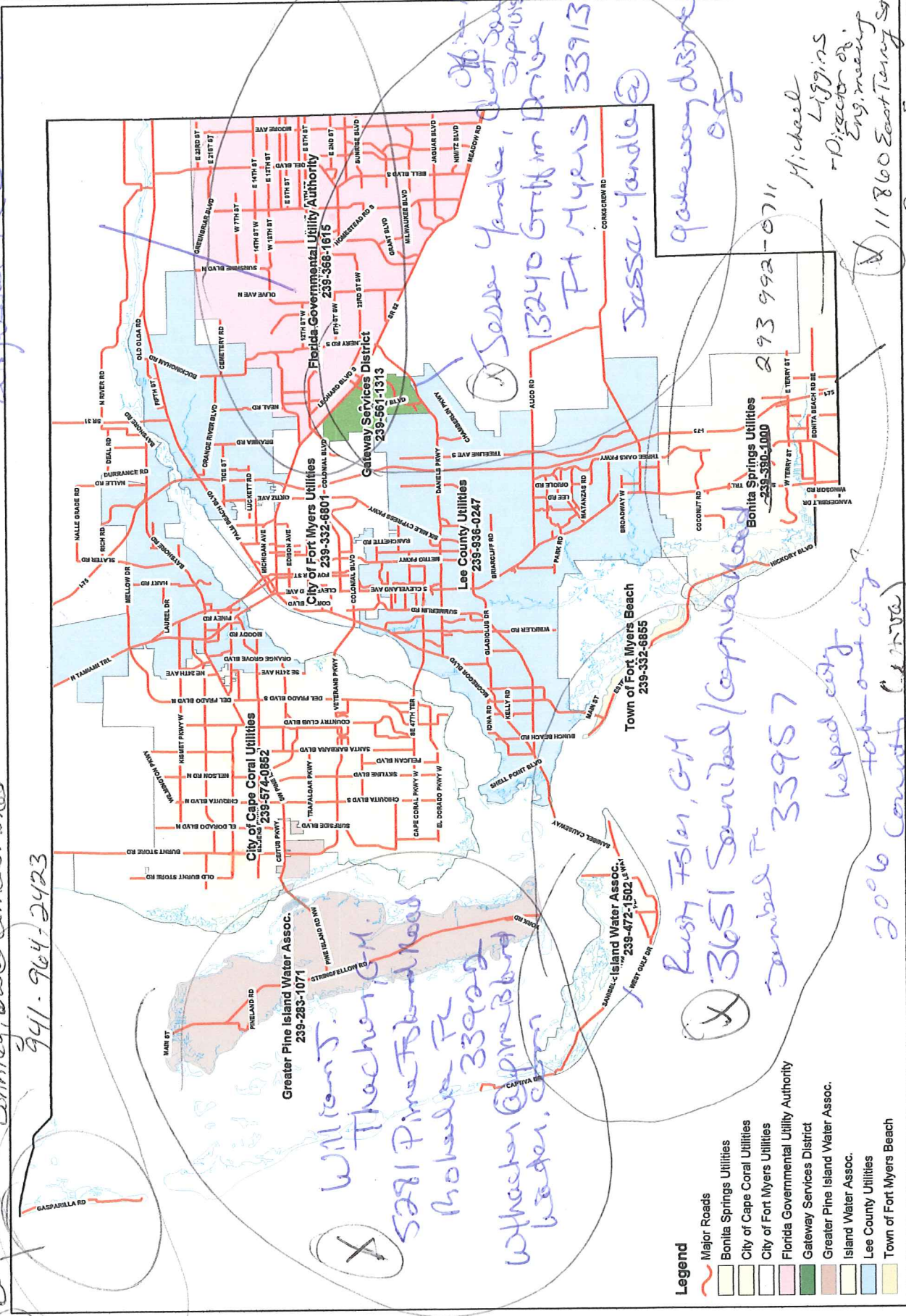


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1500 Monroe St. Fort Myers, FL 33901 Phone (239) 479-8181 Fax (239) 479-8178			
Scale: 1" = 18,000'	Date: 01/28/2005	Drawn By: DCR	Designed By: DCR
Checked By: THO	Approved By: THO		
Editor	Revision	Date	



Rusty@Islandwater.com

- (g) The Comprehensive Plan Policies of the City of Groveland are hereby amended for the Capital Improvements Element:

Amend Policy 12.3.1: The City's Concurrency Management System shall include the procedures, requirements, and analysis needed to ensure that the adopted level of service standards for roads, potable water, sanitary sewer, solid waste, stormwater, and recreation and open shall not be lowered by development below adopted LOS standards and that needed public facilities to service the development shall be provided concurrent with development according to the timeframes set out in Florida Statutes. Adequate water supplies and facilities shall be available to serve new development no later than the date on which the local government anticipates issuing a certificate of occupancy or its equivalent.

New OBJECTIVE 12.5 WATER SUPPLY FACILITIES WORK PLAN: Continue to use available funds for the expansion and enhancement of water supply facilities in accordance with the Water Supply Facilities Work Plan and to establish new lines of funding for such and for the establishment of programs and incentives that are in accordance with said Plan.

New Policy 12.5.1: The City shall continue to use the current line of funding (Impact and Water Fees) to enhance, upgrade, and expand the water supply facilities and shall be in accordance with the approved Water Supply Facilities Work Plan.

New Policy 12.5.2: The City shall investigate and establish new lines of funding for the enhancement, upgrading and expansion of water supply facilities when applicable. The City shall prioritize investigating funding through Federal and State agencies.

New Policy 12.5.3: In accordance with the Water Supply Facilities Work Plan and the policies pertaining to such in the Intergovernmental Coordination Element, Potable Water Element, and Conservation Element, the City shall dedicate funds, when and where practicable, to establish City-based programs that promote water conservation to current and future consumers. The City shall investigate the establishment of incentives or grants for consumers who desire to conserve water that currently have not water conservation measures in place.

- (h) The future land use map of the City of Groveland Comprehensive Plan is hereby amended as follows:

SITE 1: STRICKLAND PROPERTY (40 +/- ACRES)

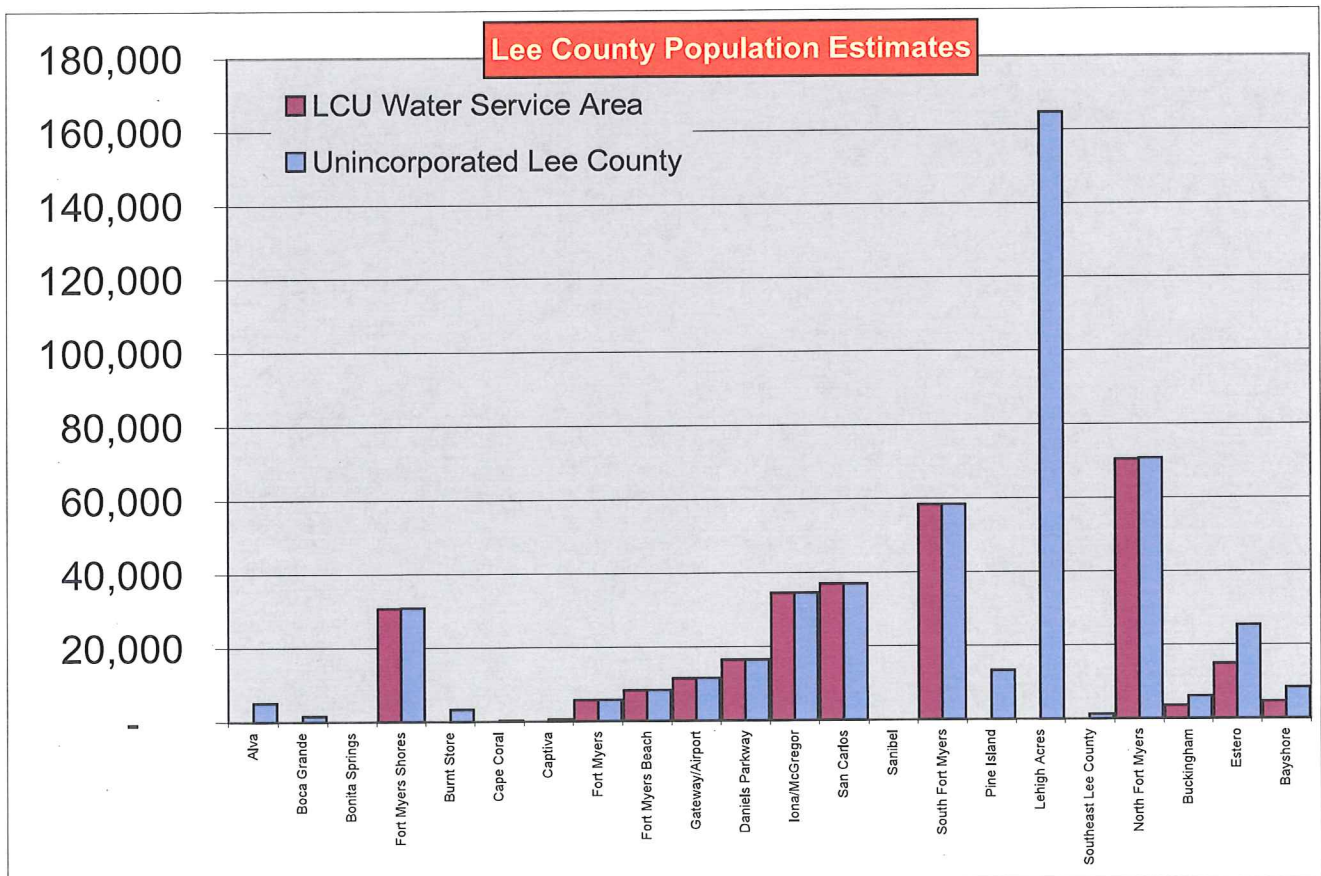
FROM: Lake County Suburban

TO: City of Groveland North Residential Neighborhood and Conservation

Legal Description

Lee Plan Adopted 2030 Population Estimates

Planning Community	Unincorporated Lee County	LCU Water Service Area
Alva	5,090	
Boca Grande	1,531	
Bonita Springs	-	
Fort Myers Shores	30,861	30,676
Burnt Store	3,270	
Cape Coral	225	
Captiva	530	
Fort Myers	5,744	5,744
Fort Myers Beach	8,354	8,354
Gateway/Airport	11,582	11,552
Daniels Parkway	16,488	16,488
Iona/McGregor	34,538	34,539
San Carlos	36,963	36,963
Sanibel	-	
South Fort Myers	58,363	58,364
Pine Island	13,265	
Lehigh Acres	164,702	
Southeast Lee County	1,270	
North Fort Myers	70,659	70,453
Buckingham	6,114	3,588
Estero	25,395	14,941
Bayshore	8,410	4,594
Total	503,354	296,256



OBJECTIVE 4

Potable water facility deficiencies shall be corrected prior to any reduction in level of service or the onset of capacity deficits.

Policy 4.1

The City adopts the following acceptable level of service for potable water:

440 198 gpcpd (gallons per capita per day) subject to multiplier and procedures as outlined in the City's Concurrency Management System Chapter 161 of the land Development Code.

OBJECTIVE 5

Lake Mary shall maximize the use of existing facilities and discourage urban sprawl through the planned expansion and retrofitting of the Harry Terry Water Treatment Plant facility and the wholesaling of available excess capacity to other systems.

Policy 5.1

All development within 100 feet of the existing water distribution system shall be required to connect to the municipal water system in its service area prior to receiving a certificate of occupancy.

Policy 5.2

As municipal water service is expanded throughout the City, connection into the central system shall be mandatory if service is made available within 100 feet of a property boundary.

Policy 5.3

The City of Lake Mary shall maintain interlocal agreements with Seminole County concerning the wholesaling of excess water supplies and capacity allocation and facility extensions for intergovernmental transfers of potable water. The City shall also maintain agreements with Sanford and Seminole County regarding emergency interconnections.

Policy 5.4

The City shall ensure that new development shares the proportionate cost in the provision of facilities and services to meet the needs of that development and maintain the City's adopted level of service standards.

Policy 5.5

Priorities for replacement, correction of deficiencies and providing for future facility needs shall be as follows:

1. Replacement and correction of existing facilities: when facilities must be replaced, they shall be constructed according to the adopted level of service standards.
2. Correction of any remaining deficiencies shall be through the following implementation measures:
 - a) Expansion of existing water treatment and/or storage capacity.
 - b) Interconnection with the Seminole County's and City of Sanford's Water Treatment Facilities.

Policy 7.2

~~The Water Supply Facilities Work Plan will be consistent with the potable water level of service standards established in Policy 4.4. The Water Supply Facilities Work Plan will be updated concurrently with within 18 months of updates of the SJRWMD's District Water Supply Plan (SJRWMD, 2002), that affect the City.~~

Policy 7.3

~~When updating the Water Supply Facilities Work Plan, the City will seek alternative sources of water in order to meet projected demand increases.~~

Policy 7.43

The Water Supply Facilities Work Plan will be used to prioritize and coordinate the expansion and upgrade of facilities used to withdraw, transmit, treat, store and distribute potable water to meet future needs.

Policy 7.5

~~The City will establish and maintain, at a minimum, a current five year schedule of capital improvements for the improvement, extension and/or increase in capacity of water facilities.~~

OBJECTIVE 8

The City will identify and utilize sources of water that can be used to meet existing and future needs. ~~when maintaining and updating the Water Supply Facilities Work Plan.~~

Policy 8.1

In conjunction with the SJRWMD and other local governments, the City will seek the development of efficient, cost-effective, and technically feasible water sources that will supplement future demands, without causing adverse impacts to water quality, wetlands, and aquatic systems. These sources may include, but are not limited to, brackish groundwater, surface water, and seawater. Specifically, ~~the City will maintain its interlocal agreement with the County and the other municipalities in the County to develop alternative water supplies and by 2010 the City or its identified partners will submit a CUP application for development of one or more alternative water supply development projects to help meet the City's future water needs, per the 2006 SJRWMD Water Supply Plan adopted on February 7, 2006, the City of Lake Mary is identified as a participant in the following projects: 1) North Seminole Regional Reclaimed Water Augmentation System Expansion & Optimization Project and 2) St. John's River (near Lake Monroe) Surface Water Project.~~

Policy 8.2

The City will maximize the usage of existing potable water facilities through the implementation of management techniques that can enhance sources of supply, sustain water resources and related natural systems, and/or optimize water supply yields. These techniques may include, but are not limited to, aquifer storage recovery, system interconnects, and water conservation.

Policy 8.3

City's annual water consumption will be equal to or less than the amount allocated under the District-issued consumptive use permit. ~~or the projected demand in the most recently published District Water Supply Plan (SJRWMD).~~

Policy 8.4

The City will participate in ~~the implementation of the East Central Florida Water Supply Planning Initiative,~~ updates of the SJRWMD's water supply assessments, and updates of the District Water Supply Plan (2000), to enable the City to design and implement an effective water supply plan.

- 1.3.2.d. (1) previously approved orders permitting redevelopment,
- 1.3.2.d. (2) previously approved orders permitting new development,
- 1.3.2.d. (3) new orders permitting redevelopment, and
- 1.3.2.d. (4) new orders permitting new development.

1.3.2.e Improvements to existing facilities, and new facilities that significantly reduce the operating cost of providing a service or facility, or otherwise mitigate impacts of public facilities on future operating budgets.

1.3.2.f New facilities that exceed the adopted levels of service for new growth during the next five fiscal years by either:

- 1.3.2.f. (1) providing excess public facility capacity that is needed by future growth beyond the next five fiscal years, or
- 1.3.2.f. (2) providing higher quality public facilities than are contemplated in the City's normal design criteria for such facilities.

1.3.2.g Facilities not described in Subsections a through f, above, but which the City is obligated to complete, provided that such obligation is evidenced by a written agreement the City executed prior to the adoption of this Comprehensive Plan.

- 1.3.3 All facilities scheduled for construction or improvement in accordance with this policy shall be evaluated to identify any plans of state agencies or the St. Johns Water Management District that affect, or will be affected by, the proposed City capital improvement.
 - 1.3.4 Project evaluation may also involve additional criteria that are unique to each type of public facility, as described in other elements of this Comprehensive Plan.
- 9J-5.016(3)(c) 1, (3)(c) 3

1.3.5 Inclusion of Water Supply Facilities Work Plan Projects

The City shall include in its annual update of the City's five (5) year capital improvements project listing the first five (5) years of the ten (10) year Water Supply Facilities Work Plan to ensure consistency between the Infrastructure Element and the Capital Improvement Element. Annual updates to the CIP projects listing will continue to include projects listed in the work plan beyond the initial 5 year time frame.

SAMPLE WATER SUPPLY PLANS

City of LaBelle

Water Supply Element

To Support the
City of LaBelle Comprehensive Plan

PREPARED BY:

**APPLIED TECHNOLOGY AND MANAGEMENT, INC.
JACKSONVILLE, FLORIDA**

NOVEMBER 2007

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This report is prepared to enhance the Water Supply Element in support of the City of LaBelle Comprehensive Plan.

1.0 INTRODUCTION

The City of LaBelle is located in Hendry County, in southwest Florida about 35 miles east of Fort Myers and the Gulf of Mexico. Future geographic growth of LaBelle is limited on the north by the Caloosahatchee River and on the east by the Port LaBelle. The City limits are shown in Figure 1. Most of the area to the south is currently undeveloped; however, several developments are proposed, which could greatly increase the demands on the City's existing water supply infrastructure.

The City is facing near term treatment capacity issues with its existing water treatment plant, which is operating at approximately 86 percent of its production capacity and has even exceeded its capacity on multiple occasions in recent years. Due to these capacity issues and development potential in the area, the City is currently designing a new water treatment plant that would be capable of handling the expected future demands. It is expected to be online in 2010.

2.0 FUTURE WATER SUPPLY NEEDS

Like most small communities in south Florida, the City of LaBelle expects substantial future population growth. LaBelle's population is projected to more than double over the next 20 years, with a required finished water capacity of approximately 2.5 million gallons per day (mgd) in the year 2030. The City uses a level of service standard of 125 gallons per capita per day to determine the necessary capacity of the potable water facilities.

2.1 POPULATION GROWTH PROJECTIONS

Table 1 summarizes the population growth projections to the year 2030. These projections are from the September 2007 *Rural Utility Service Preliminary Engineering Report*, which was prepared by Applied Technology & Management, Inc. (ATM).

Table 1 City of LaBelle Population Growth for the Core City		
Year	Population	Annual Growth Rate
2010	5,381	3.7%
2015	6,442	3.5%
2020	7,584	3.3%
2025	8,873	3.1%
2030	10,296	2.9%

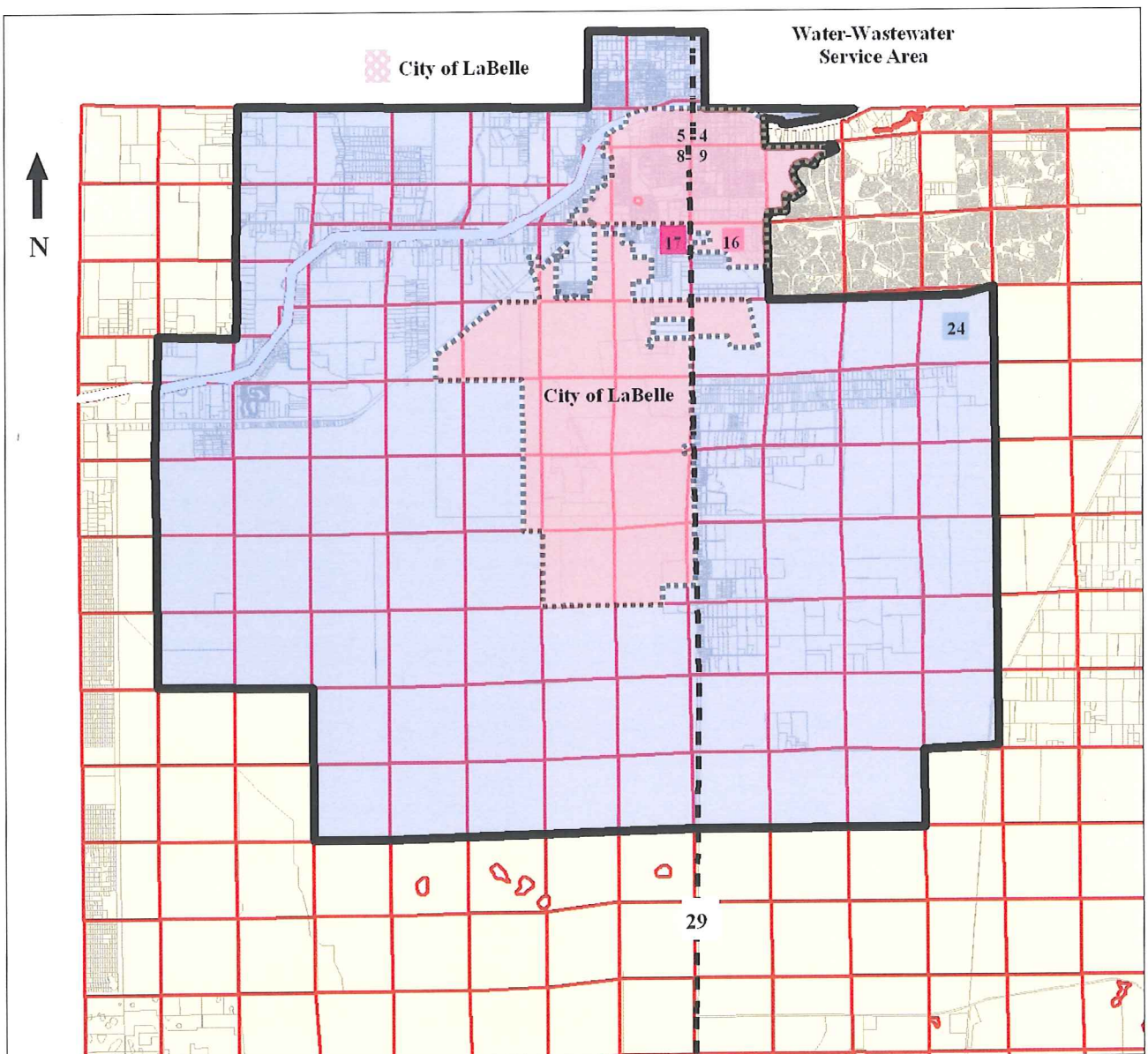


Figure 1 City of LaBelle Water Service Area

2.2 REQUIRED FUTURE TREATMENT PLANT CAPACITY

As the City's population continues to grow the overall daily demand for water will increase. To determine the necessary future capacity, historical data from the water treatment plant was used to project the future water production requirements in terms of annual average daily production (AADP) and maximum day production (MDP). The MDP is used to define the overall capacity of the treatment plant, such that this 2.5 mgd facility has an MDP of 2.5 mgd. The AADP is calculated by multiplying the level of service by the future service population from the previous section. The MDP is calculated by multiplying the AADP by a peaking factor. A peaking factor of 1.54 is used based on the information presented in the *Preliminary Engineering Report*. The projected AADP and MDP demands are shown in Table 2.

Table 2 Future Water Demand Data		
Year	AADP (mgd)	MDP (mgd)
2010	0.67	1.03
2015	0.81	1.25
2020	0.95	1.46
2025	1.11	1.71
2030	1.29	1.99

3.0 WATER SUPPLY FACILITIES

Several years ago, the City identified that its existing water facilities are not adequate to meet projected future demands. To address this issue, the City began a large capital improvement program to increase potable water capacity. Therefore, the following sections describe both the existing facilities and the capital improvement projects that are underway to provide additional capacity.

3.1 EXISTING WATER SUPPLY FACILITIES

The existing Main Street Water Treatment Plant is a 0.999 mgd facility that consists of five municipal wells, one lime softening reactor and clarifier (Clarator), two dual media sand filters, chloramination, fluoridation, finished water storage, and two high service pumps to deliver finished water to the distribution system (as shown in Table 3).

Table 3 City of LaBelle Water Treatment Plant	
System Component	Information
Water source	Surficial Aquifer
Well #5	100 gpm
Well #6	250 gpm
Well #7	250 gpm
Well #10	250 gpm
Well #11	250 gpm
Process	Lime softening with Clarator
Filters	Two dual media (sand and anthracite coal)
High Service Pumps	2
Storage Tank #1	200,000 gallons
Storage Tank #2	300,000 gallons

As noted previously, the City of LaBelle is expecting significant population growth over the next twenty years. The existing water treatment plant has been operating close to capacity and will not be adequate to meet the projected population growth for the City. Therefore, work is already underway to design a new water treatment plant that will be able to meet the projected demands.

3.2 PLANNED WATER SUPPLY FACILITIES

The City is currently in the design phase of a new treatment plant that will ultimately replace the existing facility. The design of the proposed 2.5 mgd reverse osmosis water treatment plant is described in the sections below.

3.2.1 Source Water

Freshwater resources to supply drinking water demands are becoming scarce in certain parts of the state, especially in south Florida, due to the rapid population growth. Because of this scarcity of adequate water sources, it is becoming more challenging to permit new water sources. The new water treatment plant will draw water from the Lower Hawthorn Aquifer, which is deeper than the surficial aquifer. It contains a high concentration of Total Dissolved Solids (TDS) and is considered to be an alternative water source. It is therefore more acceptable as a future water source, in less demand by other area users, less likely to be source limited in the foreseeable future, and keeping in the spirit of the water supply strategy of the region.

3.2.2 Treatment Facilities

Approximately 25 percent of the raw water will be lost as concentrate from the membrane process. To make up for this loss of water, the water supply wells and pumping facilities will be sized for a maximum day raw water supply of 3.3 mgd to produce the design maximum day finished water rate

of 2.5 mgd. The raw water will undergo pretreatment in the form of pH adjustment, scale inhibitor addition, and cartridge filtration prior to membrane filtration. Following filtration, the water will undergo degasification, disinfection, fluoridation, and finally storage.

3.2.3 Distribution System

The finished water from the reverse osmosis treatment plant will travel through a new transmission pipeline which will connect the reverse osmosis water treatment plant to the existing distribution system in two locations. These two connections will create a new water main loop, which will allow for a greater distribution of flow and pressure to the existing water system, specifically to the eastern areas of the City.

In addition, the storage tanks at the existing water treatment plant will be utilized as a re-pump station to provide added pressure as necessary for peak hourly demand and fire flow. The existing 200,000 gallon and 300,000 gallon tanks will provide storage and will be directly connected to the existing water system by a water main in order to fill the tanks.

3.2.4 Future Water Treatment Plant Expansion

Multiple new developments are planned within and around the City of LaBelle; however, the timeframe for construction is uncertain. The new water treatment plant is being designed to accommodate these developments in the future once the City has more information regarding the schedules for construction and water demands. The 2.5 mgd water treatment plant will be designed to be easily upgradeable to 4.5 mgd if the planned developments proceed. Beyond 4.5 mgd, the site layout and raw water supply facilitates future expansion to 9.5 mgd to accommodate the developer projections through 2030.

4.0 5-YEAR CAPITAL IMPROVEMENT SCHEDULE

The new reverse osmosis water treatment plant will be funded through revenues from the water treatment system and potential partial funding through Rural Utility Service (RUS). The City will be applying for other pertinent grants, such as Alternative Water Supply Funding through the South Florida Water Management District. A new rate structure was implemented in June 2007, which was based on the comprehensive rate study performed in March 2007. The estimated costs for the water treatment plant are outlined in Table 4 below. The new water treatment plant is scheduled to be online in 2010.

Table 4 5-Year Capital Improvement Program	
Item	Cost (x1000)¹
Source water wellfield	\$ 2,900
Treatment plant	\$ 8,900
Deep well disposal system	\$ 5,660
Distribution system improvements	\$ 2,630
Subtotal	\$ 20,090
Inflation (3 years at 2.1%)	\$ 1,300
Engineering	\$ 1,600
Construction Administration	\$ 1,550
Total	\$ 24,540
<i>1- Costs are rounded to reflect the preliminary nature of this opinion of cost</i>	

Note: This information is from the opinion of probable construction cost in the *Preliminary Engineering Report*.

-- END OF DOCUMENT --

Collier County

10-Year Water Supply Facilities Work Plan

October 2007

Work Plan

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List of Common Acronyms

A

AADD	Annual Average Daily Demand
AADF	Annual Average Daily Flow
ADD	Average Daily Demand
AMUC	Ave Maria Utility Company (AMUC)
ASR	Aquifer Storage and Recovery
AUIR	Annual Update and Inventory Report

B

BEBR	Bureau of Economic and Business Research
------	------------------------------------------

C

CCWSD	Collier County Water-Sewer District
CDES	Community Development and Environmental Services
CUP	Consumption Use Permits

D

DIW	Deep Injection Well
-----	---------------------

E

EAR	Evaluation and Appraisal Report
ERC	Equivalent Residential Connection

F

FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FGUA	Florida Government Utility Authority
FY	Fiscal Year

G

GMP	Growth Management Plan
gpcd	Gallons per Capita per Day
gpd	Gallons per Day

H

HPRO	High Pressure Reverse Osmosis
HZ1	Hawthorne Zone 1 Aquifer

I

IE	Ion Exchange
IWSD	Immokalee Water and Sewer District

L

LDC	Land Development Code
LH	Lower Hawthorne Aquifer
LOSS	Level of Service Standard
LPRO	Low Pressure Reverse Osmosis
LS	Lime Softening
LT	Lower Tamiami Aquifer
LWCWSP	Lower West Coast Water Supply Plan

M

MG	Million Gallons
MGD	Million Gallons Per Day
MS	Membrane Softening
MMDD	Maximum Month Daily Demand

N

NCRWTP	North County Regional Water Treatment Plant
NCWRF	North County Water Reclamation Facility
NERWTP	Northeast Regional Water Treatment Plant
NEWRF	Northeast Water Reclamation Facility

O

OTUC	Orange Tree Utility Company
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P

PBWRF	Pelican Bay Water Reclamation Facility
PUD	Public Utilities Division

R

RIB	Rapid Infiltration Basin
RO	Reverse Osmosis
SCRWTP	South County Regional Water Treatment Plant

S

SCWRF	South County Water Reclamation Facility
SERWTP	Southeast Regional Water Treatment Plant
SEWRF	Southeast Water Reclamation Facility
SFWMD	South Florida Water Management District

W

WRF	Water Reclamation Facility
WT	Water-Table Aquifer
WTP	Water Treatment Plant

Executive Summary

On July 12, 2006, the Governing Board of the South Florida Water Management District (SFWMD) approved the 2005-2006 Lower West Coast Water Supply Plan Update (LWCWSP). Under Florida law (section 163.3177(6)(c), Florida Statutes) Collier County must adopt amendments to its comprehensive plan within 18 months of the SFWMD approval of the update. These amendments include the development of a 10-Year Water Supply Facilities Work Plan and amendments to the following elements of the Growth Management Plan (GMP): Intergovernmental Coordination Element, Infrastructure Element, Conservation and Coastal Management Element and Capital Improvement Element.

Under the requirement of the Florida Statutes, the 10-Year Water Supply Facilities Work Plan for Collier County must include analysis of all water utilities in the County not serving a specific local government. These utilities include:

- Collier County Water-Sewer District (CCWSD)
- Immokalee Water and Sewer District (IWSD)
- Florida Governmental Utility Authority (Golden Gate) (FGUA)
- Orange Tree Utility Company (OTUC)
- Ave Maria Utility Company, LLLP (AMUC)

Utilities not included in this plan are the City of Naples Utility Department, Marco Island Utilities, and Everglades City, each of which is responsible to develop a 10-Year Water Supply Facilities Work Plan to be included in its city's comprehensive plan.

This 10-Year Water Supply Facilities Work Plan for Collier County has the following objectives:

- Identify population and water demands of each utility for the planning period of 2008 to 2018.
- Present existing and planned potable and reclaimed water facilities that will be utilized to meet demand projections.
- Identify sources of raw water needed for potable water supply to meet demands through the year 2018.
- Identify the steps necessary to develop additional potable and reclaimed water supplies and specify when they must occur and how they will be funded.

- Demonstrate that the water supply plans for each utility within the County are feasible with respect to facility capacity to be developed and consumptive use permit allocations required.
- Describe the conservation practices and regulations utilized by each utility to meet water supply demand.

The Collier County 10-Year Water Supply Facilities Work Plan was prepared by Camp Dresser and McKee Inc. (CDM) for the Collier County Comprehensive Planning Department. CDM is a consulting, engineering, construction, and operations firm with a successful track record of utility-based planning and design projects. CDM is a leader in providing innovative water and wastewater services throughout Southwest Florida and the world.

Information for the Plan was solicited from each of the utilities included. All five utilities provided some level of information to CDM for inclusion in the Plan. Where information gaps existed, information on the existing and planned facilities was gathered from various sources including the SFWMD LWCWSP update, SFWMD consumptive use permits, FDEP public water supply and wastewater treatment facility permits, and the Collier County Water Supply Facilities Work Plan, Final Report prepared by Greeley and Hansen, LLC, April 2004.

After completion of the draft version of the Plan, copies were distributed to each of the utilities for review and comment. Each of the utilities provided comments and gave approval to their sections of the Plan contingent on their comments being addressed.

The findings of the plan are summarized below for each of the utilities.

Collier County Water-Sewer District (CCWSD)

During the 10-year planning period CCWSD has plans to develop two new potable water treatment facilities and two new water reclamation facilities to meet growing water demands. Table ES-1 summarizes the treatment capacity of the existing and planned potable water and water reclamation facilities for CCWSD. In addition to the construction of these facilities, CCWSD intends to construct new wellfields, finished water storage, and distribution lines, which are presented in detail in the plan. The information on CCWSD is fully nested with the 2005 Water and Wastewater Master Plan Updates, adopted by the Collier County Board of County Commissioners on June 6, 2006 and the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007. A copy of the water and wastewater sections of the Collier County 2006 Annual Update and Inventory Report on Public Facilities is provided as Appendix A.

Table ES-1. Summary of Existing and Planned CCWSD Water Treatment and Water Reclamation Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Project Identified In LWCWSP
Water Treatment Facilities			
NCRWTP MF	Online	12.0	N/A
NCRWTP LPRO	Online	8.0	N/A
SCRWTP LS	Online	12.0	N/A
SCRWTP LPRO	Online	8.0	N/A
SCRWTP LPRO	2008	12	Yes
NCRWTP HPRO	2010	2.0	Yes
NERWTP Phase 1 LPRO	2011	7.5	Yes
NERWTP Phase 1 Ion Exchange	2011	2.5	Yes
SERWTP Phase 1 LPRO	2014	12.0	Yes
NERWTP Phase 2 LPRO	2016	2.5	Yes
NERWTP Phase 2 Ion Exchange	2016	2.5	Yes
Total		81.0	
Water Reclamation Facilities			
NCWRF	Online	24.1	N/A
SCWRF	Online	16.0	N/A
NCWRF Expansion	2010	6.5	N/A
NEWRF Phase 1	2011	4.0	Yes
NEWRF Phase 2	2014	4.0	Yes
SEWRF Phase 1	2014	4.0	Yes
NEWRF Phase 3	2018	4.0	Yes
SEWRF Phase 2	2018	4.0	Yes
Total		66.6	

¹ Information taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

Based on population projections available for the CCWSD service area, a capacity analysis was performed looking at projected demand versus plant capacity versus permitted allocation. The results of the capacity analysis are summarized below in Table ES-2. A discussion of the capacity analysis can be found in Section 6.1.

Table ES-2. Capacity Analysis for CCWSD

	2005	2008	2013	2018
Peak Service Area Population (Seasonal)	203,274	250,104	341,484	418,223
Demand Per Capita (MGD)	185	185	185	185
Required Treatment Capacity @ 185 gpcd (MGD)	37.61	46.27	63.17	77.37
Available Facility Capacity (MGD)	40.00	52.00	64.00	81.00
Facility Capacity Surplus (Deficit) (MGD) ¹	2.39	5.73	0.83	3.63
Raw Water Requirement (MGD) ²	44.63	59.81	79.30	97.47

	2005	2008	2013	2018
Permitted Amount (MGD Annual Average) ³	56.14	63.82	76.40	76.40
Permitted Surplus (Deficit) (MGD) ⁴	11.51	4.01	(2.90)	(21.07)

¹ Calculated by subtracting Required Treatment Capacity @ 185 gpcd from Available Facility Capacity.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the Required Treatment Capacity @ 185 gpcd by the efficiency of the treatment process.

³ CUP based on existing permit (11-00249-W) and allocation increases currently in process.

⁴ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

As the capacity analysis illustrates, CCWSD has sufficient plant capacity existing or planned throughout the 2018 planning horizon. There is a permit deficit that occurs between 2008 and 2013, but this will be addressed through planned permit modifications that will accompany planned plant construction projects.

Immokalee Water and Sewer District (IWSD)

Table ES-3 summarizes the treatment capacity of the existing and planned potable water facilities for IWSD.

Table ES-3. Summary of Existing and Planned ISWD Water Treatment Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Project Identified in LWCWSP
Jerry V. Warden WTP	Online	2.25	N/A
Airport WTP	Online	1.35	N/A
Carson Road WTP	Online	0.90	N/A
Carson Road WTP Expansion 1	2008	1.10	No
Carson Road WTP Expansion 2	2013	1.00	No
Total		6.60	

¹ Information on the existing and planned water treatment facilities taken from the 2005-2006 Lower West Coast Water Supply Plan Update approved by the Governing board of the SFWMD on July 12, 2006.

Based on population projections available for the IWSD service area, a capacity analysis was performed looking at projected demand versus plant capacity versus permitted allocation. The results of the capacity analysis are summarized below in Table ES-4. A discussion of the capacity analysis can be found in Section 6.2.

Table ES-4. Capacity Analysis for IWSD

	2005	2008	2013	2018
Service Area Population	22,206	23,784	26,638	29,664
Demand Per Capita (MGD)	182	182	182	182
Annual Average Daily Demand (MGD)	4.04	4.33	4.85	5.40
Available Facility Capacity (MGD)	4.50	5.60	5.60	6.60
Facility Capacity Surplus (Deficit) (MGD) ¹	0.46	1.17	0.75	1.20
Raw Water Requirement (MGD) ²	4.17	4.46	5.00	5.57

	2005	2008	2013	2018
Permitted Amount (MGD Annual Average) ³	3.36	3.36	3.36	3.36
Permitted Surplus (Deficit) (MGD) ⁴	(0.80)	(1.10)	(1.64)	(2.20)

¹ Calculated by subtracting Annual Average Daily Demand from Available Facility Capacity.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the Annual Average Daily Demand by the efficiency of the treatment process.

³ CUP for 3.36 MGD annual average expires June 15, 2010.

⁴ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

Based on the capacity analysis, the improvements planned by the IWSD for the 10-year planning period are sufficient to meet the demands of the service area. However, the allocation of the underlying CUP (11-00013-W) does not cover the withdrawals required to achieve the finished water demand.

Florida Governmental Utility Authority (Golden Gate) (FGUA)

The FGUA service area is nearly built out and the utility's plans for the 10-year planning period include projects to meet minor increases in water demand.

Table ES-5 summarizes the treatment capacity of the existing and planned potable water facilities for FGUA.

Table ES-5. Summary of Existing and Planned FGUA Water Treatment Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Project Identified in LWCWSP
Golden Gate WTP (LS)	Online	1.22	No
Golden Gate WTP (RO)	Online	0.87	No
Golden Gate WTP (RO)	2008	0.25	No
Golden Gate WTP (RO)	2009	0.50	No
Golden Gate WTP (RO)	2010	0.50	No
Total		3.34	

¹ Information on existing and planned water treatment facilities taken from the draft 2007 Water Master Plan Update, prepared by Arcadis, June 2007.

Based on population projections available for the FGUA service area, a capacity analysis was performed looking at project demand versus plant capacity versus permitted allocation. The results of the capacity analysis are summarized below in Table ES-6.

Table ES-6. Capacity Analysis for FGUA

	2005	2008	2013	2018
Service Area Population	10,359	11,113	12,370	13,626
Demand Per Capita (MGD)	173	173	173	173
Annual Average Daily Demand (MGD)	1.79	1.92	2.14	2.36
Available Facility Capacity (MGD)	2.09	2.34	3.34	3.34
Facility Capacity Surplus (Deficit) (MGD) ¹	0.30	0.42	1.20	0.98

	2005	2008	2013	2018
Raw Water Requirement (MGD) ²	2.02	2.19	2.48	2.77
Permitted Amount (MGD Annual Average) ³	1.92	1.92	1.92	1.92
Permitted Surplus (Deficit) (MGD) ⁴	(0.10)	(0.27)	(0.56)	(0.85)

¹ Calculated by subtracting Annual Average Daily Demand from Available Facility Capacity.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the Annual Average Daily Demand by the efficiency of the treatment process.

³ CUP for 1.92 MGD annual average expires September 11, 2008.

⁴ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

The improvements planned by the FGUA for the 10-year planning period are sufficient to meet the demands of the service area. However, the allocation of the underlying CUP (11-00148-W) does not cover the withdrawals required to achieve the finished water demand.

Orange Tree Utility Company (OTUC)

Table ES-7 summarizes the treatment capacity of the existing and planned potable water facilities for OTUC.

Table ES-7. Summary of Existing and Planned OTUC Water Treatment Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Project Identified in LWCWSP
Orange Tree WTP	Online	0.75	N/A
Orange Tree WTP Expansion	2009	0.75	No
Total		1.50	

¹ Information on existing and planned water treatment facilities were taken from the e-mail memo submitted by OTUC to the Collier County Community Development and Environmental Services on September 27, 2007.

Based on population projections available for the OTUC service area, a capacity analysis was performed looking at project demand versus plant capacity versus permitted allocation. The results of the capacity analysis are summarized below in Table ES-8.

Table ES-8. Capacity Analysis for OTUC

	2005	2008	2012
Service Area Population	2,631	5,700	9,500
Demand Per Capita (MGD)	60	80	85
Annual Average Daily Demand (MGD)	0.16	0.46	0.81
Available Facility Capacity (MGD)	0.75	0.75	1.50
Facility Capacity Surplus (Deficit) (MGD) ¹	0.59	0.29	0.69
Raw Water Requirement (MGD) ²	0.20	0.58	1.04
Permitted Amount (MGD Annual Average) ³	0.86	0.86	0.86
Permitted Surplus (Deficit) (MGD) ⁴	0.66	0.28	(0.18)

¹ Calculated by subtracting Annual Average Daily Demand from Available Facility Capacity.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the Annual Average Daily Demand by the efficiency of the treatment process.

³ CUP for 0.86 MGD annual average expires November 11, 2009.

⁴ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

Under the population projections presented, the improvements planned by the OTUC for the 10-year planning period are sufficient to meet the demands of the service area. However, the allocation of the underlying CUP (11-00419-W) does not cover the withdrawals required to make the finished water demanded in 2012.

Ave Maria Utility Company, LLLP (AMUC)

Table ES-9 summarizes the treatment capacity of the existing and planned potable water and water reclamation facilities for AMUC.

Table ES-9. Summary of Existing and Planned AMUC Water Treatment and Water Reclamation Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Project Identified In LWCWSP
Water Treatment Facilities			
AMUC WTP (Phase 1)	Online	1.67	Yes
AMUC WTP (Phase 2)	2010	0.83	No
AMUC WTP (Phase 3)	2012	1.67	No
AMUC WTP (Phase 4)	2015	0.83	No
Total		5.00	
Water Reclamation Facilities			
AMUC WRF (Phase 1)	Online	1.25	Yes
AMUC WRF (Phase 2)	2010	1.25	Yes
AMUC WRF (Phase 3)	2012	1.25	Yes
AMUC WRF (Phase 4)	2015	1.25	Yes
Total		5.00	

¹ Information on existing and planned water and wastewater treatment facilities taken from the Preliminary Design Reports for Ave Maria Utility Company, LLLP and Florida Department of Environmental Protection as prepared by CH2M Hill, Inc., June 2004 and February 2006 and supplemented with comments received from AMUC in a letter dated September 20, 2007.

Based on population projections available for the AMUC service area, a capacity analysis was performed looking at project demand versus plant capacity versus permitted allocation. The results of the capacity analysis are summarized below in Table ES-10. Without improvement to the system, the facilities operated by AMUC will be insufficient to meet the prescribed level of service around 2012.

Table ES-10. Capacity Analysis for AMUC

	2007 ¹	2008	2013	2018
Service Area Population	2,924	3,886	14,985	27,255
Demand Per Capita (MGD)	110	110	110	110
Annual Average Daily Demand (MGD)	0.32	0.43	1.65	3.00
Available Facility Capacity (MGD)	1.67	1.67	4.17	5.00
Facility Capacity Surplus (Deficit) (MGD) ²	1.35	1.24	2.52	2.00

	2007 ¹	2008	2013	2018
Raw Water Requirement (MGD) ³	0.38	0.50	1.94	3.53
Permitted Amount (MGD Annual Average) ⁴	1.26	1.26	1.26	1.26
Permitted Surplus (Deficit) (MGD) ⁵	0.88	0.76	(0.68)	(2.27)

¹ AMUC began service in early 2007.

² Calculated by subtracting Annual Average Daily Demand from Available Facility Capacity.

³ Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the Annual Average Daily Demand by the efficiency of the treatment process.

⁴ CUP for 1.26 MGD annual average expires June 14, 2011.

⁵ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

Section 1

Introduction

1.1 Plan Background

On July 12, 2006, the Governing Board of the South Florida Water Management District (SFWMD) approved the 2005-2006 Lower West Coast Water Supply Plan Update. Under Florida law (section 163.3177(6)(c), Florida Statutes) Collier County must adopt amendments to its comprehensive plan within 18 months of the SFWMD approval of the update. These amendments include the development of a 10-Year Water Supply Facilities Work Plan and amendments to the following elements of the Growth Management Plan (GMP): Intergovernmental Coordination Element, Infrastructure Element, Conservation and Coastal Management Element and Capital Improvement Element.

Under the requirement of the Florida Statutes, the 10-Year Water Supply Facilities Work Plan for Collier County must include analysis of all water utilities in the County not serving a specific local government. These utilities include:

- Collier County Water-Sewer District (CCWSD)
- Immokalee Water and Sewer District (IWSD)
- Florida Governmental Utility Authority (Golden Gate) (FGUA)
- Orange Tree Utility Company (OTUC)
- Ave Maria Utility Company, LLLP (AMUC)

Utilities not included in this plan are the City of Naples Utility Department, Marco Island Utilities, and Everglades City, each of which is responsible to develop a 10-Year Water Supply Facilities Work Plan to be included in its city's comprehensive plan.

1.2 Plan Objectives

This 10-Year Water Supply Facilities Work Plan for Collier County has the following objectives:

- Identify population and water demands of the County and each utility for the planning period of 2008 to 2018.
- Present existing and planned potable and reclaimed water facilities that will be utilized to meet demand projections.
- Identify sources of raw water needed for potable water supply to meet demands through the year 2018.

- Identify the steps necessary to develop additional potable and reclaimed water supplies and specify when they must occur and how they will be funded.
- Demonstrate that the water supply plans for each utility within the County are feasible with respect to facility capacity to be developed and consumptive use permit allocations required.
- Describe the conservation practices and regulations utilized by each utility to meet water supply demand.

1.3 Report Contents

Section 2 introduces the utilities that serve Collier County and identifies their service areas. Section 3 presents population and water demand projections for the County and individual utilities for the planning period out to 2018. Section 4 summarizes the existing potable water supply system including fresh and brackish water wellfields, raw water transmission systems, and WTPs and reclaimed water system (where applicable) for each utility. Section 5 summarizes the planned potable and reclaimed water systems for each of the utilities out to 2018. Section 6 presents an analysis of the ability of each utility to meet projected demands during the planning period. Section 7 summarizes current and planned conservation practices and regulations that will be utilized to meet demands. Section 8 summarizes the capital improvement plan for each of the utilities. Section 9 presents the findings of the work plan, including a list of any planning deficiencies and recommendations for each of the utilities.

Section 2

Water Service Areas

2.1 Overview of Collier County

Collier County is served by 4 Public Sector Water Systems, including the County, the City of Naples, Everglades City, and the City of Marco Island. The County is further subdivided into the Collier County Water-Sewer District (CCWSD) and the Goodland Water Sub-District. The boundaries of the CCWSD, City of Naples, Everglades City, the City of Marco Island, and the Goodland Water Sub-District are shown in **Figure 2-1**.

In addition to the Public Sector Water Systems, Collier County is served by 4 Non-Public Sector Water Systems including the Immokalee Water and Sewer District (IWSD), the Florida Governmental Utility Authority (Golden Gate) (FGUA), the Orange Tree Utility Company (OTUC), and the Ave Maria Utility Company (AMUC). The boundaries of these systems are also presented in **Figure 2-1**. There are also 2 Private Sector Water Systems which includes the Lee Cypress Water and Sewer Co-Op, Inc. and the Port of the Islands Community Improvement District, along with numerous small capacity water systems that are regulated by the Florida Department of Environmental Protection (FDEP).

2.2 Individual Utilities and Systems

2.2.1 Collier County

2.2.1.1 Collier County Water-Sewer District (CCWSD)

The CCWSD encompasses approximately 240 square miles. This area is bounded on the North by Lee County, on the south by the City of Marco Island service area, on the west by the City of Naples service area and the Gulf of Mexico, and on the east by the Urban Planning Boundary. The CCWSD was approved by referendum in 1969 and validated by the State Legislature in 1978 by Special Act, Chapter 78-489, Laws of Florida. In 1988, the legislature approved a supplement to the Special Act, which included revisions to the District boundaries. This action significantly increased the size of the District to its current size of approximately 240 square miles. It also specifically excluded areas of the City of Naples, Marco Shores, Marco Island, and the FGUA. There is one portion of the CCWSD service area that is not served by CCWSD, that being approximately 17 square miles of unincorporated area contiguous to the City of Naples, shown as green hatch on **Figure 2-1**.

The Water-Sewer District Boundary was established by a Special Act, Approved by the Governor on June 26, 2003, and adopted as Chapter 2003-353, Laws of Florida. The Rural Fringe Areas were incorporated within the CCWSD when the Board of County Commissioners approved Resolution 2003-296 on September 17, 2003. From the adoption date forward, the County is responsible for providing water and sewer service in the Rural Fringe, which is approximately 38 square miles in area.

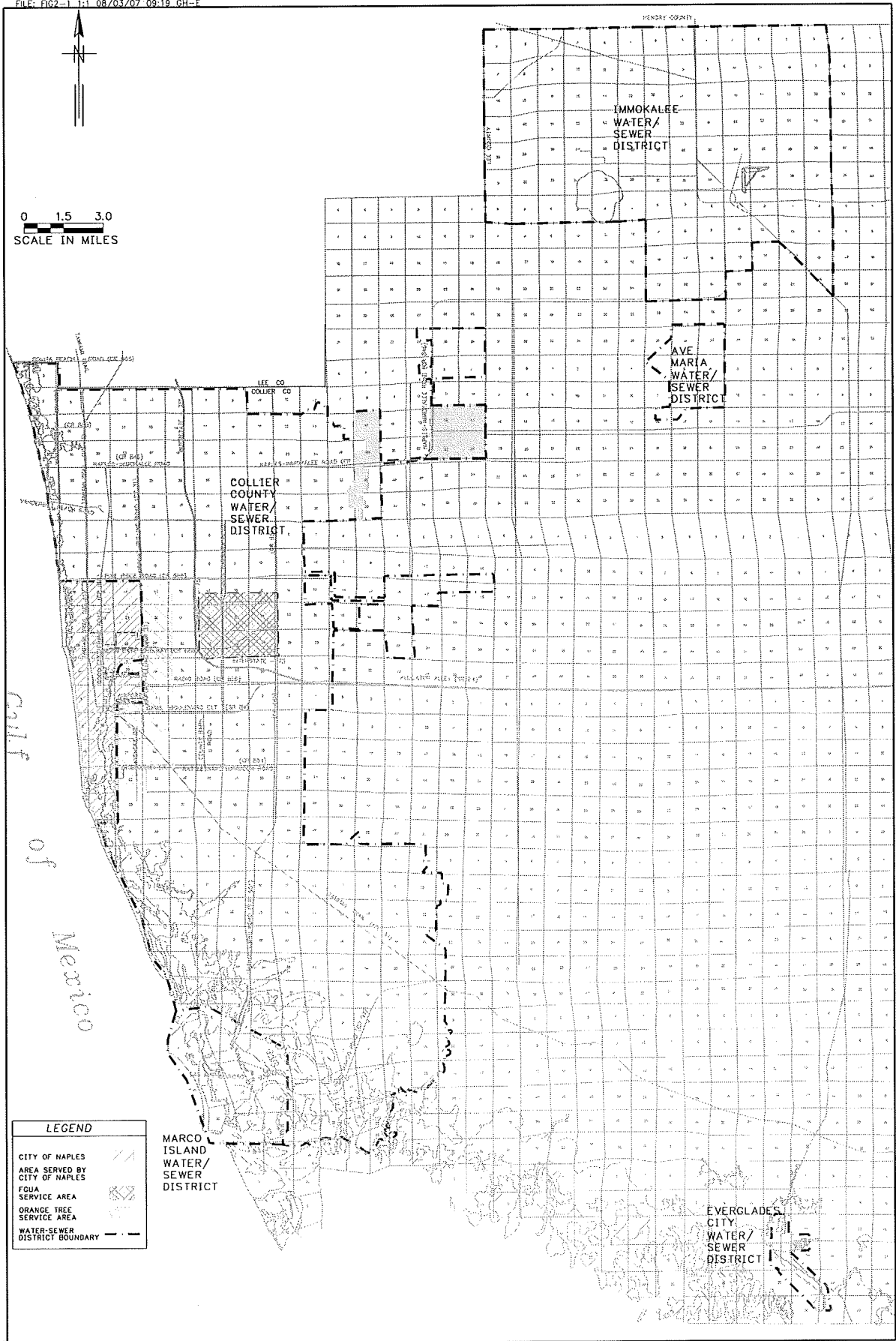


FIGURE 2-1
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
WATER SEWER DISTRICT BOUNDARIES OF COLLIER COUNTY

However, service in these areas is according to the following policy:

“Any development occurring within the Rural Fringe within the revised Collier County Water-Sewer District Boundary will be customers of the County. Should the County not be in a position to supply potable water to the project and/or receive the project’s wastewater at the time development commences, the PUD Developer, at his expense, will install and operate water and/or wastewater interim facilities adequate to meet all requirements of the appropriate regulatory agencies. These developments may receive water and wastewater services from another centralized service area provider until the County is in a position to provide service. However, these developments and the required interlocal agreement to enact this interim service will be reviewed on a case-by-case basis. Non-centralized interim service such as potable water supply wells and septic systems are allowable interim facilities.”

Several areas are included in the planning areas that lie outside the existing District boundaries. These areas include the OTUC service area, the FGUA service area, and potentially other partially developed areas in Golden Gate Estates within the CCWSD. The OTUC is obligated to become part of the CCWSD in 2012.

A composite map, provided as **Figure 2-2**, showing the existing CCWSD potable and reclaimed water distribution systems, illustrates the actual area of the water-sewer district currently being served.

2.2.1.2 Goodland Water Sub-District

The smallest of the County’s districts is the Goodland Water Sub-District. Goodland is an island community, roughly one-quarter of a square mile in area, and is located off SR-92 about two miles east of Marco Island. This district was established by referendum in 1975. Potable water for the Goodland Water System is purchased from the City of Marco Island in the future. Collier County maintains pumping, distribution and storage facilities in the Goodland Water Sub-District. The Goodland Water Sub-District serves the community of Goodland as well as Key Marco. The location of the Goodland Water Sub-District is shown in Figure 2-1.

2.2.2 City of Naples

The City of Naples is another public sector provider of water service in Collier County. In addition to its corporate area, the City also serves approximately 17 square miles of unincorporated area contiguous to the City limits per an interlocal agreement with Collier County. The City allocates 38 percent of its system capacity to serve this unincorporated area. The enabling legislation, under which the City established its water service area boundary, is Chapter 180, F.S., Municipal Public Works Law. The City's existing water supply facilities are not addressed in this 10-Year Water Supply Facilities Work Plan, since they will be discussed in the City's Plan. The County, however, is responsible for ensuring that the City's existing and future facilities meet the Level of Service Standard (LOSS) of the County in the

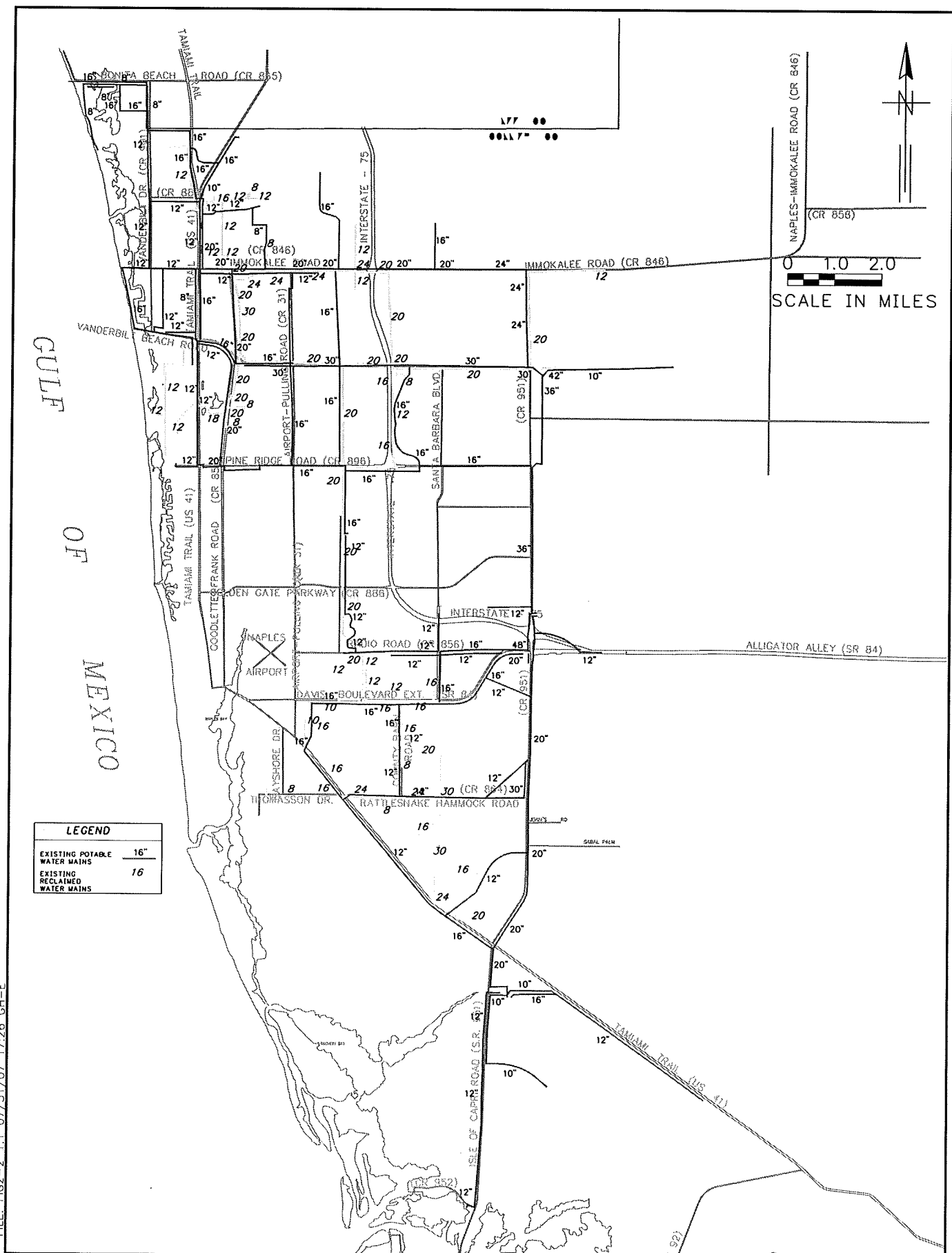


FIGURE 2-2
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
CCWS D POTABLE/RECLAIMED WATER SYSTEM COMPOSITE MAP

unincorporated portion of the City's service area. The service area for the utility is shown in Figure 2-1.

2.2.3 Everglades City

Everglades City is also a public sector provider of water service in the County. Like Naples, Everglades City is an incorporated community that provides water service both within and beyond its corporate limits. The outlying unincorporated communities served by the City include Plantation Island and Seaboard Village in Copeland. These represent a demand of over 17 percent of Everglades City's system capacity. Having no existing facilities in the vicinity of Everglades City, the County has authorized the City to serve these unincorporated areas. The City's existing water supply facilities are not addressed in this 10-Year Water Supply Facilities Work Plan, since they will be discussed in the City's Plan. The service area for the utility is shown in Figure 2-1.

2.2.4 City of Marco Island Water and Sewer Service Areas

The City of Marco Island historically had been provided service from the private sector utility company, the Florida Water Services Corporation. A small portion of Marco Island's water and sewer infrastructure had historically been maintained by Collier County as the Marco Island Water and Sewer District. The City of Marco Island recently voted to purchase the system from the Florida Water Services Corporation. The City now operates the approximately 10 square mile system as a public sector utility. On February 24, 2004, the Marco Island Water and Sewer District was dissolved/abolished by Ordinance No. 2004-09. The infrastructure in that area was turned over from the CCWSD to the City. The City now owns and operates the only centralized utility services on Marco Island. The City's existing water supply to the Marco Shores area is being replaced with a bulk water supply from the CCWSD to service the area. The bulk supply from the CCWSD is estimated at 165,000 gallons per day. The City's existing water supply facilities are not addressed in this 10-Year Water Supply Facilities Work Plan, since they will be discussed in the City's Plan. The service area for the utility is shown in Figure 2-1.

2.2.5 Immokalee Water and Sewer District (IWSD)

The Immokalee Water and Sewer District, located in the northeast part of Collier County, was created by Special Act of the State Legislature following a 1978 referendum. Creation of an independent district provided the means for this unincorporated community to develop its own water/sewer system, which was necessary due to the distance from the developed coastal area of the County. The Boundaries of the District were expanded following a voter referendum in 2004 and a change to the enabling act was signed by the Governor in June 2005 (Chapter 2005-298). This district is approximately 107 square miles in area and has a governing board whose members are appointed by the Governor of Florida. The boundaries of this independent district are shown on Figure 2-1.

2.2.6 Florida Governmental Utility Authority (Golden Gate) (FGUA)

FGUA provides water service to and slightly beyond the limits of Golden Gate. It also owns and operates systems in other Florida counties. Figure 2-1 shows the boundaries for the utility.

2.2.7 Orange Tree Utility Company (OTUC)

OTUC received a PSC Certificate to operate in 1987 and since then OTUC has served the Orangetree PUD, which is 2798 acres. In 1996, OTUC billing and customer service became regulated by Collier County Department of Utility Franchise Regulation. In 1998, OTU began servicing Collier County School Board facilities which now include Corkscrew Elementary, Corkscrew Middle, and Palmetto Ridge High School. In 1999, OTUC franchise area was expanded to include the Estates of TwinEagles with specific connections along 33rd Ave NE, and 33rd Ave NW, which are located within CCWSD service area. In 2006 Orange Blossom Ranch PUD was annexed into the OTUC franchise area. The OTUC franchise area is located 9 miles east of I-75, as depicted in Figure 2-1.

2.2.8 Ave Maria Utility Company, LLLP (AMUC)

AMUC, established in 2005, provides potable and reclaimed water service to the Town of Ave Maria. The town is located approximately 20 miles east of Interstate 75. The AMUC service area boundary is shown in Figure 2-1.

2.2.9 Independent Districts

2.2.9.1 Lee Cypress Water and Sewer Co-op, Inc.

The private sector utility providing water service to Copeland is the Lee Cypress Water and Sewer Co-op, Inc. The unincorporated community of Copeland is located on SR-29 about 3 miles north of US-41.

2.2.9.2 Port of the Islands Community Improvement District

Another independent district in the County is the Port of the Islands Community Improvement District. This district encompasses approximately 1 square mile of land contiguous to and north and south of US-41, approximately 20 miles south of Naples. This district was created in 1986 by the Collier County Board of County Commissioners in response to a petition from the district's developers and was created as a mechanism to provide water and other services to this isolated area. The district is governed by an elected board of directors.

2.2.10 Water Systems Regulated by Florida Department of Environmental Protection

The following is a summary of private sector water systems operating within Collier County, but regulated by the FDEP due to very small capacities. These systems primarily serve individual establishments, such as schools, stores, or golfing communities. The list was developed from the FDEP drinking water database.

- Big Cypress Wilderness Institute
- Bonita Bay East Golf Club
- Bonita Bay East Maintenance
- Bonita Bay East Sabal Rest #1
- Bonita Bay East Sabal Rest #2
- Center Point Community Church
- Children's House
- Corkscrew Swamp Sanctuary
- E's Country Store
- Everglades Shores/ Big Cypress Preserve
- Golden Gate Assembly Of God
- Golden Gate Library
- Hakan Services, Inc.
- Harley Davidson Motor Company
- Hideout Golf Club System
- I-75 Rest Stop & Recreational Area
- Monument Lake Campground
- Naples Bingo Palace Golden Gate Parkway
- Naples Golf Center
- Oasis Ranger Station
- Porky's Last Stand BBQ
- Randall Center
- Southwest Florida Research Education Center
- Sandy Ridge Labor Camp
- Sunniland Country Store
- Syngenta Seeds, Inc.
- Temple Bethel
- Trail Lakes Campground
- Trees Camp WTP
- Unity Faith Missionary Baptist
- VFW-Golden Gate Post 7721

Section 3

Population and Demand Projections

Sources of information utilized to develop the included population and projections are historical population growth, Florida Bureau of Economic and Business Research (BEER), Collier County Planning Department forecasts, historical construction permit data, build-out population data prepared by the Collier County Planning Department, information from water use permits, and information provided by the individual water supply utilities, such as Master Plans. Population projections through 2018 are included in the following sub-sections.

3.1 Countywide Projections

Table 3-1 shows the projected population for Collier County for the 10-year planning period of this plan. The population projections are for peak season, which is the basis for planning and sizing of facilities.

Table 3-1. Collier County Peak Season Population Estimates and Projections

Year	2005	2008	2013	2018
Countywide	441,314	517,251	636,076	750,380

¹ Estimates and projections are taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

The population and demand projections for each of the five utilities serving unincorporated Collier County are presented in Section 3.2.

3.2 Individual Utilities

3.2.1 Collier County Water-Sewer District (CCWSD)

Table 3-2 shows the projected populations for the areas served and to be served within the existing CCWSD service area. The populations are shown in 5-year increments, through 2018. The total population projections include the populations in the Rural Fringe Areas, which were incorporated into the CCWSD in 2003 as described in Section 2.2.1.1, and the Orange Tree Area which is obligated to become part of CCWSD in 2012.

Table 3-2. Population Projections for Areas Served by CCWSD

Year	2005	2008	2013	2018
Peak Served Area Population (Seasonal) ¹	203,274	250,104	341,484	418,223

¹ Estimates and projections are taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

As described in the 2005 Water Master Plan Update, adopted by the Collier County Board of County Commissioners (BCC) on June 6, 2006, the LOSS includes operational standards and a per capita water demand standard of 185 gpcd. The LOSS

for water transmission systems requires a minimum system pressure of 50 psi during the peak hour water demand period and a minimum system pressure of 40 psi during maximum day demand with fire flow. Based on the LOSS of 185 gpcd and the population projections presented in Table 3-2, the demand projections for the CCWSD were developed. Table 3-3 presents the projected population and demand for the area served by CCWSD, in 5-year increments, through 2018. Demand is provided as Required Treatment Capacity @ 185 gpcd in MGD. Required Treatment Capacity @ 185 gpcd is metric used by Collier County in its AUIR and is used to evaluate the ability of CCWSD facilities to meet peak season demand. It is calculated as the peak season population multiplied by the LOSS of 185 gpcd.

Table 3-3. Projected Population and Demand for Areas Served by CCWSD

Year	2005	2008	2013	2018
Peak Service Area Population (Seasonal) ¹	203,274	250,104	341,484	418,223
Demand Per Capita (MGD)	185	185	185	185
Required Treatment Capacity @ 185 gpcd ² (MGD)	37.61	46.27	63.17	77.37

¹ Estimates and projections are taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

² Required Treatment Capacity @ 185 gpcd taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

The per capita demand developed and adopted by CCWSD is based on historical water demands within the system. Between 1994 and 2004, per capita demand ranged from 164 gpcd to 203 gpcd. While the observed trend of the per capita demand has been downward over the past five years, CCWSD believes it would be imprudent at this time to adopt a new lower per capita demand for planning purposes. Most of the reduction in per capita demand can be attributed to expansion of the reclaimed water distribution system. While CCWSD intends to continue development of the reclaimed water distribution system, there is a limit as to how much additional potable use can be offset. Currently, CCWSD reuses more than 85 percent of the reclaimed water it produces. CCWSD is taking steps to better address reclaimed water surpluses as is discussed in Section 4.1.3.2.

3.2.2 Immokalee Water and Sewer District (IWSD)

Table 3-4 shows the projected populations for the areas served and to be served within the existing IWSD service area. The population is shown in 5-year increments, through 2018.

Table 3-4. Population Projections for Areas Served by IWSD

Year	2005	2008	2013	2018
Served Area Population ¹	22,206	23,784	26,638	29,664

¹ Service area populations based on projections included in SFWMD CUP #11-00013-W.

The ISWD LOSS includes operational standards and a per capita water demand standard of 182 gpcd. Based on the LOSS of 182 gpcd and the population projections presented in Table 3-4 the demand projections for the IWSD were developed. Table 3-5 presents the projected served population and demand for the IWSD, in 5-year increments, through 2018. Demand is provided as both Annual Average Daily Demand in MGD and Maximum Month Daily Demand also in MGD. Maximum Month Daily Demand is determined by multiplying the Annual Average Daily Demand by a peaking factor, which in this case is 1.2.

Table 3-5. Project Population and Demand for Areas Served by IWSD

Year	2005	2008	2013	2018
Service Area Population	22,206	23,784	26,638	29,664
Demand Per Capita (MGD)	182	182	182	182
Annual Average Daily Demand (MGD)	4.04	4.33	4.85	5.40
Maximum Month Daily Demand (MGD)	4.85	5.19	5.82	6.48

3.2.3 Florida Governmental Utility Authority (Golden Gate) (FGUA)

Table 3-6 shows the projected populations for the areas served and to be served within the existing FGUA service area. The population is shown in 5-year increments, through 2018.

Table 3-6. Population Projections for Areas Served by FGUA

Year	2005	2008	2013	2018
Served Area Population ¹	10,359	11,113	12,370	13,626

¹ Service area populations based on projections included in SFWMD CUP #11-00148-W.

The FGUA LOSS includes operational standards and a per capita water demand standard of 173 gpcd. Based on the LOSS of 173 gpcd and the population projections presented in Table 3-6, the demand projections for the FGUA were developed. Table 3-7 presents the projected served population and demand for the FGUA, in 5-year increments, through 2018. Demand is provided as both Annual Average Daily Demand in MGD and Maximum Month Daily Demand also in MGD. Maximum Month Daily Demand is determined by multiplying the Annual Average Daily Demand by a peaking factor, which in this case is 1.2.

Table 3-7. Project Population and Demand for Areas Served by FGUA

Year	2005	2008	2013	2018
Service Area Population	10,359	11,113	12,370	13,626
Demand Per Capita (MGD)	173	173	173	173
Annual Average Daily Demand (MGD)	1.79	1.92	2.14	2.36
Maximum Month Daily Demand (MGD)	2.15	2.31	2.57	2.83

3.2.4 Orange Tree Utility Company (OTUC)

Table 3-8 shows the projected populations for the areas served and to be served within the existing OTUC service area. The population is shown in 5-year increments, through 2012 when operation of the OTUC will be taken over by CCWSD.

Table 3-8. Population Projections for Areas Served by OTUC

Year	2005	2008	2012
Served Area Population ¹	2,631	5,700	9,500

¹ Service area populations based on existing connections and forecasted connections per developer agreements as reported by OTUC in an e-mail memo to Collier County Community Development and Environmental Services on September 27, 2007.

The OTUC LOSS includes operational standards and a per capita water demand standard of 60 gpcd. Based on the LOSS of 60 gpcd and the population projections presented in Table 3-8, the demand projections for the IWSD were developed. Table 3-9 presents the projected served population and demand for the IOTUC, in 5-year increments, through 2012. Demand is provided as both Annual Average Daily Demand in MGD and Maximum Month Daily Demand also in MGD. Maximum Month Daily Demand is determined by multiplying the Annual Average Daily Demand by a peaking factor, which in this case is 1.2.

Table 3-9. Project Population and Demand for Areas Served by OTUC

Year	2005	2008	2012
Service Area Population	2,631	5,700	9,500
Demand Per Capita (MGD)	60	80	85
Annual Average Daily Demand (MGD)	0.16	0.46	0.81
Maximum Month Daily Demand (MGD)	0.19	0.55	0.97

3.2.5 Ave Maria Utility Company, LLLP (AMUC)

Table 3-10 shows the projected populations for the areas served and to be served within the existing AMUC service area. The population is shown in 5-year increments, through 2018.

Table 3-10. Population Projections for Areas Served by AMUC

Year	2007 ²	2008	2013	2018
Served Area Population ¹	2,924	3,886	14,985	27,255

¹ Service area populations based on Preliminary Design Report for Wastewater Treatment Facilities, prepared by CH2M Hill, June 2004 and supplemented with comments received from AMUC in a letter dated September 20, 2007.

² AMUC began service in early 2007.

The AMUC LOSS includes operational standards and a per capita water demand standard of 110 gpcd. Based on the LOSS of 110 gpcd and the population projections presented in Table 3-10 the demand projections for the AMUC were developed. **Table 3-11** presents the projected served population and demand for the AMUC, in 5-year increments, through 2018. Demand is provided as both Annual Average Daily Demand in MGD and Maximum Month Daily Demand also in MGD. Maximum Month Daily Demand is determined by multiplying the Annual Average Daily Demand by a peaking factor, which in this case is 1.2.

Table 3-11. Project Population and Demand for Areas Served by AMUC

Year	2007 ¹	2008	2013	2018
Service Area Population	2,924	3,886	14,985	27,255
Demand Per Capita (MGD)	110	110	110	110
Annual Average Daily Demand (MGD)	0.32	0.43	1.65	3.00
Maximum Month Daily Demand (MGD)	0.39	0.51	1.98	3.60

¹ AMUC began service in early 2007.

Section 4

Existing Water Supply Facilities

4.1 Collier County Water-Sewer District (CCWSD)

4.1.1 Water Supply Permits

The SFWMD regulates withdrawals from groundwater sources in Collier County. CCWSD currently maintains 2 consumptive use permits (CUPs), one for potable water supply and one for supplemental supply of the reclaimed water system. An additional CUP for potable water supply has been requested by CCWSD for supply of the planned Northeast Regional Water Treatment Plant (NERWTP). The NERWTP and additional planned facilities within the CCWSD system are discussed in Section 5.1. Table 4-1 provides details on the CUPs CCWSD currently maintains and has requested.

Table 4-1. Consumptive Use Permits Issued by SFWMD to CCWSD

Consumptive Use Permit	Aquifer	Number of Permitted Wells	Expiration Date	Annual Allocation (MG)	Average Day Allocation (MGD)	Maximum Monthly Allocation (MG)
11-00249-W	LT	36	02/08/26	6,868	18.82	N/A
	HZ1	46	02/08/11	5,840	16.00	N/A
	LH	28	02/08/26	N/A	N/A	N/A
	Total	110		20,490	56.14	1981
070529-12 ¹	LT	3	TBD	949	2.60	N/A
	HZ1	4	TBD	949	2.60	N/A
	LH	14	TBD	3,650	13.30	N/A
	Total	21		4,599	15.90	390.6
11-00052-W ²	LT	7	TBD	2,639	7.23	N/A
	WT	6	TBD			
	Total	13		2,639	7.23	N/A

LT = Lower Tamiami

HZ1 = Hawthorn Zone 1

LH = Lower Hawthorn

WT = Water Table

¹ Application in process for a consumptive use permit for the planned NERWTP.

² Consumptive use permit for supplemental reclaimed water wellfield. Permit is currently in renewal process.

The CCWSD also has a permit for operation of a 1 MGD potable water ASR well near the Manatee Pumping Station Site.

4.1.2 Potable Water Facilities

4.1.2.1 Wellfields

Currently, the CCWSD operates 3 wellfields: the Golden Gate Tamiami Wellfield, the North Hawthorn Reverse Osmosis (RO) Wellfield, and the South Hawthorn RO Wellfield. The location of each of these wellfields is illustrated in **Figure 4-1**. The North Hawthorn RO and South Hawthorn RO wellfields contain wells that tap the Hawthorn Zone 1 (HZ1) and the Lower Hawthorn (LH) aquifers, both of which tend to be brackish in those areas of Collier County. The wellfields serve the low pressure reverse osmosis (LPRO) treatment trains at the North County Regional Water Treatment Plant (NCRWTP) and the South County Regional Water Treatment Plant (SCRWTP), respectively. The Golden Gate Tamiami Wellfield contains wells that tap the Lower Tamiami (LT) Aquifer, which contains freshwater. The wellfield serves the membrane filtration (MF) equipment at the NCRWTP and the lime softening (LS) equipment at the SCRWTP.

Tables 4-2, 4-3, and 4-4 summarize the existing wells in the Golden Gate Tamiami Wellfield, the North Hawthorn RO Wellfield, and the South Hawthorn RO Wellfield, respectively.

4.1.2.2 Water Treatment Facilities

The CCWSD is served by two water treatment plants (WTPs), the NCRWTP and the SCRWTP, which are shown in **Figure 4-2**.

The NCRWTP is located on the north side of Vanderbilt Beach Road Extension east of CR-951 in the northeastern quadrant of the service area. The plant utilizes groundwater withdrawn from the LT, HZ1 and LH aquifers. Water from the LT Aquifer is treated using MF, while water from the HZ1 and LH aquifers are treated by LPRO. Currently, the plant is capable of producing 20 MGD of finished water; 12 MGD from the MF process and 8 MGD from the LPRO process.

The SCRWTP is located near the intersection of CR-951 and I-75 about 5.5 miles south of the NCRWTP. The plant utilizes groundwater withdrawn from the LT, HZ1 and LH aquifers. Water from the LT Aquifer is treated using LS, while water from the HZ1 and LH aquifers are treated by LPRO. Currently, the plant is capable of producing 20 MGD of finished water; 12 MGD from the LS process and 8 MGD from the LPRO process.

A summary of the existing water treatment facilities is provided in **Table 4-5**. In addition to identifying the design capacity of each treatment train, the amount of raw water required to achieve the design capacity is also provided.

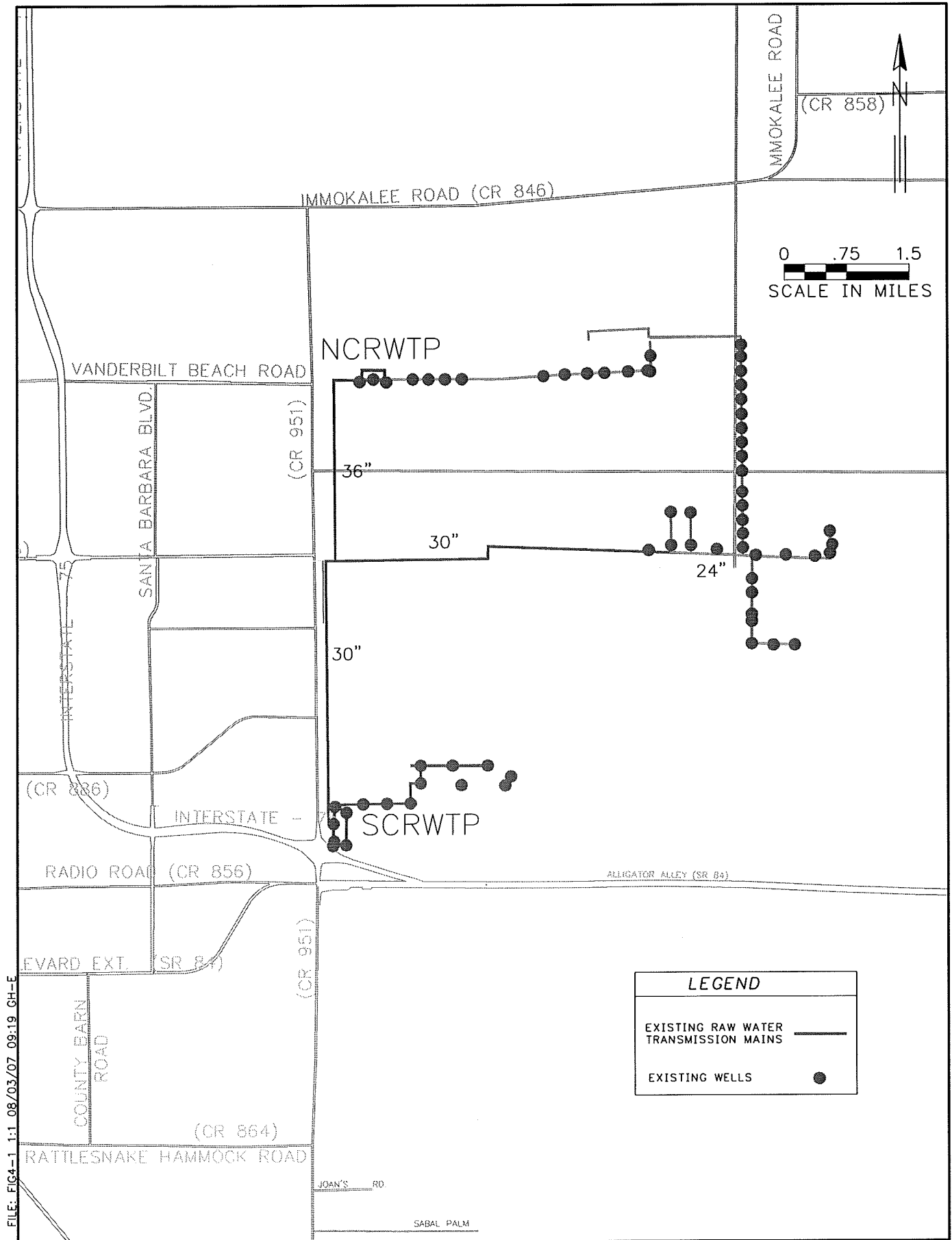


FIGURE 4-1
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING CCWSD WELLFIELDS AND RAW WATER TRANSMISSION MAINS

Table 4-2. Existing CCWSD Golden Gate Tamiami Wellfield¹

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
1	LT	96	50	16	700
2	LT	100	50	16	700
3	LT	100	51	16	700
4	LT	102	52	16	700
5	LT	108	50	16	700
6	LT	101	65	12	700
7	LT	106	65	12	700
9	LT	114	65	12	700
10	LT	112	71	12	700
11	LT	137	90	12	700
12	LT	133	90	12	700
13	LT	130	84	12	700
14	LT	131	85	12	700
15	LT	130	84	12	700
16	LT	150	92	12	700
17	LT	125	78	12	1000
18	LT	126	80	12	1000
19	LT	128	83	12	1000
20	LT	131	83	12	1000
21	LT	110	62	12	1000
22	LT	101	62	12	1000
23	LT	111	59	12	1000
24	LT	109	58	12	1000
25	LT	110	65	12	1000
26	LT	106	65	12	1000
27	LT	105	61	12	1000
28	LT	120	66	12	1000
29	LT	125	72	12	1000
30	LT	120	58	12	1000
31	LT	120	65	12	1000
32	LT	120	65	12	1000
33	LT	120	70	12	1000
34	LT	120	80	12	1000
35	LT	145	102	12	1000
36	LT	125	92	12	1000
37	LT	150	100	12	1000

¹ Information on existing wells taken from CUP #11-00249-W.

Table 4-3. Existing North Hawthorn RO Wellfield Summary¹

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
RO-1N	LH	801	705	16/12 ²	1000
RO-2N	LH	780	734	16/12 ²	1000
RO-3N	LH	800	720	16/12 ²	1000
RO-4N	LH	891	744	16/12 ²	1000
RO-5N	LH	1070	790	16/12 ²	1000
RO-6N	LH	975	740	16/12 ²	1000
RO-7N	LH	977	775	16/12 ²	1000
RO-9N	LH	952	780	16/12 ²	1000
RO-10N	LH	1011	750	16/12 ²	1000
RO-11N	LH	951	735	16/12 ²	1000
RO-12N	LH	891	730	16/12 ³	1000
RO-13N	LH	925	731	16/12 ³	1000
RO-14N	LH	950	713	16/12 ⁴	1000
RO-15N	LH	957	737	16/12 ³	1000
RO-16N	LH	989	751	16/12 ³	1000
RO-17N	LH	996	780	16/12 ³	1000
RO-18N	LH	1000	700	16	1000
RO-19N	LH	1000	700	16	1000
RO-20N	LH	1000	700	16	1000
RO-101N	HZ1	512	397	16	350
RO-102N	HZ1	500	400	16	350
RO-109N	HZ1	475	404	16	350
RO-114N	HZ1	514	412	16	350
RO-115N	HZ1	500	400	16	350
RO-116N	HZ1	500	400	16	350
RO-117N	HZ1	500	400	16	350
RO-118N	HZ1	500	400	16	350
RO-119N	HZ1	500	400	16	350
RO-120N	HZ1	500	400	16	350

¹ Information on existing wells taken from CUP #11-00249-W.

² 16-inch casing to 100 feet, then 12-inch casing to production casing depth.

³ 16-inch casing to 150 feet, then 12-inch casing to production casing depth.

⁴ 16-inch casing to 160 feet, then 12-inch casing to production casing depth.

Table 4-4. Existing South Hawthorn RO Wellfield Summary¹

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
RO-1S	HZ1	420	312	16/12 ²	1000
RO-2S	HZ1	400	292	16/12 ²	1000
RO-3S	HZ1	403	293	16/12 ²	1000
RO-4S	HZ1	402	331	16/12 ²	1000
RO-5S	HZ1	402	297	16/12 ²	1000
RO-6S	HZ1	421	317	16/12 ²	1000
RO-7S	HZ1	442	328	16/12 ²	1000
RO-8S	LH	982	660	16/12 ²	1000
RO-9S	LH	682	630	16/12 ²	1000
RO-10S	LH	842	630	16/12 ²	1000
RO-11S	LH	963	653	16/12 ²	1000
RO-12S	HZ1	422	299	16/12 ²	1000
RO-13S	HZ1	400	295	16/12 ²	1000
RO-14S	HZ1	422	298	16/12 ²	1000
RO-15S	HZ1	402	295	16/12 ²	1000
RO-39S	HZ1	400	300	16	1000
RO-40S	LH	1000	700	16	1000
RO-41S	HZ1	400	300	16	1000
RO-42S	LH	1000	700	16	1000

¹ Information on existing wells taken from CUP #11-00249-W.

² 16-inch casing to 120 feet, then 12-inch casing to production casing depth.

Table 4-5. Summary of Existing CCWSD Water Treatment Facilities¹

Facility Name	Design Capacity (MGD)	Raw Water Requirement ² (MGD)	Raw Water Source	Traditional/ Alternative
NCRWTP MF	12.00	14.12	LT	Traditional (Fresh)
NCRWTP LPRO	8.00	10.67	LH/HZ1	Alternative (Brackish)
SCRWTP LS	12.00	12.37	LT	Traditional (Fresh)
SCRWTP LPRO	8.00	10.67	LH/HZ1	Alternative (Brackish)
Total	40.00	47.82		

¹ Information on existing treatment facilities taken from the Collier County 2005 Water Master Plan Update, adopted by the Collier County BCC on June 6, 2006.

² Raw water requirement is the amount of raw water needed to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

4.1.2.3 Pumping, Storage, and Transmission

The existing transmission facilities consist of transmission pipelines, water storage tanks, an aquifer storage and recovery (ASR) system, and pumping facilities. The storage and pumping facilities utilized by CCWSD are shown in **Figure 4-3**. The pumping facilities are comprised of high service pumps located at both water treatment plants, 4 water booster pumping stations and an in-line booster pump station. Ground storage tanks at the treatment facilities and at the booster pumping stations provide system storage and reserve capacity to help meet the peak hourly demands of the system. The booster pumping stations and storage tanks are located at the Isle of Capri, Manatee Road, and Carica Road. The CCWSD maintains and operates the Goodland Water Booster Pumping Station, which is part of the Goodland Water Sub-District. An in-line booster station is located in the northwest portion of the system near Vanderbilt Drive. In addition to the traditional storage and pumping facilities mentioned above, CCWSD operates a 1 MGD potable water ASR system at the Manatee Road Pumping Station.

Potable water is stored at various strategic points in the CCWSD distribution system to help meet diurnal peak system and fire flow demands. A summary of the existing storage facilities is provided in **Table 4-6**.

Table 4-6. Summary of Existing CCWSD Water Storage Facilities

Facility Name	Tank Volume (MG)	Usable Storage Volume (MG)
NCRWTP	12.00	11.10
SCRWTP	14.00	12.40
Isle of Capri	0.25	0.20
Manatee Road Pumping Station	2.00	1.80
Carica Road Pumping Station	10.00	9.30
Manatee Road ASR ²	N/A	~1 MGD
System Total	38.25	34.80

¹ Information on existing water storage facilities taken from the Collier County 2005 Water Master Plan Update, adopted by the Collier County BCC on June 6, 2006.

² Storage volume for Manatee Road ASR not included in total.

Potable water is pumped from the plants into the distribution system. The distribution system includes water mains designated as either transmission or distribution mains. The CCWSD pipelines 16 inches in diameter and larger are generally termed transmission mains. These are typically located along arterial and collector roadways and convey water to major demand areas. Pipelines smaller than 16 inches in diameter are generally called distribution mains, branching off the transmission system to supply individual users.

The transmission mains and major distribution mains that serve the CCWSD are illustrated in **Figure 4-4**. Overall, the CCWSD owns and maintains over 800 miles of water transmission and distribution pipelines, up to 42 inches in diameter, with over 49,000 individual service connections.

4.1.3 Reclaimed Water Facilities

CCWSD operates the largest reclaimed water system in South Florida. Currently, the system serves 28 customers with contractual commitments of 22.3 MGD. The majority of the existing customer base is golf courses, residential communities, environmental mitigation areas, county parks, and roadway medians. There are more than 140 additional entities within Collier County that have requested connection to the reclaimed water system and are currently on a waiting list.

4.1.3.1 Water Reclamation Facilities

CCWSD currently operates two water reclamation facilities (WRFs), the North County Water Reclamation Facility (NCWRF) and the South County Water Reclamation Facility (SCWRF), which are shown in **Figure 4-5**. **Table 4-7** summarizes the capacities of the existing reclaimed water facilities.

Table 4-7. Summary of Existing Water Reclamation Facilities¹

Facility Name	Design Capacity (MGD)
NCWRF	24.10
SCWRF	16.00
Total	40.10

¹ Information on existing water reclamation facilities taken from the Collier County 2005 Wastewater Master Plan Update, adopted by the Collier County BCC on June 6, 2006.

² The design capacities do not reflect the amount of reclaimed water available from the facilities. The amount of reclaimed water available is based on influent flow and treatment efficiency.

4.1.3.2 Reclaimed Water Pumping, Storage, and Transmission

The reclaimed water distribution system, which consists of 125 miles of transmission and distribution pipeline, is currently divided into two services areas; one in the north and one in the south, that are supplied by the respective WRF. There are a few small interconnects between the two service areas, but the system is hydraulically limited from passing large volumes of water from one service area to the other. This issue is currently being addressed by the development of a reclaimed water booster pump

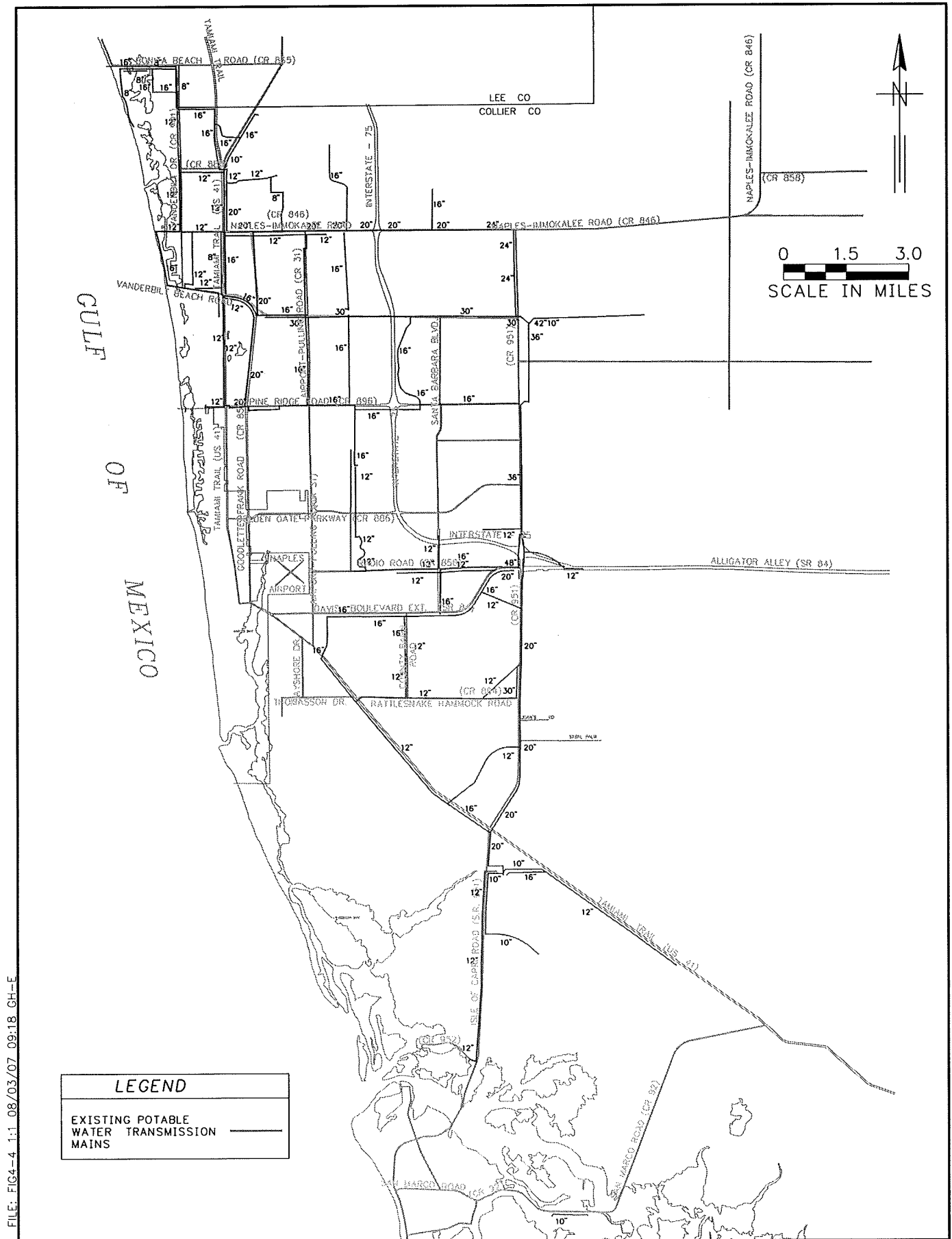


FIGURE 4-4
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING CCWSD POTABLE WATER TRANSMISSION MAINS

station that will interconnect the two service areas and provide the capacity for transferring up to 5 MGD of reclaimed water.

Reclaimed water produced at the two WRFs can be temporarily stored in on-site ponds. Storage of up to 1 MG is also available at the former Pelican Bay WRF, which was decommissioned in 2006 and converted to a reclaimed water storage and pumping facility. Additional storage is achieved in the distribution system which provides 130 MG of wet weather storage. Excess water is pumped into deep injection wells (DIWs) for disposal. **Figure 4-6** presents the reclaimed water distribution system.

One of the significant issues that the reclaimed water system must contend with is wet weather storage. During the wet season, demand for reclaimed water drops off sharply and CCWSD is forced to put the reclaimed water down its DIWs from which it cannot be recovered. The County has identified this scenario as a waste of a valuable resource and is making efforts to reduce the amount of reclaimed water that is disposed during the wet season. To this end, a reclaimed water ASR is being developed. The initial phase of the reclaimed water ASR is ongoing with cycle testing to commence within the next few months. Following 18 months of cycle testing, the ASR will be put into service, where it is expected to provide between 0.5 and 1 MGD of reclaimed water to meet peak season demands.

4.1.3.3 Supplemental Wellfields

In addition to the two existing WRFs, pumping and storage facilities, CCWSD utilizes two supplemental wellfields to meet its contractual requirements. The locations of the two wellfields, known as the Pelican Bay Wellfield and the Immokalee (Mule Pen Quarry) Wellfield, are shown in **Figure 4-6**. The wellfields are permitted under CUP 11-00052-W, described in Section 4.1.1, which allows CCWSD to withdraw water from the Lower Tamiami Aquifer in the Pelican Bay Wellfield and the Water-Table aquifer at the Immokalee Wellfield, to meet peak demands within the reclaimed water distribution system. A summary of the wells that make up these wellfields is provided in **Table 4-8**.

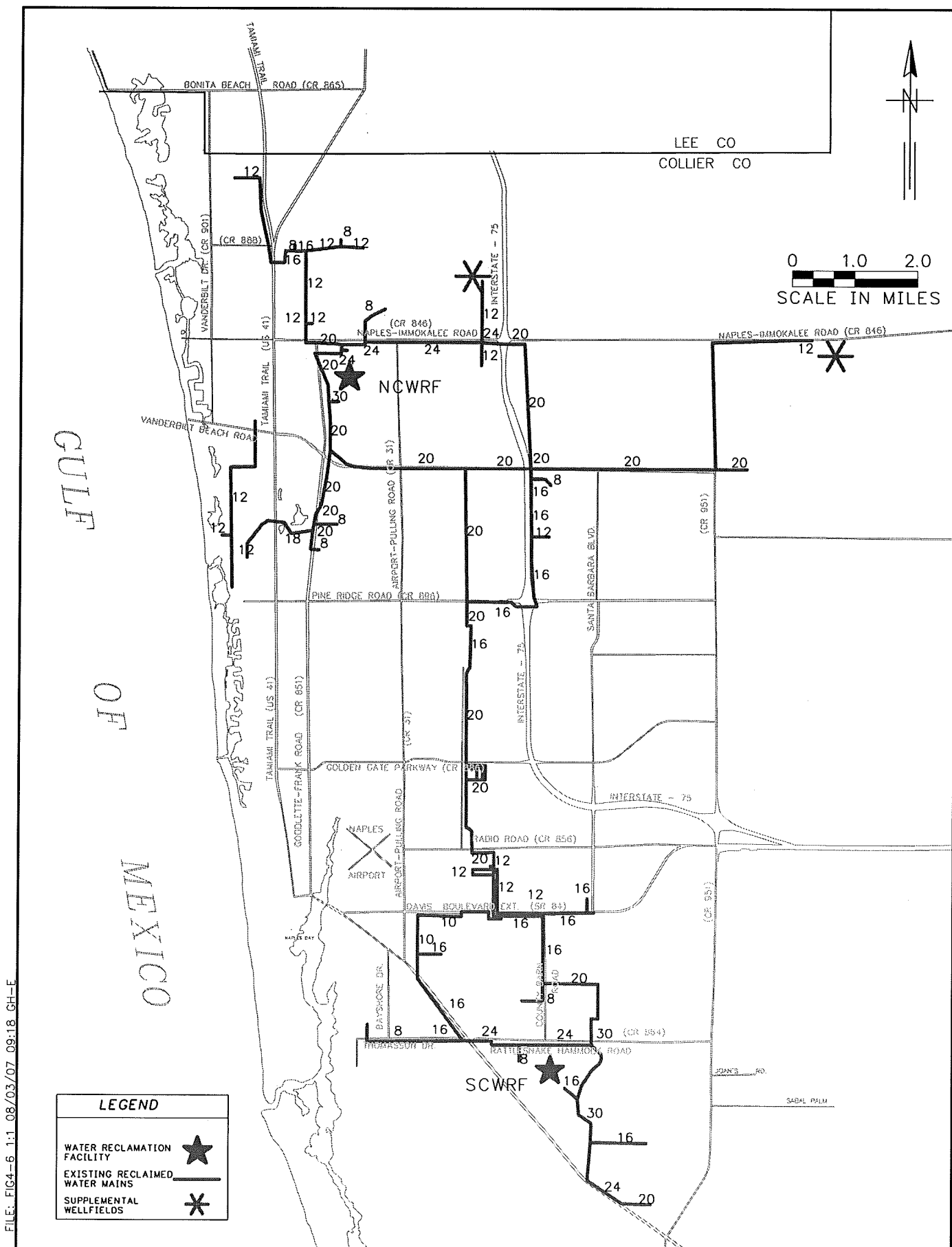


FIGURE 4-6
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING CCWSD RECLAIMED WATER DISTRIBUTION SYSTEM

Table 4-8. Summary of Existing CCWSD Supplemental Wells¹

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
1	LT	100	50	10	300
2	LT	100	50	10	300
3	LT	100	50	10	300
4	LT	100	50	10	300
5	LT	100	50	10	300
6	LT	100	50	10	300
7	LT	100	50	10	300
8	WT	35	20	10	500
9	WT	35	20	10	500
10	WT	35	20	10	500
11	WT	35	20	10	500
12	WT	35	20	10	500
13	WT	35	20	10	500

¹ Information on existing wells taken from CUP #11-00052-W.

4.2 Immokalee Water and Sewer District (IWSD)

4.2.1 Water Supply Permits

The IWSD maintains one CUP for potable water supply. The details of the CUP are presented in Table 4-9.

Table 4-9. Consumptive Use Permits Issued by SFWMD to the Immokalee Water and Sewer District

Consumptive Use Permit	Aquifer	Number of Permitted Wells	Expiration Date	Annual Allocation (MG)	Average Day Allocation (MGD)	Maximum Day Allocation (MGD)
11-00013-W	Lower Tamiami	16	6/15/2010	1,227	3.36	4.70

4.2.2 Potable Water Facilities

4.2.2.1 Wellfields

Currently, the IWSD operates three wellfields; one adjacent to each of its WTPs. The locations of each of these wellfields and WTPs are illustrated in Figure 4-7. The wells maintained by the Immokalee Water and Sewer District tap the Lower Tamiami Aquifer, which is a traditional freshwater source. Table 4-10 summarizes the existing wells operated by the Immokalee Water and Sewer District.

4.2.2.2 Water Treatment Facilities

The IWSD is served by 3 interconnected water treatment facilities, the Jerry V. Warden WTP, the Airport WTP and the Carson Road WTP, which are shown in Figure 4-7.

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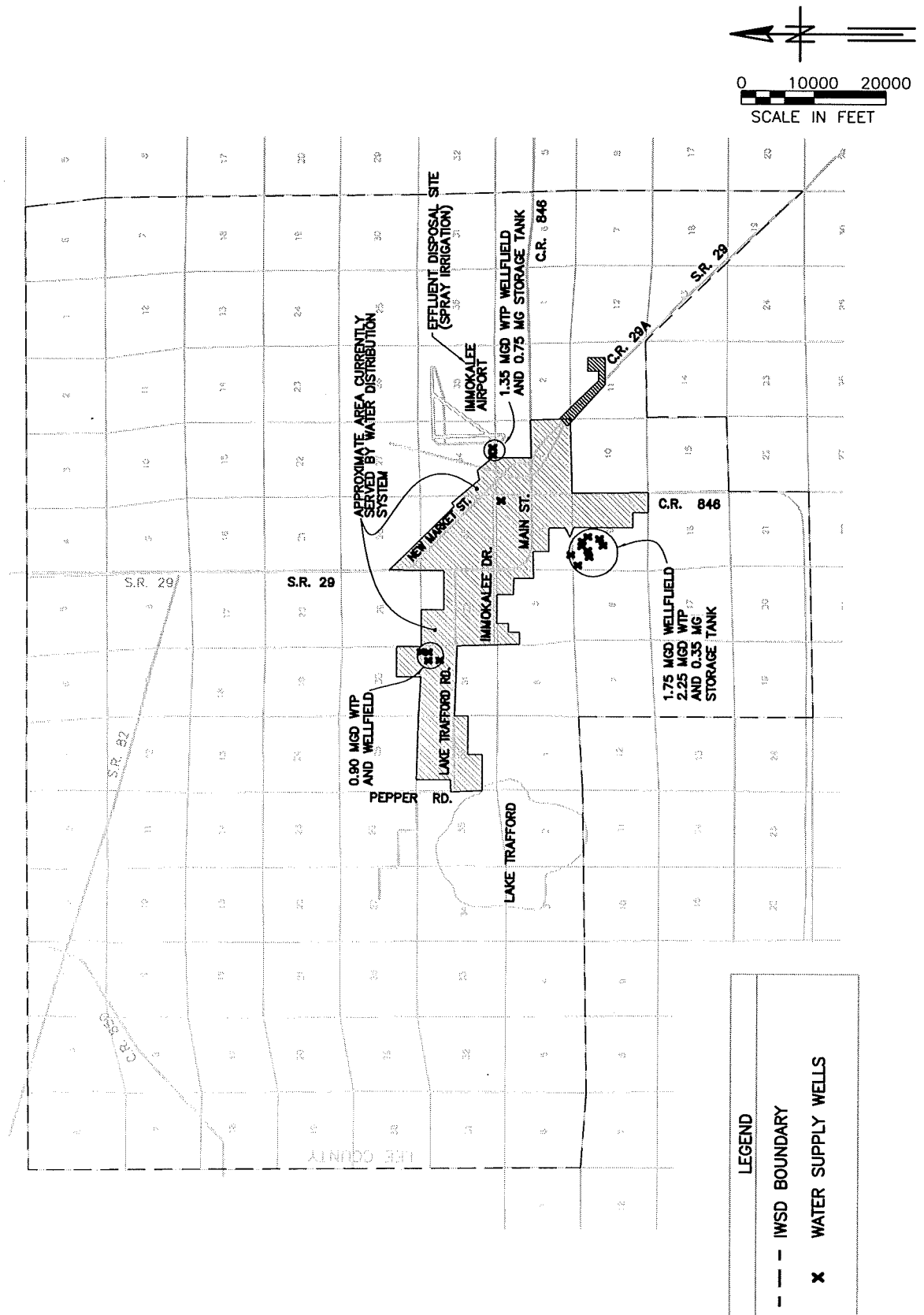


FIGURE 4-7
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING IWSD WATER SUPPLY FACILITIES

Table 4-10. Summary of Existing IWSD Potable Water Wells

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
1	LT	275	236	4	110
2	LT	225	140	6	400
3	LT	315	230	8	200
4	LT	275	250	8	225
5	LT	275	236	8	225
6	LT	175	95	8	250
7	LT	278	234	8	250
8	LT	200	140	8	350
9	LT	200	140	8	350
10	LT	200	125	8	350
11	LT	200	154	6	250
12	LT	210	140	8	200
13	LT	210	128	8	350
14	LT	180	100	8	350
15	LT	180	100	8	350
16	LT	187	107	6	350

¹ Information on existing wells taken from CUP #11-00013-W.

The Jerry V. Warden WTP is located on the west side of Sanitation Road, south of CR-29. Freshwater from the Lower Tamiami Aquifer is treated at the plant using LS. The plant has a finished water capacity of 2.25 MGD.

The Carson Road WTP is located on the west side of Carson Road, north of Lake Trafford Road. The plant utilizes LS to treat the freshwater from the Lower Tamiami Aquifer and has a finished water capacity of 0.9 MGD.

The Airport WTP is located east of New Market Road East, north of CR-846. LS is utilized at the plant to treat freshwater from the Lower Tamiami Aquifer. The finished water capacity of the plant is 1.35 MGD. A summary of the existing water treatment facilities is provided in **Table 4-11**. In addition to identifying the design capacity of each treatment train, the amount of raw water required to make the design capacity is also provided.

4.2.2.3 Pumping, Storage, and Transmission

The existing transmission facilities consist of transmission pipelines, water storage tanks, and pumping facilities. The transmission facilities utilized by IWSD are shown in Figure 4-7. Water from the Jerry V. Warden WTP is pumped to two ground storage tanks, with a total capacity of 1.80 MG, located on the plant site. Water from the Carson Road WTP is pumped to an on-site 0.5 MG ground storage tank. Water from the Airport WTP is pumped to an on-site 0.75 MG ground storage tank. From the storage tanks water enters the distribution system which consists of mains ranging in

size from 2-inch to 12-inch. The distribution system contains approximately 100 miles of mains. Table 4-12 summarizes the existing water storage facilities utilized by IWSD.

Table 4-11. Summary of Existing IWSD Water Treatment Facilities¹

Facility Name	Design Capacity (MGD)	Raw Water Requirement ² (MGD)	Raw Water Source	Traditional/ Alternative
Jerry V. Warden WTP	2.25	2.32	LT	Traditional (Fresh)
Airport WTP	1.35	1.39	LT	Traditional (Fresh)
Carson Road WTP	0.90	0.93	LT	Traditional (Fresh)
Total	4.50	4.64		

¹ Information on existing water treatment facilities taken from the 2005-2006 Lower West Coast Water Supply Plan Update approved by the Governing Board of the SFWMD on July 12, 2006.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

Table 4-12. Summary of Existing IWSD Water Storage Facilities¹

Facility Name	Tank Volume (MG)	Usable Storage Volume (MG)
Jerry V. Warden WTP	1.80	1.80
Carson Road WTP	0.50	0.50
Airport WTP	0.75	0.75
Total	3.05	3.05

¹ Information on existing water storage facilities taken from CUP #11-00013-W.

4.2.3 Reclaimed Water Facilities

Currently, IWSD disposes of all effluent wastewater via an on-site spray irrigation field, percolation ponds, or deep well injection. There are no current plans to develop a reclaimed water distribution system.

4.3 Florida Governmental Utility Authority (Golden Gate) (FGUA)

4.3.1 Water Supply Permits

The FGUA maintains one CUP for potable water supply. The details of the CUP are presented in Table 4-13.

Table 4-13. Consumptive Use Permits Issued by SFWMD to FGUA

Consumptive Use Permit	Aquifer	Number of Permitted Wells	Expiration Date	Annual Allocation (MG)	Average Day Allocation (MGD)	Maximum Monthly Allocation (MG)
11-00148-W	LT	2 (proposed)	9/11/2008	331	0.91	33.75
	WT	9	9/11/2008	N/A	N/A	N/A
	Total	11		702	1.92	71.50

4.3.2 Potable Water Facilities

4.3.2.1 Wellfields

Currently, FGUA operates 1 wellfield, with wells on or adjacent to its WTP site. The locations of these wells and WTP are illustrated in **Figure 4-8**. The wells maintained by FGUA tap the WT Aquifer, which is a traditional freshwater source. The two permitted LT wells are proposed and discussed in Section 5.3.1.1. **Table 4-14** summarizes the existing wells operated by FGUA.

Table 4-14. Summary of Wells Operated by FGUA¹

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
1	WT	22	15	6	200
2	WT	22	15	8	250
3	WT	45	35	6	160
4	WT	45	35	8	200
5	WT	22	15	8	250
8	WT	22	15	8	250
9	WT	25	25	10	200
10	WT	25	15	8	200
11	WT	25	15	8	200

¹ Information on existing wells taken from CUP #11-00148-W.

4.3.2.2 Water Treatment Facilities

FGUA operates 1 WTP, the Golden Gate Water Treatment Plant, which is located west of CR-951, south of Golden Gate Parkway, as shown in **Figure 4-8**. The WTP has a finished water capacity of 1.22 MGD using LS, which is augmented by 0.87 MGD of RO for additional capacity. A summary of the existing water treatment facilities is provided in **Table 4-15**. In addition to identifying the design capacity of each treatment train, the amount raw water required to make the design capacity is also provided.

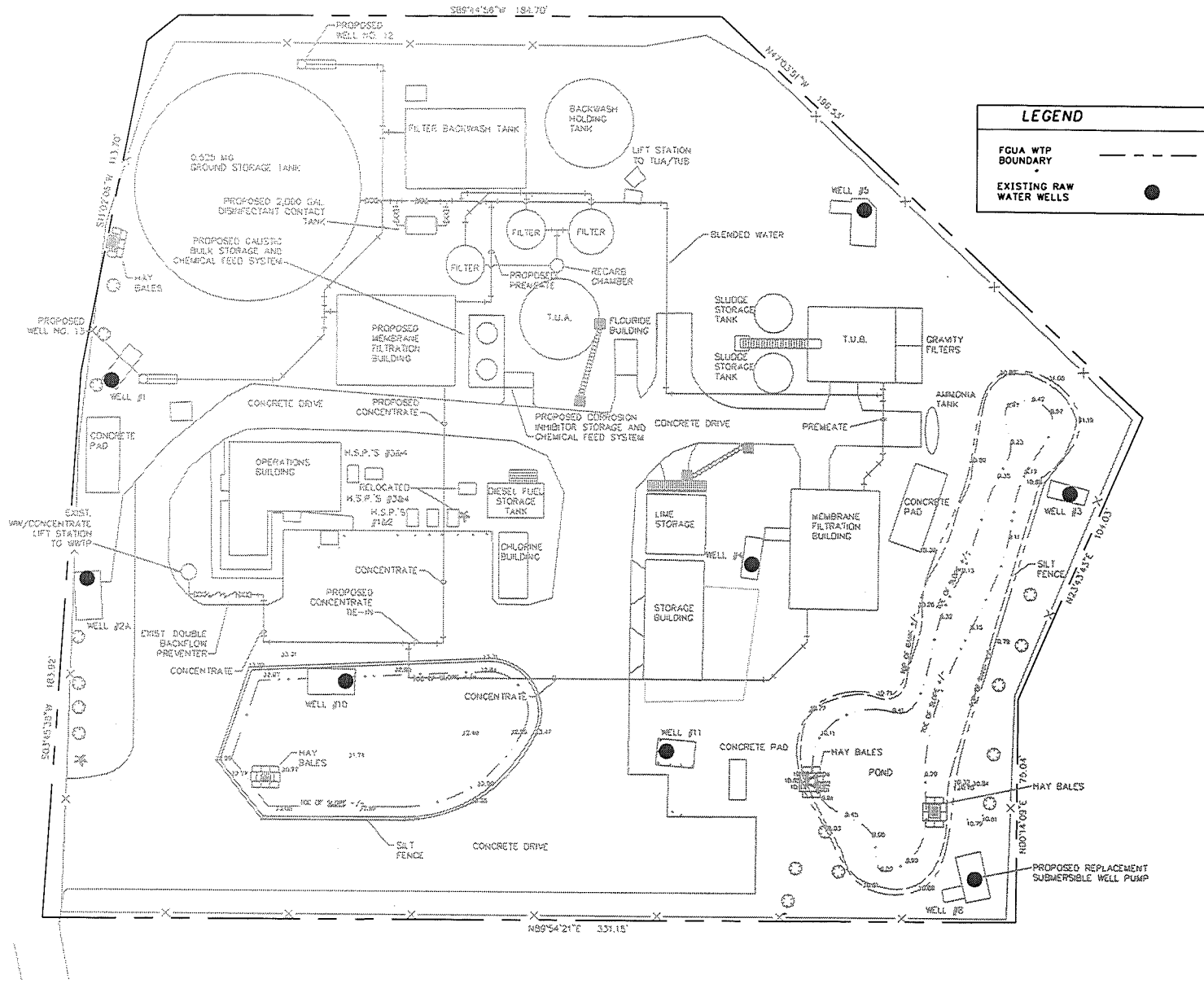
Table 4-15. Summary of Existing FGUA Water Treatment Facilities¹

Facility Name	Design Capacity (MGD)	Raw Water Requirement ² (MGD)	Raw Water Source	Traditional/ Alternative
Golden Gate WTP (LS)	1.22	1.26	WT	Traditional (Fresh)
Golden Gate WTP (RO)	0.87	1.16	WT	Traditional (Fresh)
Total	2.09	2.42		

¹ Information of existing water treatment facilities take from the draft 2007 Water Master Plan Update, prepared by Arcadis, June 2007.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING FGUA WELLFIELD AND WATER TREATMENT FACILITY



4.3.2.3 Pumping, Storage, and Transmission

The existing transmission facilities consist of transmission pipelines, water storage tanks, and pumping facilities. The transmission facilities utilized by FGUA are shown in Figure 4-9. Water from the WTP is pumped to a 0.52 MG ground storage tank, located on the plant site. From the storage tank water enters the distribution system which consists of mains ranging in size from 2-inch to 14-inch. The distribution system contains approximately 42.5 miles of mains. A booster pump station with a 1 MG ground storage tank on Green Boulevard is used to maintain water pressures within the distribution system. Table 4-16 summarizes the existing water storage facilities utilized by FGUA.

Table 4-16. Summary of Existing FGUA Storage Facilities¹

Facility Name	Tank Volume (MG)	Usable Storage Volume (MG)
Golden Gate WTP Tank	0.52	0.52
Green Blvd. Booster Pump Station Tank	1.00	1.00
Total	1.52	1.52

¹ Information of existing water storage facilities take from the draft 2007 Water Master Plan Update, prepared by Arcadis, June 2007.

4.3.3 Reclaimed Water Facilities

The FGUA currently disposes of treated wastewater using rapid infiltration basins (RIBs). The existing permitted capacity of the RIB system is 1.25 MGD, which is sufficient to meet the disposal need of the existing 0.95 MGD facility and the planned Phase I expansion of the facility to 1.25 MGD AADF, scheduled to come on-line in 2008. Two planned future expansions of the facility will increase the capacity to 2.00 MGD by 2010. The FGUA considered the possibility of utilizing water reclamation as a possible alternative disposal method in its 2006 Reuse Feasibility Report, but determined that upgrading the treatment facilities to FDEP public access reuse standards and developing a reclaimed water distribution system within the service area would be cost prohibitive. As an alternative the FGUA has decided to construct a Class 1 deep injection well to meet future effluent disposal needs.

4.4 Orange Tree Utility Company (OTUC)

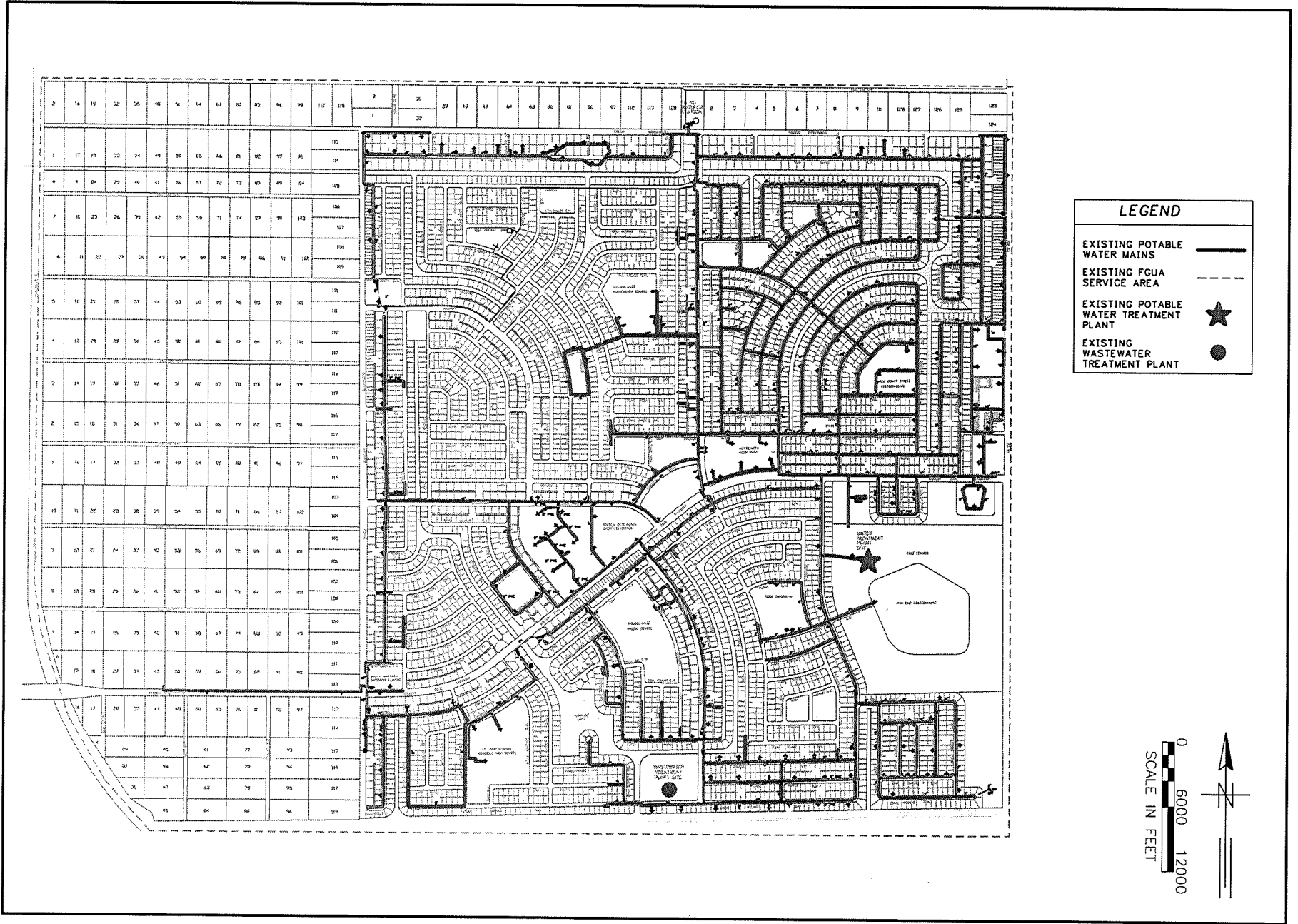
4.4.1 Water Supply Permits

The OTUC maintains one CUP for potable water supply. The details of the CUP are presented in Table 4-17.

Table 4-17. Consumptive Use Permits Issued by SFWMD to OTUC

Consumptive Use Permit	Aquifer	Number of Permitted Wells	Expiration Date	Annual Allocation (MG)	Average Day Allocation (MGD)	Maximum Monthly Allocation (MGD)
11-00419-W	LT	6	11/11/2009	313	0.86	37.70

FIGURE 4-9
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING FGUA POTABLE WATER TRANSMISSION MAINS



4.4.2 Potable Water Facilities

4.4.2.1 Wellfields

Currently, OTUC operates 1 wellfield in the vicinity of its WTP. The locations of these wells and WTP are illustrated in **Figure 4-10**. The wells maintained by OTUC tap the Lower Tamiami Aquifer, which is a traditional freshwater source. **Table 4-18** summarizes the existing wells operated by the utility.

Table 4-18. Summary of Wells Operated by OTUC

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
PW1	LT	180	70	12	300
PW2	LT	180	70	12	300
PW3	LT	180	70	12	300
PW4	LT	180	70	12	300

¹ Information on existing wells taken from CUP #11-00419-W.

4.4.2.2 Water Treatment Facilities

Orange Tree Utility operates 1 WTP, which is located east of SR-846, north of CR-858 as shown in **Figure 4-10**. The WTP has a finished water capacity of 0.75 MGD using membrane softening (MS). A summary of the existing water treatment facility is provided in **Table 4-19**. In addition to identifying the design capacity, the amount raw water required to produce the design capacity is also provided.

Table 4-19. Summary of Existing OTUC Water Treatment Facilities¹

Facility Name	Design Capacity (MGD)	Raw Water Requirement ² (MGD)	Raw Water Source	Traditional/ Alternative
Orange Tree WTP	0.75	0.94	LT	Traditional (Fresh)
Total	0.75	0.94		

¹ Information on existing water treatment facilities taken from the 2005-2006 Lower West Coast Water Supply Plan Update approved by the Governing Board of the SFWMD on July 12, 2006.

² Raw water requirement is the amount of raw water needed to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

4.4.2.3 Pumping, Storage, and Transmission

The existing transmission facilities consist of a water storage tank at the WTP and transmission pipelines. The water storage tank at the WTP has a capacity of 0.75 MG and the transmission pipelines range in size from 3-inch to 12-inch and total approximately 9 miles in length. The transmission facilities utilized by OTUC are shown in **Figure 4-10**. **Table 4-20** summarizes the water storage available in the Orange Tree Utility System.

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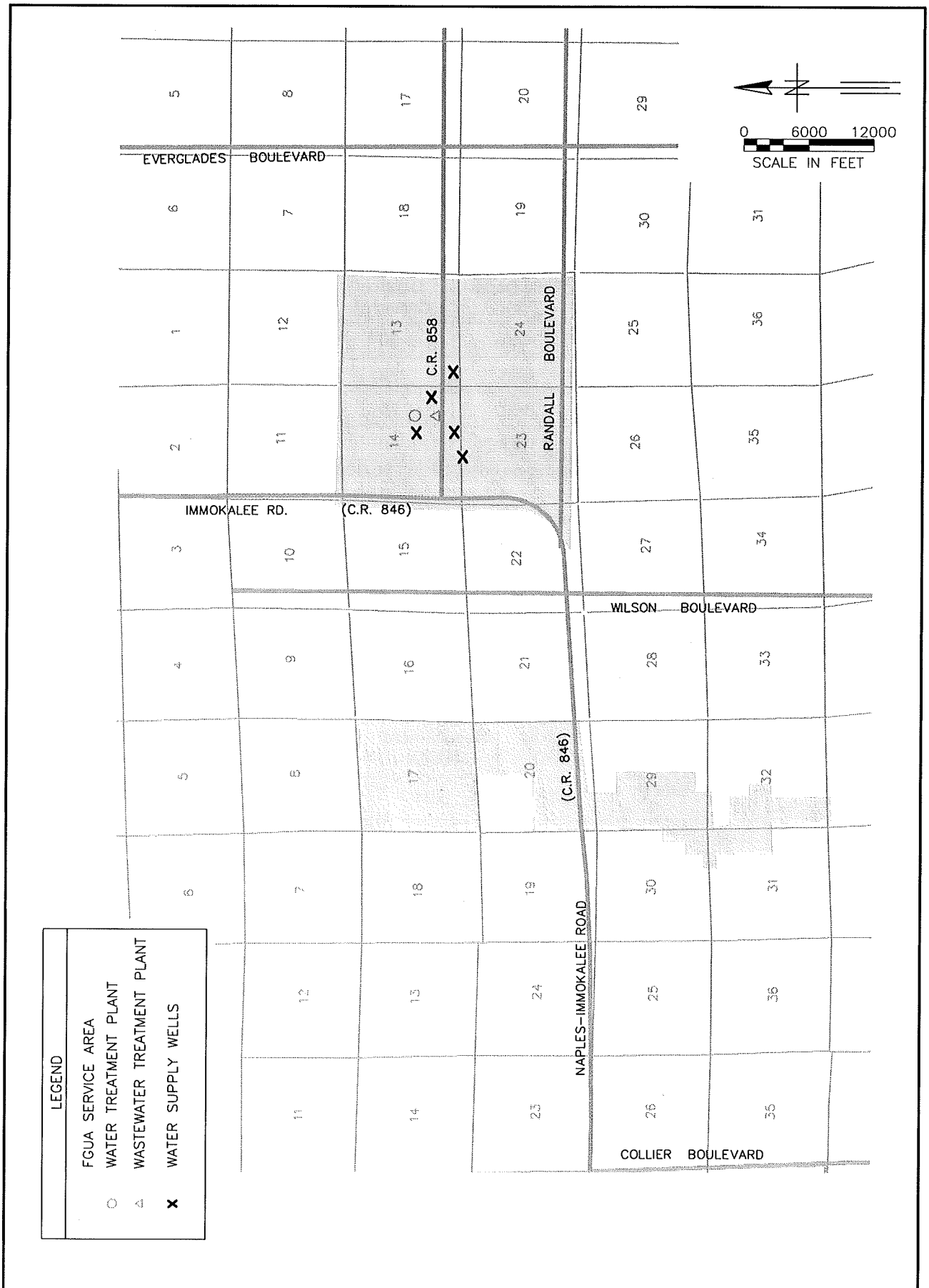


FIGURE 4-10
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING OTUC WATER SUPPLY FACILITIES

Table 4-20. Summary of Existing OTUC Storage Facility¹

Facility Name	Tank Volume (MG)	Usable Storage Volume (MG)
Orange Tree WTP	0.75	0.73
Total	0.75	0.73

¹ Information on existing water storage facilities taken from CUP #11-00419-W.

4.4.3 Reclaimed Water Facilities

Currently, OTUC disposes of all effluent wastewater via rapid infiltration basins. There are no current plans to develop a reclaimed water distribution system.

4.5 Ave Maria Utility Company, LLLP (AMUC)

4.5.1 Water Supply Permits

AMUC maintains one CUP for potable water supply. The details of the CUP are presented in Table 4-21.

Table 4-21. Consumptive Use Permits Issued by SFWMD to AMUC

Consumptive Use Permit	Aquifer	Number of Permitted Wells	Expiration Date	Annual Allocation (MG)	Average Day Allocation (MGD)	Maximum Monthly Allocation (MG)
11-02298-W	LT	3	6/14/2011	460	1.26	43.30

4.5.2 Potable Water Facilities

4.5.2.1 Wellfields

Currently, AMUC operates 1 wellfield in the vicinity of its WTP. The wells maintained by Ave Maria Utilities tap the Lower Tamiami Aquifer, which is a traditional freshwater source. Table 4-22 summarizes the existing wells operated by the utility.

Table 4-22. Summary of Wells Operated by AMUC

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
PWS-1	LT	120	70	12	700
PWS-2	LT	120	70	12	700
PWS-3	LT	120	70	12	700

¹ Information on existing wells taken from CUP #11-02298-W.

4.5.2.2 Water Treatment Facilities

Ave Maria Utilities operates 1 WTP, which is located west of Camp Keais Road, north of CR-858. The WTP has a finished water capacity of 1.67 MGD using membrane softening (MS). A summary of the existing water treatment facility is provided in Table 4-23. In addition to identifying the design capacity of each treatment train, the amount raw water required to make the design capacity is also provided.

Table 4-23. Summary of Existing AMUC Water Treatment Facility¹

Facility Name	Design Capacity (MGD)	Raw Water Requirement ¹ (MGD)	Raw Water Source	Traditional/ Alternative
Ave Maria WTP	1.67	1.96	LT	Traditional (Fresh)
Total	1.67	1.96		

¹ Information on existing and planned water treatment facilities was taken from the Preliminary Design Report for Ave Maria Utility Company, LLLP and Florida Department of Environmental Protection as prepared by CH2M Hill, Inc., June 2004.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

4.5.2.3 Pumping, Storage, and Transmission

The existing transmission facilities consist of a water storage tank at the WTP and transmission pipelines. The water storage tank at the WTP has a capacity of 1.5 MG. Table 4-24 summarizes the water storage available in the Ave Maria Utilities System.

Table 4-24. Summary of Existing AMUC Storage Facility¹

Facility Name	Tank Volume (MG)	Usable Storage Volume (MG)
AMUC WTP	1.50	1.50
Total	1.50	1.50

¹ Information on existing and planned water treatment facilities was taken from the Preliminary Design Report for Ave Maria Utility Company, LLLP and Florida Department of Environmental Protection as prepared by CH2M Hill, Inc., June 2004 and supplemented with comments received from AMUC in a letter dated September 20, 2007.

4.5.3 Reclaimed Water Facilities

AMUC is served by one WRF, which is located within the development. The WRF is capable of producing 1.25 MGD of reclaimed water. Reclaimed water is pumped from the WRF to three reclaimed water storage ponds, which serve as the source for the town and university's irrigation system and have a combined capacity of 23.00 MG. Reclaimed water is the most important element of the AMUC Conservation Plan, presented in detail in Section 7, and will be utilized to the fullest extent possible for irrigation of the town and university. AMUC believes it will be able to utilize 100 percent of the reclaim water generated. Table 4-25 summarizes the capacity of the existing reclaimed water facility.

Table 4-25. Summary of Existing AMUC Water Reclamation Facility¹

Facility Name	Design Capacity (MGD)
AMUC WRF (Phase 1)	1.25
Total	1.25

¹ Information on existing and planned water treatment facilities taken from the Revised Preliminary Design Report for Ave Maria Utility Company, LLLP and Florida Department of Environmental Protection as prepared by CH2M Hill, Inc., February 2006 and supplemented with comments received from AMUC in a letter dated September 20, 2007.

Section 5

Planned Water Supply Facilities

5.1 Collier County Water-Sewer District (CCWSD)

5.1.1 Potable Water Facilities

5.1.1.1 Wellfields

As part of the CCWSD plan to meet future water supply needs it intends to build four new wellfields over the next ten years, as follows: the South Hawthorn RO Wellfield Expansion, the Northeast Regional Water Treatment Plant (NERWTP) Wellfield Phase 1, the Southeast Regional Water Treatment Plant (SERWTP) Wellfield Phase 1, and the NERWTP Wellfield Phase 2. The location of the South Hawthorn RO Wellfield Expansion and the NERWTP Wellfield Phase 1 are illustrated in **Figure 5-1**, along with the general vicinities of the SERWTP Wellfield Phase 1 and the NERWTP Wellfield Phase 2. There are on-going test programs that will assist CCWSD in determining the best locations for the SERWTP Wellfield Phase 1 and the NERWTP Wellfield Phase 2.

The South Hawthorn RO Wellfield Expansion is currently being constructed and is scheduled to come online in 2008. The wellfield consist of wells tapping the Hawthorn Zone 1 Aquifer, which tends to be brackish in this area of Collier County. The wellfield is being constructed to serve the new low pressure reverse osmosis (LPRO) treatment trains that are under construction at the South County Regional Water Treatment Plant (SCRWTP). **Table 5-1** summarizes the wells that are being constructed for the South Hawthorn RO Wellfield Expansion.

The NERWTP Wellfield Phase 1 will be made up of wells tapping the Lower Tamiami Aquifer, the Hawthorn Zone 1 Aquifer and the Lower Hawthorn Aquifer. The wells will serve the NERWTP Phase 1, which will treat the water using ion exchange (IE) for fresh water and LPRO for brackish water. The wellfield is scheduled to come online in 2011 to serve the first phase of the NERWTP. **Table 5-2** summarizes the planned wells in the NERWTP Wellfield Phase 1.

The SERWTP Wellfield Phase 1 will contain wells tapping the Hawthorn Zone 1 Aquifer and/or Lower Hawthorn Aquifer. Based on existing hydrogeologic data, the water quality in the study area tends to be brackish to saline. The wellfield will serve the SERWTP, which will utilize either LPRO or high pressure reverse osmosis (HPRO) to treat the water depending on the water quality observed during the current test program, which is scheduled to be complete in 2008. The wellfield is scheduled to come online in 2014.

The NERWTP Wellfield Phase 2, which is scheduled for completion in 2016, will consist of wells tapping the Lower Tamiami Aquifer, the Hawthorn Zone 1 Aquifer and the Lower Hawthorn Aquifer. The wells will serve the second phase of the

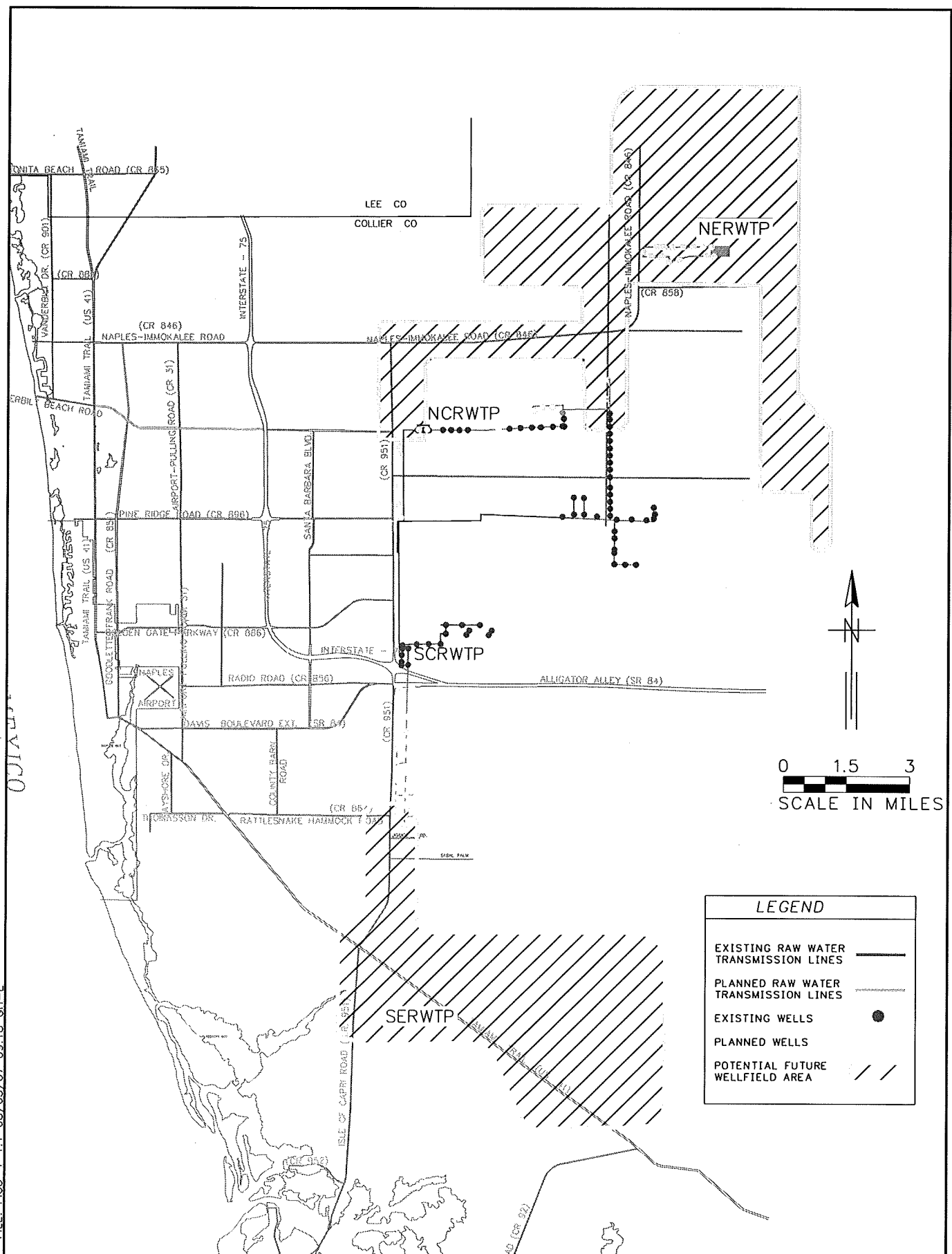


FIGURE 5-1
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING AND PLANNED CCWSD WELLFIELDS AND RAW WATER TRANSMISSION MAINS

Table 5-1. Planned South Hawthorn Wellfield Expansion Summary¹

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
RO-16S	HZ1	420	300	16	1000
RO-17S	HZ1	420	300	16	1000
RO-18S	HZ1	420	300	16	1000
RO-19S	HZ1	420	300	16	1000
RO-20S	HZ1	420	300	16	1000
RO-21S	HZ1	420	300	16	1000
RO-22S	HZ1	420	300	16	1000
RO-23S	HZ1	420	300	16	1000
RO-24S	HZ1	420	300	16	1000
RO-25S	HZ1	420	300	16	1000
RO-26S	HZ1	420	300	16	1000
RO-27S	HZ1	420	300	16	1000
RO-28S	HZ1	420	300	16	1000
RO-29S	HZ1	420	300	16	1000
RO-30S	HZ1	420	300	16	1000
RO-31S	HZ1	420	300	16	1000
RO-32S	HZ1	420	300	16	1000
RO-33S	HZ1	420	300	16	1000
RO-34S	HZ1	420	300	16	1000
RO-35S	HZ1	420	300	16	1000
RO-36S	HZ1	420	300	16	1000
RO-37S	HZ1	420	300	16	1000
RO-38S	HZ1	420	300	16	1000

¹ Information on planned wells taken from CUP #11-00249-W.

Table 5-2. Planned NERWTP Wellfield Phase 1 Summary¹

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
LT-1	LTA	120	75	16	1000
LT-2	LTA	120	75	16	1000
LT-3	LTA	120	75	16	1000
LH-1	LH	1000	700	16/12 ²	1000
LH-2	LH	1000	700	16/12 ²	1000
LH-3	LH	1000	700	16/12 ²	1000
LH-4	LH	1000	700	16/12 ²	1000
LH-5	LH	1000	700	16/12 ²	1000
LH-6	LH	1000	700	16/12 ²	1000
LH-7	LH	1000	700	16/12 ²	1000
LH-8	LH	1000	700	16/12 ²	1000
LH-9	LH	1000	700	16/12 ²	1000
LH-10	LH	1000	700	16/12 ²	1000
LH-11	LH	1000	700	16/12 ²	1000
LH-12	LH	1000	700	16/12 ²	1000
LH-13	LH	1000	700	16/12 ²	1000
LH-14	LH	1000	700	16/12 ²	1000
LH-15	LH	1000	700	16/12 ²	1000
LH-16	LH	1000	700	16/12 ²	1000
HZ1-12	HZ1	550	400	16/12 ²	1000
HZ1-13	HZ1	550	400	16/12 ²	1000
HZ1-14	HZ1	550	400	16/12 ²	1000
HZ1-15	HZ1	550	400	16/12 ²	1000

¹ Information on planned wells taken from CUP application #070529-12.

² 16 inch casing to 100 feet, then 12 inch casing to production casing depth.

NERWTP will treat water using IE for fresh water and LPRO for brackish water.

The type and number of wells that will be constructed in the SERWTP Wellfield Phase 1 and NERWTP Wellfield Phase 2 are summarized in **Table 5-3**. Well designations and specifics for these wells have not yet been established and will be addressed when the wellfields are designed.

Table 5-4 identifies the major tasks required to build each of the wellfields, along with the funding source that will be utilized and scheduled dates for studies, property acquisition, design, permitting, and construction.

Table 5-3. Planned SERWTP Wellfield Phase 1 and NERWTP Wellfield Phase 2 Summary¹

Facility Name	Year Online	Raw Water Requirement ² (MGD)	Number of Wells	Raw Water Source	Traditional/ Alternative	Project Identified In LWCWSP
SERWTP Phase 1 LPRO	2014	16.0	21	LH	Alternative (Brackish)	Yes
NERWTP Phase 2 LPRO	2016	3.3	5	LH	Alternative (Brackish)	Yes
NERWTP Phase 2 Ion Exchange	2016	2.6	1	LT	Traditional (Fresh)	Yes
			3	HZ1		
Total		21.9	30			

¹ Information taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

² Raw water requirement is the amount of raw water needed to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

5.1.1.2 Water Treatment Facilities

The CCWSD is currently served by two water treatment plants (WTPs), the North County Regional Water Treatment Plant (NCRWTP) and the SCRWTP. As mentioned in the previous subsection, the CCWSD intends to construct two additional treatment facilities, the NERWTP and the SERWTP and to expand the existing SCRWTP to meet future demands. Additionally, the CCWSD is planning to add HPRO treatment skids at the NCRWTP. The location of the existing and planned facilities are shown in Figure 5-2.

The location of the planned NERWTP is approximately one mile north of CR-858 (Oil Well Road) and one mile east of SR-846 (Immokalee Road) in the northeastern quadrant of the service area. The plant will utilize IE to treat fresh groundwater withdrawn from the Lower Tamiami and Hawthorn Zone 1 aquifers. Water from the Lower Hawthorn Aquifer will be treated using LPRO. The first phase of the plant, scheduled to come online in 2011, will have a reliable capacity of 10 MGD. The second phase of the plant is scheduled to come online in 2016. The plant will be capable of expansion to an ultimate capacity of 45 MGD.

The planned SERWTP will be located on the same site as the Manatee Road ASR, which is approximately 1 mile south of US-41 (Tamiami Trail) and 1/2 mile east of CR-951 (Collier Blvd.) The plant will utilize groundwater withdrawn from the Hawthorn Zone 1 Aquifer and/or Lower Hawthorn Aquifer, which will be treated by either LPRO or HPRO depending on the water quality. The first phase of the facility is scheduled to come online in 2014, with a reliable capacity of 12 MGD, expandable to an ultimate capacity of 24 MGD.

As stated in Section 4.1.2.2, the NCRWTP is located on the north side of Vanderbilt Beach Road Extension east of CR-951 in the northeastern quadrant of the service area and the SCRWTP is located near the intersection of CR-951 and I-75 about 5.5 miles

Table 5-4. Major Tasks Required to Build Planned CCWSD Potable Water Wellfields

Facility Name	Funding Source	Year(s) of Execution				
		Feasibility Study	Property Acquisition	Design	Permitting	Construction
SCRWTP LPRO Wellfield	411 - Water Impact Fees	Complete	Complete	Complete	Complete	2006-2008
NERWTP Phase 1 Wellfield	411 - Water Impact Fees	Complete	Complete	2005-2008	2005-2008	2009-2011
SERWTP Phase 1 Wellfield	411 - Water Impact Fees	2006-2008	2008-2009	2010-2011	2010-2011	2012-2014
NERWTP Phase 2 Wellfield	411 - Water Impact Fees	Complete	Complete	2012-2013	2012-2013	2014-2016

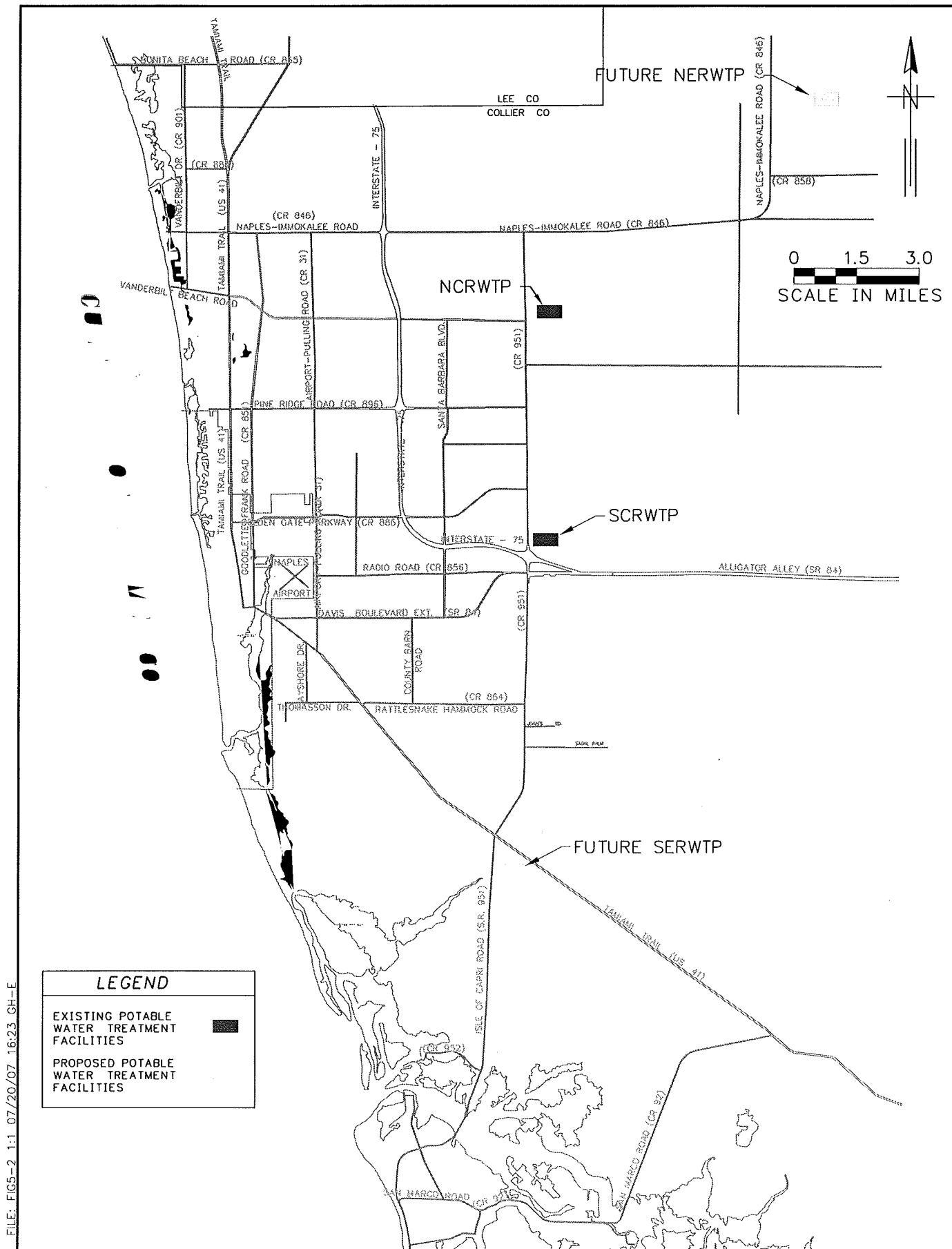


FIGURE 5-2
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING AND PLANNED CCWSD POTABLE WATER TREATMENT FACILITIES

south of the NCRWTP. The CCWSD has plans to expand the reliable capacity of each of these facilities. The NCRWTP will be expanded from its current capacity of 20 MGD to 22 MGD, with the addition of 2 one MGD HPRO treatment skids. The skids will be used to treat water from Wells RO-1N, RO-2N, RO-3N, and RO-4N, which experienced elevated salinity levels shortly after being brought online. The HPRO treatment skids are scheduled to come online in 2010. The SCRWTP will be expanded to a total LPRO capacity of 20 MGD through the installation of 12 MGD of additional LPRO treatment skids, which are scheduled to come online in 2008.

A summary of the existing and planned water treatment facilities is provided in **Table 5-5**. In addition to identifying the design capacity of each treatment train, the amount raw water required to make the design capacity is also provided.

Table 5-6 identifies the major tasks required to build each of the planned water treatment facilities, along with the funding source that will be utilized and the scheduled dates for studies, property acquisition, design, permitting, and construction.

5.1.1.3 Pumping, Storage, and Transmission

The planned transmission facilities consist of transmission pipelines, water storage tanks, aquifer storage and recovery (ASR) systems, and pumping facilities. The transmission facilities utilized by CCWSD are shown in **Figure 5-3**. The planned pumping facilities will include high service pumps at each of the new water treatment plants. Additional booster pumping stations and an in-line booster pump stations may be required to meet demands, but are not planned for construction during the planning period out to 2018. Ground storage tanks at the proposed treatment facilities will provide system storage and reserve capacity to help meet peak hourly demands of the system. Additionally, potable water will be stored at various strategic points in the CCWSD distribution system to help meet diurnal peak system and fire flow demands. In addition to the traditional storage and pumping facilities mentioned above, CCWSD plans to expand the existing 1 MGD potable water ASR system at the Manatee Road Pumping Station to a capacity of 5 MGD.

A summary of the existing and planned storage facilities is provided in **Table 5-7**.

Table 5-8 identifies the major tasks required to build each of the planned pumping and storage improvements, along with the funding source that will be utilized and the scheduled dates for studies, property acquisition, design, permitting, and construction.

Potable water is pumped from the plants into the distribution system. The distribution system includes water mains designated as either transmission or distribution mains. The CCWSD pipelines 16 inches in diameter and larger are generally termed transmission mains. These are typically located along arterial and collector roadways and convey water to major demand areas. Pipelines smaller than

Table 5-5. Summary of Existing and Planned CCWSD Water Treatment Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Raw Water Requirement ² (MGD)	Raw Water Source	Traditional/Alternative	Project Identified In LWCWSP
NCRWTP MF	Online	12.0	14.1	LH	Traditional (Fresh)	N/A
NCRWTP LPRO	Online	8.0	10.7	LH/HZ1	Alternative (Brackish)	N/A
SCRWTP LS	Online	12.0	12.4	LTA	Traditional (Fresh)	N/A
SCRWTP LPRO	Online	8.0	10.7	LH/HZ1	Alternative (Brackish)	N/A
SCRWTP LPRO	2008	12	16	HZ1	Alternative (Brackish)	Yes
NCRWTP HPRO	2010	2.0	4.0	LH	Alternative (Saline)	Yes
NERWTP Phase 1 LPRO	2011	7.5	10.0	LH	Alternative (Brackish)	Yes
NERWTP Phase 1 Ion Exchange	2011	2.5	2.6	LTA/HZ1	Traditional (Fresh)	Yes
SERWTP Phase 1 LPRO	2014	12.0	16.0	LH	Alternative (Brackish)	Yes
NERWTP Phase 2 LPRO	2016	2.5	3.3	LH	Alternative (Brackish)	Yes
NERWTP Phase 2 Ion Exchange	2016	2.5	2.6	LTA/HZ1	Traditional (Fresh)	Yes
Total		81.0	102.3			

¹ Information taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

Table 5-6. Major Tasks Required to Build Planned CCWSD Potable Water Treatment Facilities

Facility Name	Funding Source	Year(s) of Execution				
		Feasibility Study	Property Acquisition	Design	Permitting	Construction
SCRWTP LPRO	411 - Water Impact Fees	Complete	Complete	Complete	Complete	2006-2008
NCRWTP HPRO	412 - Water User Fees	Complete	Complete	2008	2008	2009
NERWTP Phase 1 LPRO	411 - Water Impact Fees	Complete	Complete	2005-2008	2007-2009	2009-2012
NERWTP Phase 1 Ion Exchange	411 - Water Impact Fees	Complete	Complete	2005-2008	2007-2009	2009-2012
SERWTP Phase 1 LPRO	411 - Water Impact Fees	2006-2008	2008-2011	2010-2012	2010-2012	2012-2014
NERWTP Phase 2 LPRO	411 - Water Impact Fees	2006-2008	2008-2011	2012-2014	2012-2014	2014-2016
NERWTP Phase 2 Ion Exchange	411 - Water Impact Fees	2006-2008	2008-2011	2012-2014	2012-2014	2014-2016



COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING AND PLANNED CCWSD POTABLE WATER STORAGE FACILITIES

Table 5-7. Summary of Existing and Planned CCWSD Water Storage Facilities¹

Facility Name	Year Online	Tank Volume (MG)	Usable Storage Volume (MG)
NCRWTP	online	12.00	11.10
SCRWTP	online	14.00	12.40
Isle of Capri	online	0.25	0.20
Manatee Road Pumping Station	online	2.00	1.80
Carica Road Pumping Station	online	10.00	9.30
NERWTP Phase 1	2011	15.00	13.50
SERWTP Phase 1	2014	12.00	10.80
NERWTP Phase 2	2016	5.00	4.50
Total		70.25	63.60
Manatee Road ASR Phase 1	online	N/A	~1 MGD
Manatee Road ASR Phase 2	2010	N/A	~2 MGD
Manatee Road ASR Phase 3	2012	N/A	~1 MGD
Manatee Road ASR Phase 4	2013	N/A	~1 MGD
Total			~5 MGD

¹ Information taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

16 inches in diameter are generally called distribution mains, branching off the transmission system to supply individual users.

Overall, the CCWSD owns and maintains over 800 miles of water transmission and distribution pipelines, up to 42 inches in diameter, with approximately 51,000 individual service connections.

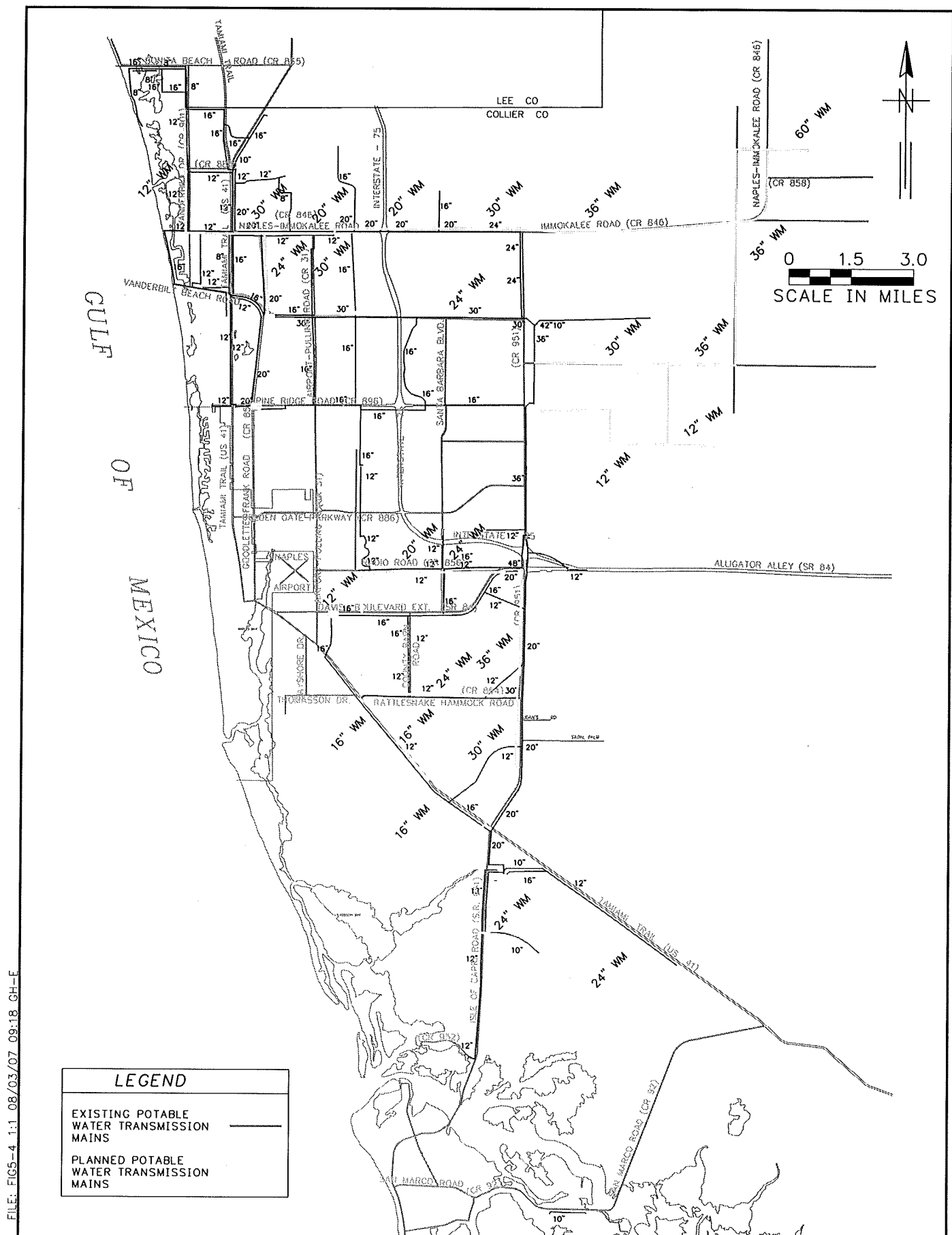
With the construction of 43 MGD of additional finished water capacity, CCWSD will be installing a substantial number of transmission mains and major distribution mains over the next 10 years. The existing and planned transmission mains and major distribution mains that will serve CCWSD in 2018 are illustrated in **Figure 5-4**.

5.1.2 Reclaimed Water Facilities

CCWSD currently operates the largest reclaimed water system in South Florida, which serves 28 customers with contractual commitments of 22.3 MGD. The majority of the existing customer base is golf courses, residential communities, environmental mitigation areas, county parks, and roadway medians. There are more than 140 additional entities within Collier County that have requested connection to the reclaimed water system and are currently on a waiting list. The following subsections describes the measures CCWSD is taking to meet future wastewater demands and supply reclaimed water to its customers. In addition to the improvements described below, CCWSD is undertaking the development of a Reclaimed Water Master Plan starting in 2007 to determine the best methods for maximizing the efficient use of reclaimed water. Recommendations and findings of the Reclaimed Water Master Plan will be incorporated into future editions of the Collier County 10-Year Water Supply Facilities Work Plan.

Table 5-8. Major Tasks Required to Build Planned CCWSD Potable Water Storage Facilities

Facility Name	Funding Source	Year(s) of Execution				
		Feasibility Study	Property Acquisition	Design	Permitting	Construction
Manatee Road ASR Phase 2	412 - Water User Fees	Complete	Complete	2005-2007	2005-2008	2009-2010
NERWTP Phase 1 Storage Tanks	411 - Water Impact Fees	Complete	Complete	2005-2008	2007-2009	2009-2012
Manatee Road ASR Phase 3	412 - Water User Fees	Complete	Complete	2005-2007	2005-2008	2011-2012
Manatee Road ASR Phase 4	412 - Water User Fees	Complete	Complete	2005-2007	2005-2008	2011-2013
SERWTP Phase 1 Storage Tanks	411 - Water Impact Fees	2006-2008	2008-2011	2010-2012	2010-2012	2012-2014
NERWTP Phase 2 Storage Tanks	411 - Water Impact Fees	2006-2008	2008-2011	2012-2014	2012-2014	2014-2016



5.1.2.1 Water Reclamation Facilities

In addition to the two existing water reclamation facilities (WRFs), the North County Water Reclamation Facility (NCWRF) and the South County Water Reclamation Facility (SCWRF), CCWSD intends to build two more WRFs, the Northeast Water Reclamation Facility (NEWRF) and the Southeast Water Reclamation Facility (SEWRF). The locations of the existing and planned WRFs are shown in **Figure 5-5**. **Table 5-9** summarizes the capacities of the existing and planned WRFs.

Table 5-9. Summary of Existing and Planned CCPUD Water Reclamation Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Project Identified In LWCWSP
NCWRF	Online	24.1	N/A
SCWRF	Online	16.0	N/A
NCWRF Expansion	2010	6.5	N/A
NEWRF Phase 1	2011	4.0	Yes
NEWRF Phase 2	2014	4.0	Yes
SEWRF Phase 1	2014	4.0	Yes
NEWRF Phase 3	2018	4.0	Yes
SEWRF Phase 2	2018	4.0	Yes
Total		66.6	

¹ Information taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

² The design capacities do not reflect the amount of reclaimed water available from the facilities. The amount of reclaimed water available is based on influent flow and treatment efficiency.

As stated in the footnotes to Table 5-9, the amount of reclaimed water distributed is not directly related to the design capacity of each water reclamation facility. In addition to the limitations identified, the ability of Collier County to utilize available reclaimed water for distribution is impacted by seasonal fluctuations in demand, with very high demands during the dry season and low demands during the wet season.

Table 5-10 identifies the major tasks required to build each of the planned water reclamation facilities, along with the funding source that will be utilized and the scheduled dates for studies, property acquisition, design, permitting, and construction.

5.1.2.2 Reclaimed Water Pumping, Storage, and Transmission

The current reclaimed water distribution system consists of 125 miles of transmission and distribution pipeline and is currently divided into two service areas—one in the north and one in the south—that are supplied by the respective WRF. There are a few small interconnects between the two service areas, but the system is hydraulically limited from passing large volumes of water from one service area to the other. This issue is currently being addressed by the development of a reclaimed water booster pump station that will interconnect the two service areas and provide the capacity for transferring up to 5 MGD of reclaimed water.

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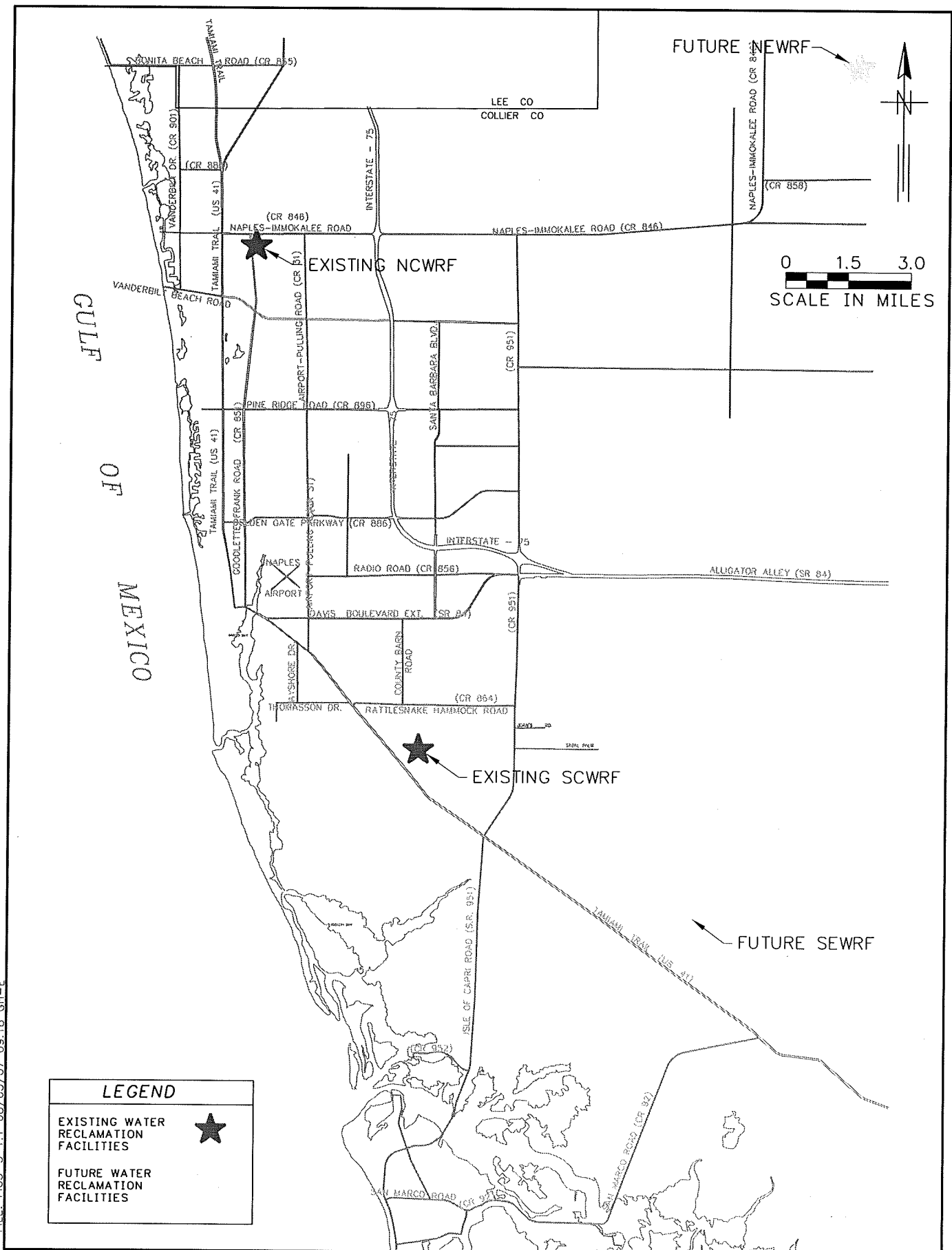


FIGURE 5-5
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING AND FUTURE CCWSD WATER RECLAMATION FACILITIES

Table 5-10. Major Tasks Required to Build Planned CCWSD Water Reclamation Facilities

Facility Name	Funding Source	Year(s) of Execution				
		Feasibility Study	Property Acquisition	Design	Permitting	Construction
NCWRF Expansion	414 - Wastewater User Fees	Complete	Complete	2007-2008	2007-2008	2009-2010
NEWRF Phase 1	413 - Wastewater Impact Fees	Complete	Complete	2005-2008	2005-2008	2009-2011
NEWRF Phase 2	413 - Wastewater Impact Fees	Complete	Complete	2009-2010	2009-2010	2012-2014
SEWRF Phase 1	413 - Wastewater Impact Fees	2006-2009	2006-2009	2009-2011	2009-2011	2012-2014
NEWRF Phase 3	413 - Wastewater Impact Fees	Complete	Complete	2013-2015	2013-2015	2016-2018
SEWRF Phase 2	413 - Wastewater Impact Fees	2006-2009	2006-2009	2013-2015	2013-2015	2018

With the expansion of the NCWRF and addition of the NEWRF and SEWRF, CCWSD will need to expand the reclaimed water distribution system to serve more customers. At this time specific distribution and transmission main projects have not been determined. These projects will be determined through analyses to be performed as part of the development of the Reclaimed Water Master Plan described previously.

The two new WRFs will be capable of temporarily storing reclaimed water in on-site ponds. Additional storage will be provided through the expansion of the existing reclaimed water ASR from a capacity of 1 MGD to 5 MGD by 2012.

A summary of the reclaimed water storage that will be available with the development of the two new WRFs and the expansion of the reclaimed water ASR is provided in Table 5-11.

Table 5-11. Summary of Existing and Planned Reclaimed Water Storage Facilities¹

Facility Name	Year Online	Tank Volume (MG)	Usable Storage Volume (MG)
NCWRF	online	2.00	2.00
SCWRF	online	3.00	3.00
Decommissioned Pelican Bay WRF	online	1.00	1.00
NEWRF	2011	2.00	2.00
SEWRF	2014	2.00	2.00
Total		10.00	10.00
Reclaimed Water ASR	online	N/A	~1 MGD
Reclaimed Water ASR Expansion	2012	N/A	~4 MGD
Total			~5 MGD

¹ Information taken from the Collier County 2006 Annual Update and Inventory Report on Public Facilities adopted by the Collier County Board of County Commissioners on January 24, 2007.

Table 5-12 identifies the major tasks required to build each of the planned reclaimed water storage facilities, along with the funding source that will be utilized and the scheduled dates for studies, property acquisition, design, permitting, and construction.

5.2 Immokalee Water and Sewer District (ISWD)

5.2.1 Potable Water Facilities

5.2.1.1 Wellfields

Currently, the IWSD operates three wellfields; one adjacent to each of its WTPs. The locations of each of these wellfields and WTPs are illustrated in Figure 5-6. The wells maintained by the Immokalee Water and Sewer District tap the Lower Tamiami Aquifer, which is a traditional freshwater source. IWSD plans to bring additional wells online to address future demands.

Table 5-12. Major Tasks Required to Build Planned CCWSD Reclaimed Water Storage Facilities

Facility Name	Funding Source	Year(s) of Execution				
		Feasibility Study	Property Acquisition	Design	Permitting	Construction
Reclaimed Water ASR	414 - Wastewater User Fees	Complete	Complete	2008-2009	2008-2009	2010-2012
NEWRF Storage Tanks	413 - Wastewater Impact Fees	Complete	Complete	2005-2008	2005-2008	2009-2011
SEWRF Storage Tanks	413 - Wastewater Impact Fees	2006-2009	2006-2009	2009-2011	2009-2011	2012-2014

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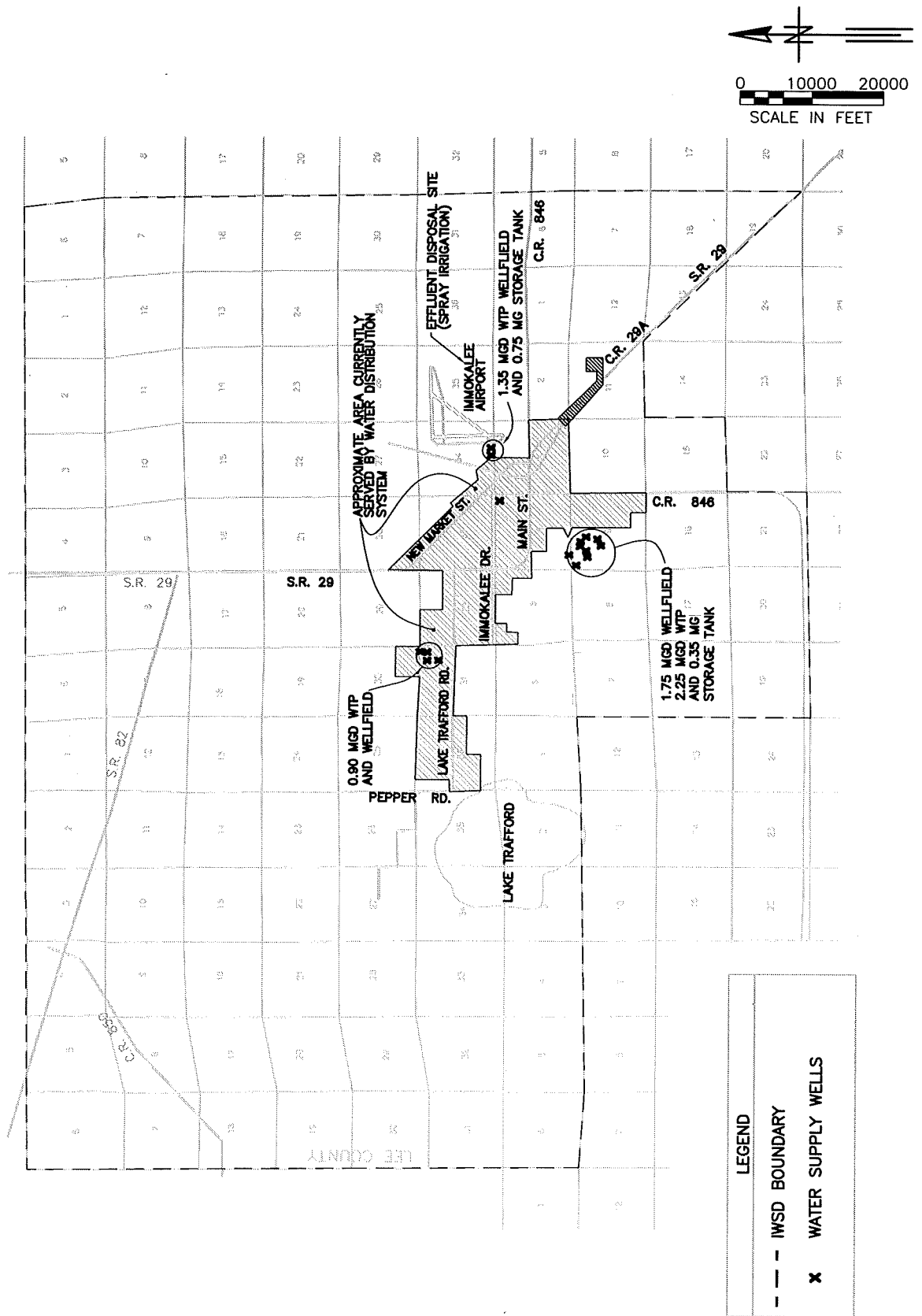


FIGURE 5-6
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING AND PLANNED IWSD WATER SUPPLY FACILITIES

5.2.1.2 Water Treatment Facilities

The IWSD is currently served by 3 interconnected water treatment facilities, the Jerry V. Warden WTP, the Airport WTP and the Carson Road WTP. During the 10 year planning period IWSD plans to expand its Carson Road WTP to meet increasing demands. Table 5-13 summarizes the treatment capacity of the existing and planned potable water facilities for IWSD.

5.2.2 Reclaimed Water Facilities

Currently, IWSD disposes of all effluent wastewater via an on-site spray irrigation field, percolation ponds, or deep well injection. There are no current plans to develop a reclaimed water distribution system.

5.3 Florida Governmental Utility Authority (Golden Gate) (FGUA)

5.3.1 Potable Water Facilities

5.3.1.1 Wellfields

FGUA currently operates 11 wells, ten of which are located on the site of the WTP. To address future demands FGUA is planning to bring two additional wells on-line in 2008. The locations of these wells are shown in Figure 5-7. Tables 5-14 summarizes the well FGUA plans to construct.

Table 5-14. Summary of Planned FGUA Wells¹

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
12	LT	180	80	10	810
13	LT	180	80	10	810

¹ Information on planned wells taken from CUP #11-00148-W.

Table 5-15 identifies the major tasks required to build each of the two wells, along with the funding source that will be utilized and the scheduled dates for studies, property acquisition, design, permitting, and construction.

5.3.1.2 Water Treatment Facilities

FGUA operates 1 WTP, the Golden Gate Water Treatment Plant, which is located west of CR-951, south of Golden Gate Parkway, as shown in Figure 5-7. The current capacity of the WTP is 1.22 MGD using LS and 0.87 MGD using RO. FGUA plans to expand the facility to a capacity of 3.34 MGD by adding additional RO treatment trains. A summary of the existing and planned water treatment facilities is provided in Table 5-16. In addition to identifying the design capacity of each treatment train, the amount raw water required to make the design capacity is also provided.

Table 5-17 identifies the major tasks required to build each of the planned expansion phases, along with the funding source that will be utilized and the scheduled dates for studies, property acquisition, design, permitting, and construction.

Table 5-13. Summary of Existing and Planned IWSD Water Treatment Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Raw Water Requirement ² (MGD)	Raw Water Source	Traditional/Alternative	Project Identified In LWCWSP
Jerry V. Warden WTP	Online	2.25	2.32	LT	Traditional (Fresh)	N/A
Airport WTP	Online	1.35	1.39	LT	Traditional (Fresh)	N/A
Carson Road WTP	Online	0.90	0.93	LT	Traditional (Fresh)	N/A
Carson Road WTP Expansion 1	2008	1.10	1.13	LT	Traditional (Fresh)	No
Carson Road WTP Expansion 2	2013	1.00	1.03	LT	Traditional (Fresh)	No
Total		6.60	6.80			

¹ Information on the existing and planned IWSD water treatment facilities was taken from the 2005-2006 Lower West Coast Water Supply Plan Update approved by the Governing Board of the SFWMD on July 12, 2006 and supplemented by a letter from ISWD to Collier County dated August 24, 2007.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

FIGURE 5-7
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING AND PLANNED FGUA WELLS AND WATER TREATMENT FACILITY

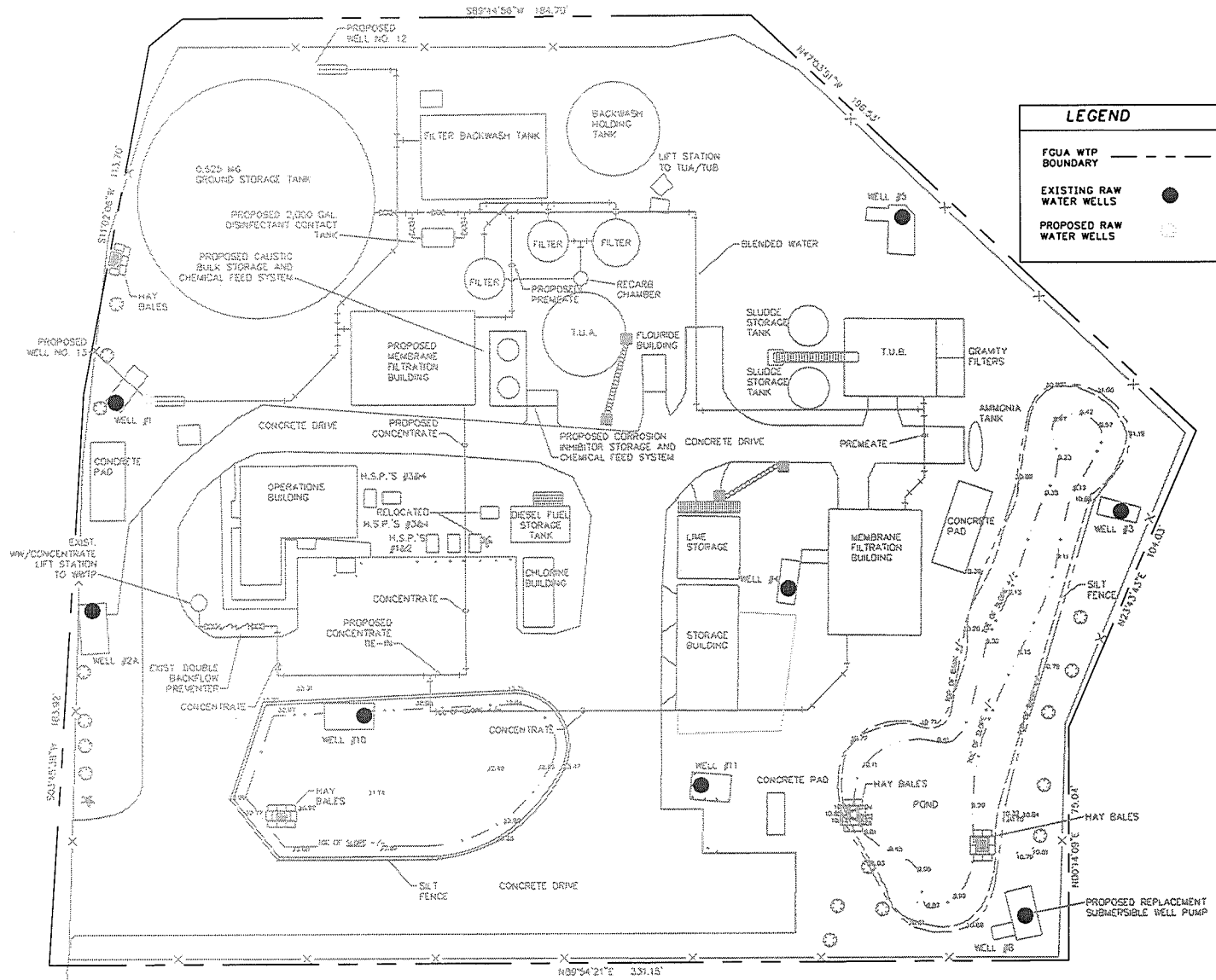


Table 5-15. Major Tasks Required to Build Planned FGUA Potable Water Wells

Facility Name	Funding Source	Year(s) of Execution				
		Feasibility Study	Property Acquisition	Design	Permitting	Construction
Wells 12 and 13	Water User Fees	Complete	Complete	Complete	Complete	2006-2008

Table 5-16 Summary of Existing and Planned FGUA Potable Water Treatment Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Raw Water Requirement ² (MGD)	Raw Water Source	Traditional/ Alternative	Project Identified In LWCWSP
Golden Gate WTP (LS)	Online	1.22	1.26	LTA/WT	Traditional (Fresh)	No
Golden Gate WTP (RO)	Online	0.87	1.16	LTA/WT	Traditional (Fresh)	No
Golden Gate WTP (RO)	2008	0.25	0.33	LTA/WT	Traditional (Fresh)	No
Golden Gate WTP (RO)	2009	0.50	0.52	LTA/WT	Traditional (Fresh)	No
Golden Gate WTP (RO)	2010	0.50	0.52	LTA/WT	Traditional (Fresh)	No
Total		3.34	3.78			

¹ Information on existing and planned water treatment facilities taken from the draft 2007 Water Master Plan Update, prepared by Arcadis, June 2007.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

Table 5-17. Major Tasks Required to Build Planned FGUA Potable Water Treatment Facilities

Facility Name	Funding Source	Year(s) of Execution				
		Feasibility Study	Property Acquisition	Design	Permitting	Construction
Golden Gate WTP (RO) 2008	Water User Fees	Complete	Complete	Complete	Complete	2006-2008
Golden Gate WTP (RO) 2009	Water User Fees	Complete	Complete	2008	2008	2009
Golden Gate WTP (RO) 2010	Water User Fees	Complete	Complete	2005-2008	2007-2009	2009-2012

5.3.1.3 Pumping, Storage, and Transmission

As described in Section 4.3.2.3, the existing FGUA transmission facilities consist of transmission pipelines, water storage tanks, and pumping facilities. FGUA has no plans to modify the existing storage facilities. However there are plans to expand the transmission pipelines. The existing and planned transmission pipelines are shown in Figure 5-8.

5.3.2 Reclaimed Water Facilities

The FGUA currently disposes of treated wastewater using rapid infiltration basins (RIBs). The existing permitted capacity of the RIB system is 1.25 MGD, which is sufficient to meet the disposal need of the existing 0.95 MGD facility and the planned Phase I expansion of the facility to 1.25 MGD AADF scheduled to come on-line in 2008. Two planned future expansions of the facility will increase the capacity to 2.0 MGD by 2010. The FGUA considered the possibility of utilizing water reclamation as a possible alternative disposal method in its 2006 Reuse Feasibility Report, but determined that upgrading the treatment facilities to FDEP public access reuse standards and developing a reclaimed water distribution system within the service area would be cost prohibitive. As an alternative the FGUA has decided to construct a Class 1 deep injection well to meet future effluent disposal needs.

5.4 Orange Tree Utility Company (OTUC)

5.4.1 Potable Water Facilities

5.4.1.1 Wellfields

OTUC currently operates 2 wells located in close proximity to the WTP. To address future demands OTUC will construct 2 additional wells that will be put into service in late 2007. Table 5-18 summarizes the additional wells OTUC plans to construct.

Table 5-18. Summary of Planned OTUC Wells

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
PW5	LT	180	70	12	300
PW6	LT	180	70	12	300

5.4.1.2 Water Treatment Facilities

OTUC is currently expanding its water treatment plant from 0.75 MGD to 1.50 MGD to address future demands. OTUC intends to submit the permit for the expansion to the FDEP in 2008. The planned expansion will provide ample capacity to bring the utility from the current demand level to those forecasted for 2012. Table 5-19 summarizes the existing and planned water treatment facilities.

FIGURE 5-8
COLLIER COUNTY 10-YEAR WATER SUPPLY FACILITIES WORK PLAN
EXISTING AND FUTURE FGUA POTABLE WATER TRANSMISSION MAINS

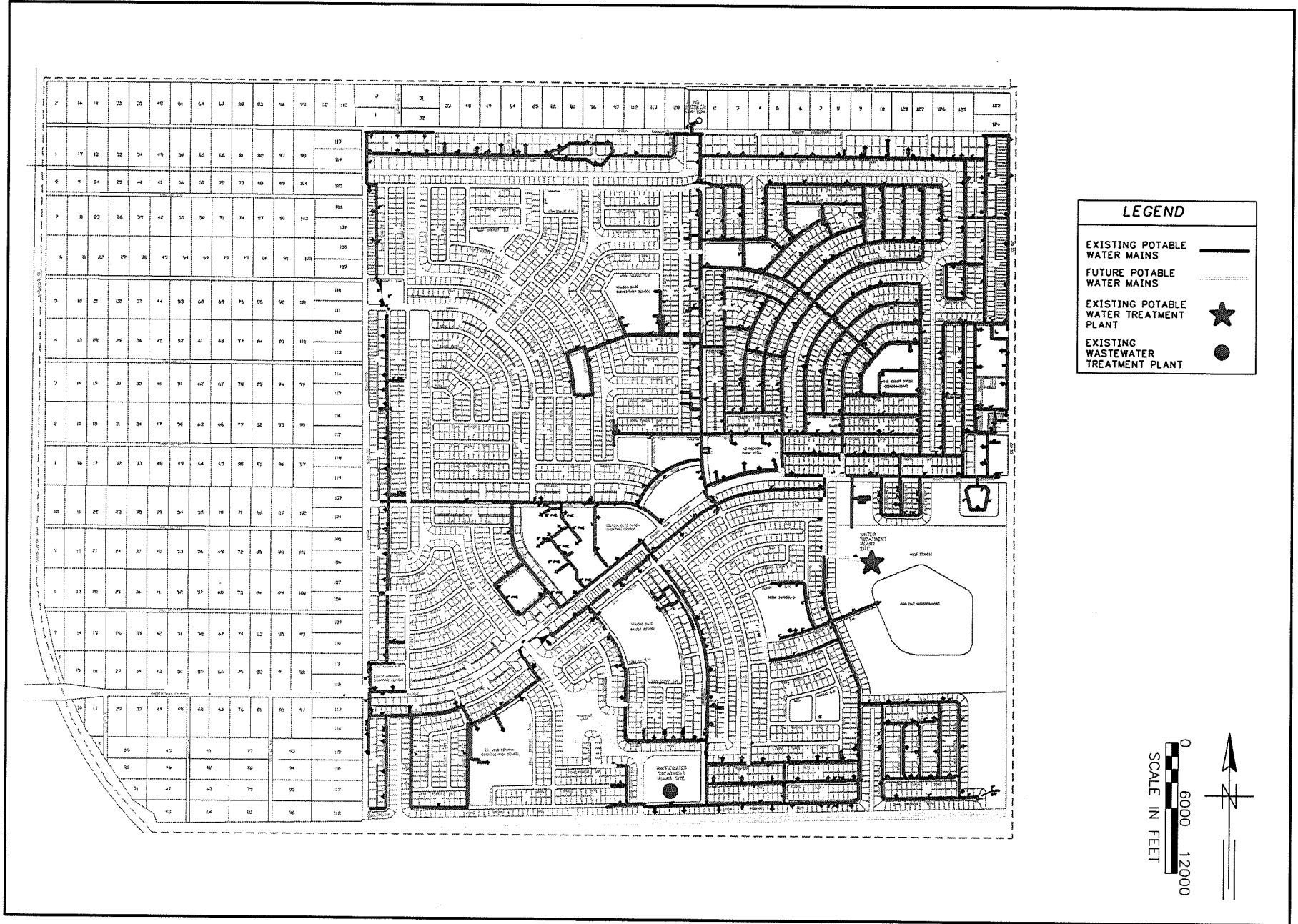


Table 5-19. Summary of Existing and Planned OTUC Water Treatment Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Project Identified In LWCWSP
Orange Tree WTP	Online	0.75	N/A
Orange Tree WTP Expansion	2009	0.75	No
Total		1.50	

¹ Information on existing and planned water treatment facilities were taken from the e-mail memo submitted by OTUC to the Collier County Community Development and Environmental Services on September 27, 2007.

5.4.2 Reclaimed Water Facilities

Currently, OTUC disposes of all effluent wastewater via rapid infiltration basins. There are no current plans to develop a reclaimed water distribution system.

5.5 Ave Maria Utility Company, LLLP (AMUC)

5.5.1 Potable Water Facilities

5.5.1.1 Wellfields

AMUC currently operates 3 wells located in close proximity to the WTP. To address future demands AMUC is planning to bring additional wells online. The locations and specifics of these wells have been determined and planned for. **Table 5-20** summarizes the additional wells AMUC plans to construct.

Table 5-20. Summary of Planned AMUC Wells

Well No.	Aquifer	Total Depth (ft)	Depth of Casing (ft)	Diameter (in)	Capacity (gpm)
PWS-4	LT	120	70	12	700
PWS-5	LT	120	70	12	700
PWS-6	LT	120	70	12	700
PWS-7	LT	120	70	12	700
PWS-8	LT	120	70	12	700

¹ Information on planned wells taken from CUP #11-02298-W.

Table 5-21 identifies the major tasks required to build each of the planned wells, along with the funding source that will be utilized and the scheduled dates for studies, property acquisition, design, permitting, and construction.

5.5.1.2 Water Treatment Facilities

Ave Maria Utilities operates 1 WTP, which is located west of Camp Keais Road, north of CR-858. The current capacity of the WTP is 1.67 MGD using MS. AMUC plans to expand the facility through three subsequent expansions to a capacity of 5 MGD by adding additional MS treatment trains. A summary of the existing and planned water treatment facilities is provided in **Table 5-22**. In addition to identifying the design capacity of each treatment train, the amount raw water required to achieve the design capacity is also provided.

Table 5-21. Major Tasks Required to Build Planned AMUC Potable Water Wells

Facility Name	Funding Source	Year(s) of Execution				
		Feasibility Study	Property Acquisition	Design	Permitting	Construction
PWS 4	TBD	Complete	Complete	2009	2009	2010
PWS 5	TBD	Complete	Complete	2009	2009	2010
PWS 6	TBD	Complete	Complete	2011	2011	2012
PWS 7	TBD	Complete	Complete	2011	2011	2012
PWS 8	TBD	Complete	Complete	2014	2014	2015

Table 5-22 Summary of Existing and Planned AMUC Potable Water Treatment Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Raw Water Requirement ² (MGD)	Raw Water Source	Traditional/ Alternative	Project Identified In LWCWSP
AMUC WTP (Phase 1)	Online	1.67	1.96	LT	Traditional (Fresh)	Yes
AMUC WTP (Phase 2)	2010	0.83	0.98	LT	Traditional (Fresh)	No
AMUC WTP (Phase 3)	2012	1.67	1.96	LT	Traditional (Fresh)	No
AMUC WTP (Phase 4)	2015	0.83	0.98	LT	Traditional (Fresh)	No
Total		5.00	5.88			

¹ Information on existing and planned water treatment facilities was taken from the Preliminary Design Report for Ave Maria Utility Company, LLLP and Florida Department of Environmental Protection as prepared by CH2M Hill, Inc., June 2004 and supplemented with comments received from AMUC in a letter dated September 20, 2007.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the finished water capacity by the efficiency of the treatment process.

Table 5-23 identifies the major tasks required to build each of the planned expansion phases, along with the funding source that will be utilized and the scheduled dates for studies, property acquisition, design, permitting, and construction.

5.5.2 Reclaimed Water Facilities

AMUC is served by one WRF, which is located within the development. The WRF is capable of producing 1.00 MGD of reclaimed water. AMUC plans to expand the WRF three times to a total capacity of 4.67 MGD. Table 5-24 summarizes the capacities of the existing and planned phases of the WRF.

Table 5-24. Summary of Existing and Planned AMUC Water Reclamation Facilities¹

Facility Name	Year Online	Design Capacity (MGD)	Project Identified In LWCWSP
AMUC WRF (Phase 1)	Online	1.25	Yes
AMUC WRF (Phase 2)	TBD	1.25	Yes
AMUC WRF (Phase 3)	TBD	1.25	Yes
AMUC WRF (Phase 4)	TBD	1.25	Yes
Total		5.00	

¹ Information on existing and planned water treatment facilities taken from the Revised Preliminary Design Report for Ave Maria Utility Company, LLLP and Florida Department of Environmental Protection as prepared by CH2M Hill, Inc., February 2006 and supplemented with comments received from AMUC in a letter dated September 20, 2007.

Reclaimed water is pumped from the WRF to three reclaimed water storage ponds, which serve as the source for the town and university's irrigation system and have a combined capacity of 23.00 MG. AMUC plans to add an additional three reclaimed water storage ponds within the development in the future. The new ponds will increase the storage capacity from 23.00 MG to 44.00 MG. Additionally, AMUC is currently permitting a 289 MG wetlands storage system which will be used for wet weather storage. Reclaimed water is the most important element of the AMUC Conservation Plan, presented in detail in Section 7, and will be utilized to the fullest extent possible for irrigation of the town and university. AMUC believes it will be able to utilize 100 percent of the reclaim water generated.

Table 5-23. Major Tasks Required to Build Planned AMUC Potable Water Treatment Facilities

Facility Name	Funding Source	Year(s) of Execution				
		Feasibility Study	Property Acquisition	Design	Permitting	Construction
AMUC WTP (Phase 2)	TBD	Complete	Complete	2009	2009	2010
AMUC WTP (Phase 3)	TBD	Complete	Complete	2011	2011	2012
AMUC WTP (Phase 4)	TBD	Complete	Complete	2014	2014	2015

Section 6

Facilities Capacity Analysis

Sections 3, 4, and 5 of this plan presented the population and associated water demand of the service area served and to be served by each utility, the existing water supply facilities in place to meet current demands, and the facilities planned to meet future water supply needs, respectively. The purpose of this section of the plan is to conveniently present a comparison of the population, water demand, facilities capacity, and permit limitations that identifies surpluses and deficits in facility and permit capacities.

6.1 Collier County Water-Sewer District (CCWSD)

As described in Section 5.1, CCWSD plans to bring online three new wellfields and five new potable water treatment facilities during the 10-year planning period ending in 2018. Table 6-1 illustrates how these additions to the existing system will allow CCWSD to stay ahead of the demand curve during the 10-year planning period.

Table 6-1. Capacity Analysis for CCWSD

	2005	2008	2013	2018
Peak Service Area Population (Seasonal)	203,274	250,104	341,484	418,223
Demand Per Capita (MGD)	185	185	185	185
Required Treatment Capacity @ 185 gpcd (MGD)	37.61	46.27	63.17	77.37
Available Facility Capacity (MGD)	40.00	52.00	64.00	81.00
Facility Capacity Surplus (Deficit) (MGD) ¹	2.39	5.73	0.83	3.63
Raw Water Requirement (MGD) ²	44.63	59.81	79.30	97.47
Permitted Amount (MGD Annual Average) ³	56.14	56.14	56.14	56.14
Permitted Surplus (Deficit) (MGD) ⁴	11.51	(3.67)	(23.16)	(41.33)

¹ Calculated by subtracting Required Treatment Capacity @ 185 gpcd from Available Facility Capacity.

² Raw water requirement is the amount of raw water needed to make a certain amount of finished water. It is calculated by dividing the Required Treatment Capacity @ 185 gpcd by the efficiency of the treatment process.

³ CUP (11-00249-W) for 56.14 MGD annual average expires February 8, 2026.

⁴ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

As will be noted from Table 6-1, the allocation under CCWSD's current CUP (11-00249-W) is insufficient to meet the raw water requirement needed to make the Required Treatment Capacity @ 185 gpcd. CCWSD currently has an application (060908-9) in to the SFWMD to increase the withdraw limit on the Lower Tamiami Aquifer specified in the current CUP. When this modification is approved the Annual Average Allocation for the permit will increase to 63.82 MGD. CCWSD has another application (070529-12) in for a new CUP for the planned NERWTP wellfield as described in Table 4-1. When the new CUP is approved CCWSD will be authorized to withdraw another 12.57 MGD from its source aquifers. Table 6-2 shows a revised

version of the CCWSD capacity analysis, taking into account the additional CUP allocation that CCWSD is currently pursuing.

Table 6-2. Revised Capacity Analysis for CCWSD

	2005	2008	2013	2018
Peak Service Area Population (Seasonal)	203,274	250,104	341,484	418,223
Demand Per Capita (MGD)	185	185	185	185
Required Treatment Capacity @ 185 gpcd (MGD)	37.61	46.27	63.17	77.37
Available Facility Capacity (MGD)	40.00	52.00	64.00	81.00
Facility Capacity Surplus (Deficit) (MGD) ¹	2.39	5.73	0.83	3.63
Raw Water Requirement (MGD) ²	44.63	59.81	79.30	97.47
Permitted Amount (MGD Annual Average) ³	56.14	63.82	76.40	76.40
Permitted Surplus (Deficit) (MGD) ⁴	11.51	4.01	(2.90)	(21.07)

¹ Calculated by subtracting Required Treatment Capacity @ 185 gpcd from Available Facility Capacity.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the Required Treatment Capacity @ 185 gpcd by the efficiency of the treatment process.

³ CUP based on existing permit (11-00249-W) and allocation increases currently in process.

⁴ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

The allocation increases currently in process will allow CCWSD to meet its supply needs to 2011, when the NERWTP comes online. CCWSD plans to request additional modifications of its CUP to account for development of the HPRO train at the NCRWTP, the SERWTP Phase 1, and the NERWTP Phase 2. These modifications will be developed during the design and permitting phase of each project, as SFWMD does not allow utilities to "reserve" water in advance.

6.2 Immokalee Water and Sewer District (IWSD)

Table 6-3 shows the capacity analysis for IWSD for the 10-year planning period. The improvements planned by the IWSD for the 10-year planning period are sufficient to meet the demands of the service area. However, the allocation of the underlying CUP (11-00013-W) does not cover the withdrawals required to make the finished water demand.

Table 6-3. Capacity Analysis for IWSD

	2005	2008	2013	2018
Service Area Population	22,206	23,784	26,638	29,664
Demand Per Capita (MGD)	182	182	182	182
Annual Average Daily Demand (MGD)	4.04	4.33	4.85	5.40
Available Facility Capacity (MGD)	4.50	5.60	5.60	6.60
Facility Capacity Surplus (Deficit) (MGD) ¹	0.46	1.27	0.75	1.20

	2005	2008	2013	2018
Raw Water Requirement (MGD) ²	4.17	4.46	5.00	5.57
Permitted Amount (MGD Annual Average) ³	3.36	3.36	3.36	3.36
Permitted Surplus (Deficit) (MGD) ⁴	(0.80)	(1.10)	(1.64)	(2.20)

¹ Calculated by subtracting Annual Average Daily Demand from Available Facility Capacity.

² Raw water requirement is the amount of raw water needed to make a certain amount of finished water. It is calculated by dividing the annual Average Daily Demand by the efficiency of the treatment process.

³ CUP (11-00013-W) for 3.36 MGD annual average expires June 15, 2010.

⁴ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

6.3 Florida Governmental Utility Authority (Golden Gate) (FGUA)

Table 6-4 shows the capacity analysis for FGUA for the 10-year planning period. The improvements planned by the FGUA for the 10-year planning period are sufficient to meet the demands of the service area. However, the allocation of the underlying CUP (11-00148-W) does not cover the withdrawals required to make the finished water demanded.

Table 6-4. Capacity Analysis for FGUA

	2005	2008	2013	2018
Service Area Population	10,359	11,113	12,370	13,626
Demand Per Capita (MGD)	173	173	173	173
Annual Average Daily Demand (MGD)	1.79	1.92	2.14	2.36
Available Facility Capacity (MGD)	2.09	2.34	3.34	3.34
Facility Capacity Surplus (Deficit) (MGD) ¹	0.30	0.42	1.20	0.98
Raw Water Requirement (MGD) ²	2.02	2.19	2.48	2.77
Permitted Amount (MGD Annual Average) ³	1.92	1.92	1.92	1.92
Permitted Surplus (Deficit) (MGD) ⁴	(0.10)	(0.27)	(0.56)	(0.85)

¹ Calculated by subtracting Annual Average Daily Demand from Available Facility Capacity.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the Annual Average Daily Demand by the efficiency of the treatment process.

³ CUP (11-00148-W) for 1.92 MGD annual average expires September 11, 2008.

⁴ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

6.4 Orange Tree Utility Company (OTUC)

Table 6-5 shows the capacity analysis for OTUC out to 2012 when it is proposed to be taken over by CCWSD. The improvements planned by the OTUC for the 10-year

planning period are sufficient to meet the demands of the service area. However, the allocation of the underlying CUP (11-00419-W) does not cover the withdrawals required to make the finished water demanded in 2012.

Table 6-5. Capacity Analysis for OTUC

	2005	2008	2012
Service Area Population	2,631	5,700	9,500
Demand Per Capita (MGD)	60	80	85
Annual Average Daily Demand (MGD)	0.16	0.46	0.81
Available Facility Capacity (MGD)	0.75	0.75	1.50
Facility Capacity Surplus (Deficit) (MGD) ¹	0.59	0.29	0.69
Raw Water Requirement (MGD) ²	0.20	0.58	1.04
Permitted Amount (MGD Annual Average) ³	0.86	0.86	0.86
Permitted Surplus (Deficit) (MGD) ⁴	0.66	0.28	(0.18)

¹ Calculated by subtracting Annual Average Daily Demand from Available Facility Capacity.

² Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the Annual Average Daily Demand by the efficiency of the treatment process.

³ CUP (11-00419-W) for 0.86 MGD annual average expires November 11, 2009.

⁴ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

6.5 Ave Maria Utility Company, LLLP (AMUC)

Table 6-6 shows the capacity analysis for AMUC for the 10-year planning period. The improvements planned by the AMUC for the 10-year planning period are sufficient to meet the demands of the service area. However, the allocation of the underlying CUP (11-02298-W) does not cover the withdrawals required to make the finished water demanded. It is assumed that any short comings of the CUP will be addressed by AMUC prior to the development of the infrastructure.

Table 6-6. Capacity Analysis for AMUC

	2007 ¹	2008	2013	2018
Service Area Population	2,924	3,886	14,985	27,255
Demand Per Capita (MGD)	110	110	110	110
Annual Average Daily Demand (MGD)	0.32	0.43	1.65	3.00
Available Facility Capacity (MGD)	1.67	1.67	4.17	5.00
Facility Capacity Surplus (Deficit) (MGD) ²	1.35	1.24	2.52	2.00
Raw Water Requirement (MGD) ³	0.38	0.50	1.94	3.53

	2007 ¹	2008	2013	2018
Permitted Amount (MGD Annual Average) ⁴	1.26	1.26	1.26	1.26
Permitted Surplus (Deficit) (MGD) ⁵	0.88	0.76	(0.68)	(2.27)

¹ AMUC began service in early 2007.

² Calculated by subtracting Annual Average Daily Demand from Available Facility Capacity.

³ Raw water requirement is the amount of raw water need to make a certain amount of finished water. It is calculated by dividing the Annual Average Daily Demand by the efficiency of the treatment process.

⁴ CUP (11-02298-W) for 1.26 MGD annual average expires June 14, 2011.

⁵ Calculated by subtracting the Raw Water Requirement from the Permitted Amount.

Section 7

Conservation Regulations and Practices

As the water supply in Florida becomes more taxed over time, the need to more efficiently utilize water resources will increase. The following subsections outline the conservation regulations and practices utilized by each of the utilities covered under this plan. The information provided has been taken directly from the conservation plans approved by the SFWMD and included in each utility's consumptive use permit.

7.1 Collier County Water-Sewer District (CCWSD)

The conservation plan implemented by CCWSD is described in the utility's consumptive use permit as follows:

The Collier County Board of Commissioners enacted Ordinance 2002-17, which reduced watering to three days per week (three times each for odd and even numbered addresses), in an effort to reduce water consumption. This ordinance also requires that rain sensor devices be installed on automatic irrigation systems. The Board initiated an ASR program to allow for the storage of excess water that can later be withdrawn to offset peak usage.

Other water conservation measures designated by the SFWMD, which Collier County has enacted include:

- Requiring low flow plumbing fixtures as part of the Unified Land Development Code (ULDC);
- Requiring use of xeriscaping and other drought-tolerant vegetation in portions of the ULDC;
- Implementing water conservation rates that increase per-thousand gallon charges as usage increases;
- Monthly reading of all customers' meters to minimize losses from unaccounted-for water;
- An active reuse program, which delivers over 3.9 billion gallons a year of reclaimed wastewater, to reduce irrigation withdrawals;
- Filter backwashing at the SCRWTP to eliminate water lost in cleaning filters; and
- Enacted in 2003 to further promote water conservation, the Board approved a mandatory water high-consumption surcharge, which is applied when the SFWMD implements water restrictions and impacts only high-use consumers.

In addition to these water conservation measures, the Public Utilities Division and other County agencies endeavor to educate the public regarding water conservation through educational and outreach programs. Staff members routinely conduct presentations for schools, civic groups, homeowner associations, and other receptive groups. Division staff participate in events, such as "Senior Expo" and "Government Days," to take the water conservation campaign to the public. Utility bill inserts and advertising have further helped to spread the message. The County has actively been promoting the "Fridays are Dry Days" campaign, which has become the tag line on commercials airing on radio stations throughout Collier County. These stations were selected to target a large number of consumers, including those that do not speak English. The tag line has also been utilized in several productions airing on the Collier County Government Channel. Public service announcements and specially produced videos promoting water conservation also air on the County's government access television station, Channel 11/16.

Collier County's Water Department has made significant strides towards improving and enhancing the efficiency of the Water Distribution System. Maintaining an efficient system with upgraded and preventive maintenance efforts keeps unplanned water losses to a minimum.

Collier County's average unaccounted-for water is currently below 10 percent, due to aggressive water loss management practices. Specific projects the Water Department has completed that aid in water conservation include:

- Installation of additional valves in several critical areas of the water mains to effectively decrease isolation times in the event of main breaks. Decreasing the isolation time results in reduced water losses.
- Mapping the entire water supply system which, in the event of a main break, aids in reducing water loss through improved location and isolation times.
- Replacing over 100 galvanized service replacements throughout the water district annually. This increases reliability of water services and reduces potential water loss.
- As part of an ongoing replacement program, the Water Department has replaced over 40,000 meters in the last three years. These new meters utilize automatic meter reading technology, which will increase the reliability of the meter reading process and decrease the amount of unaccounted for water usage.
- Completing replacement projects on several substandard water mains. This improves service reliability and fire protection capacity, and reduces the potential for water loss.
- Large meters throughout the County service area are tested twice per year. This decreases unaccounted for water loss.

- As part of the distribution system rehabilitation program automatic flushing stations are installed in problem areas of the system as they are identified. This results in the reduction of overall water loss due to required flushing to maintain disinfectant residuals.
- Another part of the distribution system rehabilitation program involves installing new water quality sampling stations at ends of the system as additional locations are identified. The increase in monitoring from these locations will aid in the identification of developing water quality problems before they become critical. Proactive monitoring results in effective reduction of water loss from high volume flushing required when water quality problems develop.

7.2 Immokalee Water and Sewer District (IWSD)

The conservation plan implemented by IWSD is described in the utility's consumptive use permit as follows:

Pursuant to the SFWMD Basis of Review (March 1994), Section 2.6.1, Water Conservation Plans, all public water supply utilities are required to develop and implement a water conservation plan. Each of the mandatory water conservation elements must exist or have a proposed time frame for implementation. As mentioned earlier, the Immokalee Water and Sewer District was established under Florida law and has specific duties and quasi-governmental rights. However, the authority to enact ordinances does not reside with that District. The applicant has stated they will request that Immokalee enact any required ordinances within a year of permit issuance. The applicant has provided the following water conservation plan elements:

- A. Permanent Irrigation Ordinance: An ordinance which restricts landscape irrigation to the hours of 4:00 p.m. to 10:00 a.m., 7 days per week, is currently not in effect for the service area. The utility will request that Immokalee adopt an ordinance for the service area within 1 year of permit issuance.
- B. Xeriscape Ordinance: An ordinance which requires the use of xeriscape landscape principles is currently not in effect. The utility will request that Immokalee adopt an ordinance for the service area within 1 year of permit issuance.
- C. Ultra-Low Volume Plumbing Fixture Ordinance: An ordinance which requires ultra-low volume plumbing fixtures on all new construction is in effect for the service area.
- D. Water Conservation Rate Structure: The applicant has a conservation-based rate structure, which includes increasing block rates as a means of reducing demands.

- E. Leak Detection Program: The applicant does not have an unaccounted-for water and leak detection program because the unaccounted-for water losses are less than 10 percent.
- F. Rain Sensor Device Ordinance: An ordinance which requires any person who purchases and installs an automatic lawn sprinkler system to install, operate and maintain a rain sensor device or automatic switch which will override the irrigation system with the occurrence of adequate rainfall is currently not in effect for the service area. The utility will request that Immokalee adopt an ordinance within 1 year of the permit issuance.
- G. Water Conservation Education Program: The applicant distributes pamphlets, makes school visits, and provides information booths for employees and customers. Information signs, press releases, and messages about water conservation on the bills are also utilized.
- H. Reclaimed Water: Currently all wastewater effluent is disposed of via a spray irrigation field and percolation ponds.

7.3 Florida Governmental Utility Authority (Golden Gate) (FGUA)

The conservation plan implemented by FGUA is described in the utility's consumptive use permit as follow:

The Authority (FGUA) has an interlocal agreement with Collier County to serve portions of unincorporated Collier County. As such, the Authority follows Collier County's Water Irrigation Ordinance, 2002-17, which is the District's intent to conserve water through irrigation schedules. This ordinance also refers to Chapter 373.62, F.S. with regards to use of a rain sensor or other automatic switch which will override the irrigation cycle of the irrigation system. Additionally, Chapter 40E-24 of the District's rules requires residential irrigation to follow a plan of odd-even addresses with 3 days per week irrigation. Permitted irrigation of nonathletic playing fields (golf courses, ball fields, lawn tennis, etc.) is also required to follow the same conservation practices.

The current rate structure for billing customers provides for a base facility charge and a volumetric consumption charge, resulting in increased customer costs for higher consumption. The rate structure is intended to conserve water.

The Authority's wastewater is 100 percent reused by routing the effluent to rapid infiltration basins to recharge the ground water system.

The Authority encourages use of xeriscape practices similar to the County's xeriscape ordinance. The Authority does not have the ability to create an ordinance for the Golden Gate service area, but does promote xeriscape through a public education program. Similarly, the Authority has no plumbing ordinance for low flow fixtures,

but does encourage these products through the use of public education. The public education program consists of routine mailings of water conservation literature with monthly customer billings, meeting with homeowner associations, school programs with speakers and water plant tours, and participation in community events.

The Golden Gate Utility, now the Authority, has not performed a leak detection survey prior to 2003. The Authority is currently evaluating the distribution system and if the unaccounted losses are greater than 10 percent, a leak detection program will be started for the 2003-2004 fiscal year in October 2003.

7.4 Orange Tree Utility Company (OTUC)

The conservation plan implemented by OTUC is described in the utility's consumptive use permit as follows:

- A. Permanent Irrigation Ordinance: Orange Tree Utility Company (OTUC) enforces all watering restrictions as they are made known. This includes the District's Mandatory Year Round landscape irrigation measures for Lee, Collier, and Charlotte Counties (Chapter 40E-24, F.A.C).
- B. Xeriscape Ordinance: OTUC highly encourages the use of Xeriscape landscaping in its service area to help reduce the need for ornamental watering.
- C. Ultra-Low Volume Plumbing Fixture Ordinance: It is the policy of OTUC that low volume plumbing be installed in all new service connections, in accordance with the State building code.
- D. Water Conservation Rate Structure: OTUC is in the process of developing a conservation based rate structure for future use, with approval from the Collier County Water and Wastewater Authority.
- E. Leak Detection Program: OTUC will repair any system leaks brought to its attention in a timely fashion and will also review usage for detection of major leaks.
- F. Rain Sensor Device Ordinance: OTU requires all irrigation systems to have rain sensors which override new lawn sprinkler installations.
- G. Water Conservation Education Program: OTUC will distribute and place on its website public service education information as it is made available by government agencies.
- H. Reclaimed Water: Wastewater is being reused as a source for golf course irrigation water at the present time. In the future as more reclaimed water becomes available, it will also be used for residential irrigation.

7.5 Ave Maria Utility Company, LLLP (AMUC)

The conservation plan implemented by AMUC is described in the utility's consumptive use permit as follow:

Per Section 2.6.1 of the Basis of Review, public water supply in excess of 500,000 gallons per day require a water conservation plan addressing the following conservation elements: Permanent Irrigation Ordinance, Xeriscape Ordinance, Ultra-Low Volume Plumbing Fixture Ordinance, Water Conservation Rate Structure, Leak Detection Program, Rain Sensor Device Ordinance, Water Conservation Education Program, and Reclaimed Water Use. The following information is provided.

- A. Permanent Irrigation Ordinance: One of the water conservation efforts the Ave Maria University and Town will pursue is adoption of an irrigation ordinance to limit irrigation water usage during the dry season. The planned ordinance would follow watering restrictions adopted by Collier County, including limiting daytime watering times and limiting the number of days that lawns could be watered. The irrigation ordinance would also likely follow an even/odd address watering system.
- B. Xeriscape Landscape Ordinance: The university and town of Ave Maria will pursue adoption of an ordinance which recommends the use of xeriscape principles in landscape planning for all new construction. The ordinance would encourage implementation of xeriscape landscaping practices including use of mulches, native and drought tolerant plants, and limited turf areas.
- C. Ultra-Low Volume Plumbing Standards: The university and town of Ave Maria will pursue adopting an ordinance requiring ultra-low volume plumbing fixtures in all new construction. The standards proposed in the planned Ave Maria Plumbing Code would in most cases be as stringent as the ultra-low plumbing standards stipulated in the SFWMD Water Conservation Plan Development Guidelines.
- D. Water Conservation Rate Structure: The Town of Ave Maria plans to utilize an inclining block rate structure in order to promote water conservation. Residential and commercial water rates will consist of a monthly capacity cost charge (base rate) and a monthly commodity costs charge (volume charge). The commodity costs charges will increase with increased volume use. For example, residential costs increase from \$1.75 per thousand gallons for under 5000 gallons, to \$4.00 per thousand gallons for quantities over 30,000 gallons. The details and the planned water rate schedule have not been specifically determined yet.
- E. Leak Detection & Distribution System Losses Program: A leak detection program will be implemented by the Ave Maria Utilities if system losses exceed 10 percent. The leak detection program will likely utilize the Rural Water Association (RWA) sonic type leak detection equipment. System

losses may be attributable to known line breaks. The Ave Maria Utilities Department will repair water main and service line breaks as soon as possible to minimize and prevent distribution system losses.

- F. Sprinkler System Rain Sensor: The Town of Ave Maria will recommend installation of rain sensor devices on automatic lawn sprinkler systems for all new construction.
- G. Public Education Programs: The Ave Maria Utility will pursue public education programs on water conservation and community responsibility. The program could include presentations by Utility staff, such as water conservation topics discussed during tours conducted at the Water Treatment Plant and Waste Water Reclamation Facility. Educational brochures on water conservation, landscaping and xeriscape can be distributed by the Utility offices. The Ave Maria Utility could also include water conservation information to all customers along with monthly billing statements.
- H. Reclaimed Water: The most important element of Ave Maria's Water Conservation Plan is utilization of a reclaimed water system for irrigation. The town and university will pursue the use of as much reclaimed water as possible and will likely be able to utilize 100 percent of the reclaimed water generated.

Section 8

Capital Improvement Projects

Section 5 of this plan focused on the projects that each of the utilities have planned for the 10-year planning period. Attention was paid to the amount of water made available and when it would be made available. The following subsections present the capital improvement projects planned by each utility, including the funding source, project number, project name, and cost estimate for each project.

8.1 Collier County Water-Sewer District (CCWSD)

The most recent lists of CCWSD water and wastewater capital improvement projects were developed as part of the 2005 Water and Wastewater Master Plans, which were published in June 2006. The capital improvement projects pertinent to future water supply are summarized in Table 8-1. CCWSD funds its water and wastewater projects from four funds: 411 – Water Impact Fees, 412 – Water User Fees, 413 – Wastewater Impact Fees, and 414-Wastewater User Fees. Impact fees are utilized to pay for new supply projects, while user fees are used to fund operations, maintenance, and replacement of existing facilities.

8.2 Immokalee Water and Sewer District (IWSD)

Included are approved projects that are expected to be completed in the 2008-2013 fiscal years. IWSD receives funding in the form of USDA Rural Development loans and grants. USDA has provided \$3,000,000 in grant funding to complete these projects. IWSD currently does not charge impact fees, and loans are repaid with water and sewer user fees. The capital improvement projects pertinent to future water supply are summarized in Table 8-2.

8.3 Florida Governmental Utility Authority (Golden Gate) (FGUA)

The most recent lists of FGUA water and wastewater capital improvement projects were developed as parts of the 2007 Water and Wastewater Master Plans. The capital improvement projects pertinent to future water supply are summarized in Table 8-3. As a utility near build out, FGUA funds its capital projects through user fees.

8.4 Orange Tree Utility Company (OTUC)

A request for information was made of OTUC, but no response has been received. Table 8-4 has been included, but intentionally left blank to allow for the inclusion of OTUC's capital improvement project if it is submitted.

8.5 Ave Maria Utility Company (AMUC)

A request for information was made of AMUC, but no response has been received. Table 8-5 has been included, but intentionally left blank to allow for the inclusion of AMUC's capital improvement project if it is submitted.

Table 8-1. CCWSD Capital Improvement Projects

Funding Source	Project Number	Project	FY2008 - FY 2013	FY2013 - FY2018
411 - Water Impact Fees	70070	Water Master Plan Updates	\$140,000	
411 - Water Impact Fees	70093	Immokalee Road East 36" WTM	\$1,600,000	
411 - Water Impact Fees	70157	Manatee Road Four New Potable Water ASR Wells	\$6,950,000	
411 - Water Impact Fees	70892	SCRWTP RO Wellfield Expansion	\$6,000,000	
411 - Water Impact Fees	70899	NERWTP Phase 1A Wellfield for 10 MGD Capacity (Design and Construct)	\$60,000,000	
411 - Water Impact Fees	70900	SERWTP Wellfield Study and Land Acquisition	\$600,000	
411 - Water Impact Fees	70902	NERWTP -New 10 MGD Water Treatment Plant Phase 1A	\$62,500,000	
411 - Water Impact Fees	71002	NCRWTP High TDS RO Design, Construction and Supply	\$9,800,000	
411 - Water Impact Fees	2006-3	Evaluation of Orange Tree Utility System	\$50,000	
411 - Water Impact Fees	2006-13	New Water Main from Orange Tree Treatment Plant to NERWTP	\$260,000	
411 - Water Impact Fees	2006-18	Program Management and Oversight for NE Utility Facility	\$2,150,000	
411 - Water Impact Fees	2006-20	SFWMD Grant Application	\$150,000	
411 - Water Impact Fees	2006-24	Manatee Pumping Station Improvements	\$600,000	
411 - Water Impact Fees	2006-29	NERWTP Phase 1B Wellfield Expansion Land Acquisition	\$5,900,000	
411 - Water Impact Fees	70070	Water Master Plan Updates	\$150,000	\$280,000
411 - Water Impact Fees	70093	Commissioning of Immokalee 36" WTM	\$120,000	\$80,000
411 - Water Impact Fees	70140	East Central 16" Water Transmission Main	\$4,680,000	\$3,120,000
411 - Water Impact Fees	70175	Water Supply Facilities Work Plan	\$51,000	\$34,000
411 - Water Impact Fees	70897	Carica Road Potable Water ASR (5 wells)	\$2,340,000	\$4,440,000
411 - Water Impact Fees	70899	5 MGD NERWTP Wellfield Expansion to 15 MGD Phase 1A.2	\$18,000,000	\$12,000,000
411 - Water Impact Fees	71001	SCRWTP Lime Softening New 4th Reactor	\$0	\$5,400,000
411 - Water Impact Fees	71023	Upsize Lime Softening Reactor No. 1 at SCRWTP	\$0	\$3,780,000
411 - Water Impact Fees	70157	Manatee Road Four New Potable Water ASR Wells	\$3,000,000	\$2,000,000
411 - Water Impact Fees	70902	NERWTP -New 10 MGD Water Treatment Plant Phase 1A	\$8,580,000	\$5,720,000
411 - Water Impact Fees	70902	NERWTP -New 5 MGD Expansion to 15 MGD Phase 1A.2	\$23,160,000	\$15,440,000
411 - Water Impact Fees	2006-1	SERWTP Phase 1 -New 12 MGD Water Treatment Plant	\$27,420,000	\$72,820,000
411 - Water Impact Fees	2006-2	Radio Road Parallel 20" WTM Livingston to Santa Barbara	\$2,820,000	\$1,880,000
411 - Water Impact Fees	2006-4	Goodlette-Frank Rd Parallel 24" WTM Upgrade -VBR to Immokalee	\$0	\$2,760,000
411 - Water Impact Fees	2006-6	Upsize Existing 12" WTM to 16" WTM along US 41 from Rattlesnake Hammock Rd to east of Bridge	\$480,000	\$320,000
411 - Water Impact Fees	2006-8	Vanderbilt Drive Parallel 12" WTM Upgrade North from Immokalee	\$1,440,000	\$960,000
411 - Water Impact Fees	2006-9	US 41 Parallel 24" WTM Upgrade Southeast from Manatee PS	\$7,740,000	\$5,160,000
411 - Water Impact Fees	2006-10	Immokalee Road Parallel 20" and 30" WTM Upgrades	\$0	\$9,300,000
411 - Water Impact Fees	2006-11	NERWTP Phase 1B 10 MGD Expansion to 25 MGD	\$12,240,000	\$30,840,000
411 - Water Impact Fees	2006-12	NERWTP Phase 1C 5 MGD Expansion to 30 MGD	\$0	\$20,520,000

Table 8-1. CCWSD Capital Improvement Projects

Funding Source	Project Number	Project	FY2008 - FY 2013	FY2013 - FY2018
411 - Water Impact Fees	2006-13	New Water Main from Orange Tree Treatment Plant to NERWTP	\$1,050,000	\$700,000
411 - Water Impact Fees	2006-14	Lower Tamiami Transmission Improvements	\$8,184,000	\$5,456,000
411 - Water Impact Fees	2006-15	NERWTP Phase 1B 10 MGD Wellfield Expansion to 25 MGD	\$3,840,000	\$19,780,000
411 - Water Impact Fees	2006-16	Eastern Lands Freshwater Supply	\$330,000	\$220,000
411 - Water Impact Fees	2006-17	SCRWTP Filters and Recarbonation Basin	\$360,000	\$240,000
411 - Water Impact Fees	2006-18	Program Management and Oversight for NE Utility Facility	\$2,340,000	\$1,560,000
411 - Water Impact Fees	2006-19	NERWTP Phase 1B Raw Water Pipeline	\$6,060,000	\$4,040,000
411 - Water Impact Fees	2006-22	New 24" WTM on Rattlesnake Hammock Road from US 41 to CR 951	\$3,900,000	\$2,600,000
411 - Water Impact Fees	2006-23	New 16" WTM along US 41 from CR 951 to Barefoot Williams Road	\$3,000,000	\$2,000,000
411 - Water Impact Fees	2006-24	Manatee/Carica Pumping Station Improvements	\$900,000	\$1,800,000
411 - Water Impact Fees	2006-25	NERWTP Wellfield Two 24" Raw WTM's along Immokalee Road to Wilson Blvd.	\$4,800,000	\$3,200,000
411 - Water Impact Fees	2006-26	NERWTP Wellfield Two 24" Raw WTM's along Oil Well Road	\$0	\$18,360,000
411 - Water Impact Fees	2006-28	SERWTP Phase 1 Wellfield Construction (Design and Construct)	\$31,740,000	\$28,720,000
411 - Water Impact Fees	2006-30	NERWTP Phase 1C 5 MGD Wellfield Expansion to 30 MGD	\$0	\$12,540,000
411 - Water Impact Fees	2006-31	NERWTP Phase 1C Raw Water Pipeline	\$0	\$17,400,000
411 - Water Impact Fees	2006-32	North County Wellfield Interconnection Pipelines	\$0	\$0
411 - Water Impact Fees	2006-34	New 24" WTM on Isle of Capri Road from Manatee Road south to Port Au Prince Road	\$5,340,000	\$3,560,000
411 - Water Impact Fees	2006-35	New 36" WTM from NERWTP to intersection of CR 951 and GG Blvd.	\$0	\$47,400,000
411 - Water Impact Fees	2006-36	SERWTP Phase 2 -12 MGD Expansion to 24 MGD	\$0	\$45,840,000
411 - Water Impact Fees	2006-37	SERWTP Phase 2 Wellfield Expansion (Design and Construct)	\$0	\$28,980,000
411 - Water Impact Fees	2006-55	New 24" WTM on Radio Road between Santa Barbara Blvd. and Davis Blvd.	\$2,220,000	\$1,480,000
412 - Water User Fees	70045	FDOT Joint Project Agreements -Water	\$450,000	
412 - Water User Fees	70069	NCRWTP Emergency Generator Switchgear Upgrades	\$2,600,000	
412 - Water User Fees	70202	Collier Water Utility Standards	75000	
412 - Water User Fees	71010	Distribution System Renewal and Replacement	\$3,000,000	
412 - Water User Fees	71011	NCRWTP -New Hawthorne (Zone 1) Wellfield (Well Nos.: 101,102,114,115,116, 109,117,118,119,120)	\$10,800,000	
412 - Water User Fees	71012	Asset Management	\$750,000	
412 - Water User Fees	71013	Mobile Unit Project for Water/Wastewater	\$150,000	
412 - Water User Fees	71043	NCRWTP RO Membrane Replacement (Every six years from 2008)	\$1,500,000	
412 - Water User Fees	71045	Continuing Professional GIS Services	\$600,000	
412 - Water User Fees	71055	Water System SCADA/Telemetry Improvements	\$200,000	
412 - Water User Fees	71056	Water SCADA Systems Software and Support Renewals	\$50,000	
412 - Water User Fees	71058	Initial Water Legal Services	\$100,000	
412 - Water User Fees	75006	CAPDEP Update	\$15,000	

Table 8-1. CCWSD Capital Improvement Projects

Funding Source	Project Number	Project	FY2008 - FY 2013	FY2013 - FY2018
412 - Water User Fees	75007	Water Master Plan Updates	\$40,000	
412 - Water User Fees	2006-40	SCRWTP Membrane Replacement	\$750,000	
412 - Water User Fees	2006-43	NCRWTP Technical Support Projects	\$1,500,000	
412 - Water User Fees	2006-44	SCRWTP Technical Support Projects	\$1,500,000	
412 - Water User Fees	2006-45	Water Facilities Technical Support Projects	\$1,500,000	
412 - Water User Fees	2006-48	GIS Equipment	\$75,000	
412 - Water User Fees	2006-50	NCRWTP -VFD Upgrades	\$2,500,000	
412 - Water User Fees	2006-53	Hawthorn Future Reliability Wells	\$200,000	
412 - Water User Fees	2006-54	SFWMD Grant Applications -Water	\$150,000	
412 - Water User Fees	70045	FDOT Joint Project Agreements -Water	\$600,000	\$1,000,000
412 - Water User Fees	70076	Auto Meter Read Installation	\$0	\$2,460,000
412 - Water User Fees	70158	Tamiami Well Replacement Program (Well Nos.: 38-42)	\$3,105,000	\$2,070,000
412 - Water User Fees	70158	Tamiami Well Replacement Program (2 new wells every 5 years)	\$0	\$3,420,000
412 - Water User Fees	70202	Collier Water Utility Standards	\$90,000	\$150,000
412 - Water User Fees	71001	SCRWTP Lime Softening New Fourth Reactor	\$0	\$3,000,000
412 - Water User Fees	71010	Distribution System Renewal and Replacement	\$780,000	\$1,480,000
412 - Water User Fees	71023	Upsize Lime Softening Reactor No. 1 at SCRWTP	\$0	\$1,980,000
412 - Water User Fees	71041	Injection Well Repairs	\$1,140,000	\$1,900,000
412 - Water User Fees	71043	NCRWTP RO Membrane Replacement (Every six years from 2008)	\$1,320,000	\$2,740,000
412 - Water User Fees	71045	Continuing Professional GIS Services	\$150,000	\$250,000
412 - Water User Fees	71047	10 Year Water Supply Facilities Work Plan	\$60,000	\$100,000
412 - Water User Fees	71055	Water System SCADA/Telemetry Improvements	\$600,000	\$1,000,000
412 - Water User Fees	71056	Water SCADA Systems Software and Support Renewals	\$225,000	\$420,000
412 - Water User Fees	72520	NCRWTP Nanofilter Replacement (Every six years from 2005)	\$480,000	\$980,000
412 - Water User Fees	75007	Water Master Plan Updates	\$150,000	\$280,000
412 - Water User Fees	2006-40	SCRWTP Membrane Replacement	\$960,000	\$3,400,000
412 - Water User Fees	2006-41	Replace 12" WTM along US 41 from Rattlesnake Hammock Rd to east of Bridge	\$450,000	\$300,000
412 - Water User Fees	2006-42	NERWTP RO Membrane Replacement	\$0	\$1,860,000
412 - Water User Fees	2006-43	NCRWTP Technical Support Projects	\$1,500,000	\$2,500,000
412 - Water User Fees	2006-44	SCRWTP Technical Support Projects	\$1,500,000	\$2,500,000
412 - Water User Fees	2006-45	Water Facilities Technical Support Projects	\$1,500,000	\$2,500,000
412 - Water User Fees	2006-47	SCRWTP One RO Reliability Well	\$1,560,000	\$1,040,000
412 - Water User Fees	2006-53	Hawthorn Future Reliability Wells	\$7,241,880	\$14,324,120
413 - Wastewater Impact Fees	72001	Southeast WRF Land Acquisition	\$17,110,000	

Table 8-1. CCWSD Capital Improvement Projects

Funding Source	Project Number	Project	FY2008 - FY 2013	FY2013 - FY2018
413 - Wastewater Impact Fees	73156	Northeast Water Reclamation Facility	\$78,400,000	
413 - Wastewater Impact Fees	73950	NCWRF Expansion to 30.6 MGD	\$80,600,000	
413 - Wastewater Impact Fees	72516	IQ Water Master Plan Updates	\$510,000	
413 - Wastewater Impact Fees	74076	IQ Water Booster Pump Station at Livingston Road	\$1,750,000	
413 - Wastewater Impact Fees	74311	IQ Water Transmission Pipeline from NEWRF	\$7,600,000	
413 - Wastewater Impact Fees	73156	Northeast Water Reclamation Facility	\$10,080,000	\$6,720,000
413 - Wastewater Impact Fees	2006-2	Northeast WRF -Three expansions (4.0 mgd, 8.0 mgd and 4.0 mgd) to 20.0 mgd	\$28,200,000	\$116,600,000
413 - Wastewater Impact Fees	2006-3	Southeast WRF-New 4.0 mgd WRF and 4.0 mgd expansion to 8.0 mgd	\$16,080,000	\$91,120,000
413 - Wastewater Impact Fees	2006-4	Southeast WRF Offsite Pipelines and Interconnection	\$0	\$3,000,000
413 - Wastewater Impact Fees	2006-24	SCWRF Capacity Improvements	\$0	\$1,200,000
413 - Wastewater Impact Fees	72516	IQ Water Master Plan Updates	\$120,000	\$260,000
413 - Wastewater Impact Fees	2006-21	New IQ ASR Wells (Locations -TBD)	\$5,070,000	\$9,380,000
413 - Wastewater Impact Fees	2006-26	New IQ Water Booster PS	\$300,000	\$560,000
413 - Wastewater Impact Fees	2006-27	IQ Water Transmission/Interconnect Pipelines	\$900,000	\$4,320,000
414 - Wastewater User Fees	72501	Decommissioning of Pelican Bay WRF -Phase II	\$800,000	
414 - Wastewater User Fees	74030	IQ Water ASR	\$4,900,000	
414 - Wastewater User Fees	74033	IQ System SCADA/Telemetry Upgrades	\$1,100,000	
414 - Wastewater User Fees	2006-23	IQ Water Meter Replacement	\$200,000	
414 - Wastewater User Fees	72516	IQ Water Master Plan Updates -User Fee Side	\$36,000	\$72,000
414 - Wastewater User Fees	74030	IQ Water ASR	\$3,780,000	\$7,320,000
414 - Wastewater User Fees	74033	IQ Water SCADA/Telemetry Upgrades	\$720,000	\$1,380,000
414 - Wastewater User Fees	2006-22	IQ Water Technical Support Projects	\$1,500,000	\$2,500,000
1. Cost estimates taken from Collier County Water and Wastewater Master Plans, June 2006.				
2. All costs presented in 2006 dollars with 8% inflation per year.				

Table 8-2. IWSD Capital Improvement Projects

Funding Source	Project Number	Project	FY2008 - FY 2013	FY2013 - FY2018
USDA Loan/Grant	Not Assigned	Valve Project - Installation of valves at various locations	80,790	
USDA Loan/Grant	Not Assigned	Eden Park WM and Fire Protection Improvements	94,454	
USDA Loan/Grant	Not Assigned	Charlotte Street WM and Fire Protection Improvements	60,660	
USDA Loan/Grant	Not Assigned	S.R. 29 WM Improvements	84,863	
USDA Loan/Grant	Not Assigned	Delaware Avenue WM and Fire Protection Improvements	50,030	
USDA Loan/Grant	Not Assigned	Alachua(City) Street WM and Fire Protection Improvements	48,436	
USDA Loan/Grant	Not Assigned	Replacement of 50 Fire Hydrants throughout community	120,000	
USDA Loan/Grant	Not Assigned	Replacement of water services and boxes in FWV	102,660	
USDA Loan/Grant	Not Assigned	Carson Road Water Treatment Plant Expansion to 2MGD /Upgrades	2,336,615	
USDA Loan/Grant	Not Assigned	Carson Road Water Plant - 2 new Wells	289,619	
USDA Loan/Grant	Not Assigned	Jerry V. Warden Water Plant MCC Electrical Improvement	287,006	
USDA Loan/Grant	Not Assigned	Jerry V. Warden Water Plant - 1 new Well	167,042	
USDA Loan/Grant	Not Assigned	Airport Water Plant - HVAC Upgrades	11,408	
Developer Contributions	Not Assigned	IWSD Master Plan	92,500	
Water User Fees	Not Assigned	IWSD Raw Water Availability Study	40,000	
1. Cost estimates provided by IWSD in an information request response letter, dated August 24, 2007.				

Table 8-3. FGUA Capital Improvement Projects

Funding Source	Project Number	Project	FY2008 - FY 2013	FY2013 - FY2018
User Fees	GG004	Miscellaneous Renewal Replacement	\$684,000	
User Fees	GG005	Fire Hydrant Replacement	\$90,000	
User Fees	GG006	Water Meter Replacement Program	\$47,000	
User Fees	GG008	Raw Water Capacity Expansion & Water Use Permitting	\$250,000	
User Fees	GG010	Water System Distribution Improvements	\$2,565,000	
User Fees	GG011	WTP RO Membrane Replacement	\$190,000	
User Fees	GG019	System Wide Master Plan Update	\$120,000	
User Fees	GG045	Utility Relocation - Santa Barbara Boulevard	\$142,000	
User Fees	2008-WM-01	85-ft of 8-in: along 45th Street S.W. from Golden Gate Parkway to Meadowood Club Apartments	\$5,000	
User Fees	2008-WM-02	3,459-ft of 10-in: along Golden Gate Parkway from Santa Barbara Boulevard to the David Lawrence Center	\$242,000	
User Fees	2008-WM-03	652-ft of 6-in: along 31st Avenue S.W. from the connection point of a 10-in main running 285-ft east from 50th Street S.W. to 50th LA. S.W. and along 50th LA. S.W. from 31st Avenue S.W. to the end of 50th LA S.W.	\$27,000	
User Fees	2008-WM-04	2,192 ft of 6-in: along 50th Terrace S.W. from 50th Street S.W. to 28th Avenue S.W. and along 28th Avenue S.W. from 28th PL. S.W. to 50th Street S.W.	\$92,000	
User Fees	2008-WM-05	431-ft of 6-in: along 49th Lane S.W. from the connection point of an 8-in main running 195-ft north from 30th Place S.W.	\$18,000	
User Fees	2008-WM-06	399-ft of 6-in: along 49th Street S.W. from the connection point of an 8-in main running 202-ft north from 30th Place S.W.	\$17,000	
User Fees	2008-WM-07	752-ft of 6-in: 235-ft of 6-in pipe dia. upgrade along 30th Place S.W. from Tropicana Boulevard to 47th Terrace S.W. and 517-ft of 6-in new pipe along 47th Terrace S.W. to the connection point of a 2-in main.	\$32,000	
User Fees	2008-WM-08	422-ft of 6-in: along 47th Street S.W. from 31st Avenue S.W.	\$18,000	
User Fees	2008-WM-09	204-ft of 8-in: along 27th Court S.W. from the connection point of an 8-in main running 646-ft from 44th Terrace S.W. to 46th Street S.W.	\$11,000	
User Fees	2008-WM-10	597-ft of 6-in: along 46th Street S.W. from 28th Avenue S.W.	\$25,000	
User Fees	2008-WM-11	1,080-ft of 6-in: along 26th Avenue S.W. and 55th Street S.W. from the connection point of an 8-in main running -ft east from 55th Terrace S.W. to 882-ft south from 26th Avenue S.W.	\$45,000	
User Fees	2008-WM-12	560-ft of 6-in: 417-ft along 25th Place S.W. from Tropicana Boulevard and 143-ft along 47th Terrace S.W. from 25th Place S.W.	\$24,000	
User Fees	2008-WM-13	223-ft of 8-in new pipe: along 22nd PL. from the connection point of an 8-in main running 109-ft east from 55th Terrace S.W. to 55th Street S.W.	\$12,000	
User Fees	2008-WM-14	1,864-ft of 6-in new pipe: along 55th Street S.W. from Coronado Boulevard to the connection point of a 2-in main 346-ft north of 22nd PL.	\$78,000	
User Fees	2008-WM-15	316-ft of 8-in new pipe: along 18th Court S.W. to Sunshine Boulevard.	\$18,000	
User Fees	2008-WM-16	2,058-ft of 6-in: along 48th Street S.W. from 21st Avenue S.W. connecting to the 10-in main running east-west on 20th PL S.W. to 359-ft north of 18th Court S.W.	\$86,000	
User Fees	2008-WM-17	225-ft of 6-in: along 19th Court S.W. from 46th Terrace to the end of 19th Court S.W.	\$9,000	
User Fees	2009-WM-01	1606-ft of 18-in: from the WTP to the connection on 44th Street S.W and along 44th S.W. to 24th Place S.W.	\$202,000	
User Fees	2010-WM-01	614-ft of 12-in: along Golden Gate Parkway and 43rd L.A. S.W. from 44th Street S.W. to 23rd Place S.W.	\$52,000	
User Fees	2010-WM-02	52-ft of 8-in: along Golden Gate Parkway from 45th Street S.W. to Meadowood Club Apartments.	\$3,000	
1. Cost estimates taken from Golden Gate Utility System Water Master Plan, June 2007.				
2. All costs are presented in 2007 dollars.				

Table 8-4. OTUC Capital Improvement Projects

Funding Source	Project Number	Project	FY2008 - FY 2013	FY2013 - FY2018
RAA Funded		Expansion of WTP from 0.75 to 1.50 MGD	TBD	
RAA Funded		Expansion of WWTP from 0.35 to 1.1 MGD	\$2,600,000	
1. Cost estimates provided by OTUC in an e-mail memo to the Collier County Community Development and Environmental Services, dated September 27, 2007.				

Table 8-5. AMUC Capital Improvement Projects

Funding Source	Project Number	Project	FY2008 - FY 2013	FY2013 - FY2018
TBD	Not Assigned	Potable Wellfield Improvements (PWS-4 and PWS-5)	\$455,000	
TBD	Not Assigned	AMUC WTP (Phase 2)	\$3,434,000	
TBD	Not Assigned	Potable Wellfield Improvements (PWS-6 and PWS-7)	\$455,000	
TBD	Not Assigned	AMUC WTP (Phase 3)	\$5,194,000	
TBD	Not Assigned	Potable Wellfield Improvements (PWS-8)		\$228,000
TBD	Not Assigned	AMUC WTP (Phase 4)		\$2,025,000
1. Cost estimates provided by AMUC in an information request response letter, dated September 20, 2007.				

Appendix A

Water And Wastewater Sections from the Collier County 2006 Annual Update Inventory Report on Public Facilities

Collier County Government
Public Utilities Engineering Department
2006 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)

**POTABLE WATER SYSTEM - TREATMENT FACILITIES
LEVEL OF SERVICE STANDARD (LOSS) ASSESSMENT FOR SERVICE AREA**

02 Nov 06

1	2	3	4	5	5a	6	7	8	9	9a	9b
Fiscal Year	Peak Population (Seasonal)	Required Treatment Capacity @ 185 gpcd MGD	Total Constructed Plant Capacity On-line MGD	New Plant Constructed Capacity MGD	New Plant Reliable Capacity MGD	Available ASR Capacity MGD	Total Constructed Plant and ASR Capacity MGD	Total Treatment Reliable System Capacity MGD	Retained/ (Deficit) Constructed System Capacity MGD	Retained/ (Deficit) Reliable System Capacity MGD	Retained/ (Deficit) Reliable System Target Values MGD
2001	157,377	29.11	32.00			1.00	33.00	29.70	3.89	0.59	3.0 (Min) - 24.0 (Max)
2002	168,773	31.22	32.00			1.00	33.00	29.70	1.78	(1.52)	3.0 (Min) - 24.0 (Max)
2003	180,290	33.35	32.00			1.00	33.00	29.70	(0.35)	(3.65)	3.0 (Min) - 24.0 (Max)
2004	190,878	35.31	32.00			1.00	33.00	29.70	(2.31)	(5.61)	3.0 (Min) - 24.0 (Max)
2005	203,274	37.61	32.00	8.00	6.00	1.00	41.00	36.90	3.39	(0.71)	3.0 (Min) - 24.0 (Max)
2006	218,103	40.35	40.00			1.00	41.00	36.90	0.65	(3.45)	3.0 (Min) - 24.0 (Max)
2007	233,729	43.24	40.00	8.00	8.00	1.00	49.00	44.10	5.76	0.86	3.0 (Min) - 24.0 (Max)
2008	250,104	46.27	48.00	4.00	4.00	1.00	53.00	47.70	6.73	1.43	3.0 (Min) - 24.0 (Max)
2009	268,965	49.76	52.00	2.00	1.00	1.00	55.00	49.50	5.24	(0.26)	3.0 (Min) - 24.0 (Max)
2010	284,339	52.60	54.00			3.00	57.00	51.30	4.40	(1.30)	3.0 (Min) - 24.0 (Max)
2011	297,270	54.99	54.00	13.75	10.00	3.00	70.75	63.68	15.76	8.68	3.0 (Min) - 24.0 (Max)
2012	326,231	60.35	67.75			4.00	71.75	64.58	11.40	4.22	3.0 (Min) - 24.0 (Max)
2013	341,484	63.17	67.75			6.00	73.75	66.38	10.58	3.20	3.0 (Min) - 24.0 (Max)
2014	357,328	66.11	67.75	14.00	12.00	6.00	87.75	78.98	21.64	12.87	3.0 (Min) - 24.0 (Max)
2015	372,630	68.94	81.75			6.00	87.75	78.98	18.81	10.04	3.0 (Min) - 24.0 (Max)
2016	387,331	71.66	81.75	5.00	5.00	6.00	92.75	83.48	21.09	11.82	3.0 (Min) - 24.0 (Max)
2017	402,523	74.47	86.75			6.00	92.75	83.48	18.28	9.01	2.75 (Min) - 22.0 (Max)
2018	418,223	77.37	86.75			6.00	92.75	83.48	15.38	6.10	2.75 (Min) - 22.0 (Max)
2019	434,445	80.37	86.75			6.00	92.75	83.48	12.38	3.10	2.75 (Min) - 22.0 (Max)
2020	450,098	83.27	86.75	10.00	10.00	6.00	102.75	92.48	19.48	9.21	2.75 (Min) - 22.0 (Max)
2021	465,129	86.05	96.75			6.00	102.75	92.48	16.70	6.43	2.75 (Min) - 22.0 (Max)
2022	480,593	88.91	96.75			6.00	102.75	92.48	13.84	3.57	2.75 (Min) - 22.0 (Max)
2023	496,503	91.85	96.75			9.00	105.75	95.18	13.90	3.32	2.75 (Min) - 22.0 (Max)
2024	512,871	94.88	96.75	12.00	12.00	9.00	117.75	105.98	22.87	11.09	2.75 (Min) - 22.0 (Max)
2025	528,857	97.84	108.75			9.00	117.75	105.98	19.91	8.14	2.75 (Min) - 22.0 (Max)
2026	544,429	100.72	108.75	5.00	5.00	9.00	122.75	110.48	22.03	9.76	2.75 (Min) - 22.0 (Max)

Notes: (References are to the column numbers above)

1. Fiscal Year starts October 1 and ends September 30.
2. 2001 - 2026 Peak Population (Seasonal) estimates and projections for the existing service area are based on "Collier County Water & Sewer Districts Population Estimates and Projections" dated September 27, 2006, prepared by Collier County Comprehensive Planning Department. Populations are based on using BEBR High Range growth rate through 2011 and 95% of BEBR High Range growth rate from 2012 through 2026. The peak population projections shown include the Orangetree Service Area beginning in FY 2012.
- 3 Required Treatment Capacity @ 185 gpcd is obtained by multiplying the Peak Population (Seasonal) (Column 2) times 185 gallons per capita (peak population) per day. 185 gpcd is the established level of service standard (LOSS) as adopted in the 2005 Water Master Plan Update and verified by the South Florida Water Management District for the 2006 Lower West Coast Water Supply Plan.
4. Total Constructed Plant Capacity On-line is the total finished water treatment capacity at the beginning of the fiscal year in Million Gallons per Day (MGD). All plant capacities are stated in Maximum Month Average Daily Demand (MMADD).

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5. New Plant Constructed Capacity schedule is as follows:

Fiscal year	New Plant Constructed Capacity	Description	Reliable Capacity	Source of Information
2005	8.0 MGD	Reverse osmosis treatment expansion to South County Regional Water Treatment Plant	6.0 MGD	Completed
2007	8.0 MGD	Reverse osmosis treatment expansion to SCRWTP	8.0 MGD	SCRWTP Wellfield Expansion PMP
2008	4.0 MGD	Reverse osmosis treatment expansion/buildout to SCRWTP	4.0 MGD	SCRWTP Wellfield Expansion PMP
2009	2.0 MGD	High Pressure RO expansion to North County Regional Water Treatment Plant (NCRWTP)	1.0 MGD	2005 Water Master Plan Update
2011	13.75 MGD	New Northeast Regional Water Treatment Plant (NERWTP)	10.0 MGD	2005 Water Master Plan Update
2014	14.0 MGD	New Southeast Regional Water Treatment Plant (SERWTP)	12.0 MGD	Recommended based on 27 Sep 06 CDES population projections
2016	5.0 MGD	Expansion to NERWTP	5.0 MGD	Recommended based on 27 Sep 06 CDES population projections
2020	10.0 MGD	Expansion to NERWTP	10.0 MGD	Recommended based on 27 Sep 06 CDES population projections
2024	12.0 MGD	Expansion to SERWTP	12.0 MGD	Recommended based on 27 Sep 06 CDES population projections
2026	5.0 MGD	Expansion to NERWTP	5.0 MGD	Recommended based on 27 Sep 06 CDES population projections

5a. New Plant Reliable Capacity is the new plant capacity with the largest water treatment plant unit out of service in accordance with the design requirements of the "Ten State Standards" and as adopted in the 2005 Water Master Plan Update.

6. Available Aquifer Storage and Recovery (ASR) Capacity schedule is as follows:

Fiscal year	Additional ASR Capacity	Description	Available ASR Capacity	Source of Information
2010	2.0 MGD	Two additional ASR wells at Manatee Road Pumping Station site	3.0 MGD	2005 Water Master Plan Update
2012	1.0 MGD	One additional ASR well at Manatee Road Pumping Station site	4.0 MGD	Recommended based on 27 Sep 06 CDES population projections
2013	2.0 MGD	Two additional ASR wells at Manatee Road Pumping Station site	6.0 MGD	Recommended based on 27 Sep 06 CDES population projections
2023	3.0 MGD	Three new ASR wells at Carica Road Pumping Station site	9.0 MGD	Recommended based on 27 Sep 06 CDES population projections

Aquifer Storage and Recovery (ASR) is storage to meet peak season demand above plant reliable capacity.

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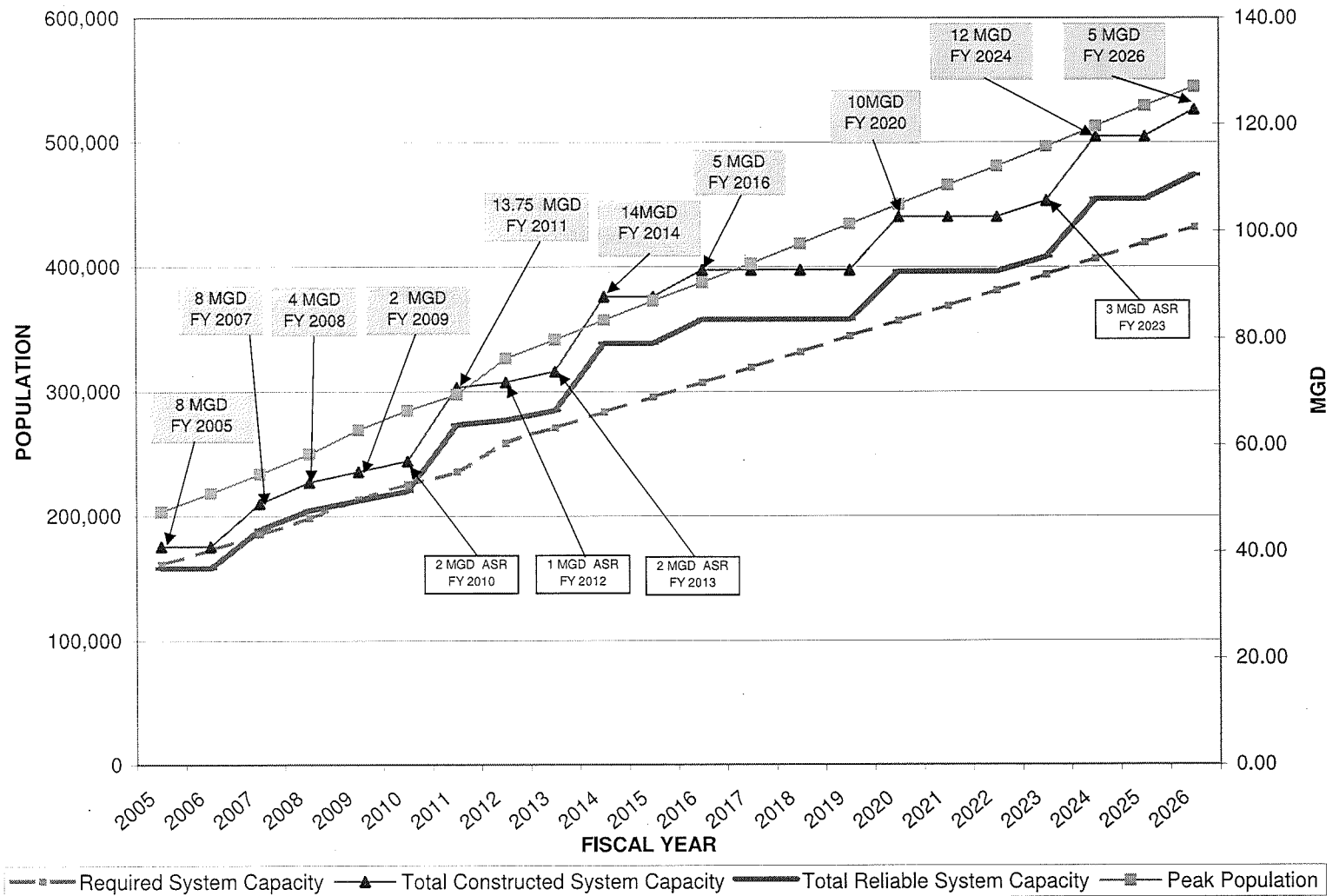
**POTABLE WATER SYSTEM - TREATMENT FACILITIES
LEVEL OF SERVICE STANDARD (LOSS) ASSESSMENT FOR SERVICE AREA**

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7. Total Constructed Plant and ASR Capacity is total of Constructed Plant Capacity (Column 4) plus New Plant Constructed Capacity (Column 5) plus Available ASR Capacity (Column 6).
8. Total Treatment Reliable System Capacity is the total available treatment system capacity necessary to meet concurrency requirements, and is defined herein as 90-percent of the Total Constructed Plant and ASR Capacity (Column 7).
9. Retained/(Deficit) Constructed System Capacity is the difference between Total Constructed Plant and ASR Capacity (Column 7) and Required Treatment Capacity (Column 3).
- 9a. Retained/(Deficit) Reliable System Capacity is the difference between Total Treatment System Reliable Capacity (Column 8) and Required Treatment Capacity (Column 3).
- 9b. Retained/(Deficit) Reliable System Capacity Target Values for planning purposes are 3.0 MGD minimum and 24.0 MGD maximum through FY 2016, and 2.75 MGD minimum and 22.0 maximum from FY 2017 through FY 2026. The target minimum capacities represent the projected increase in the next year's demand (peak population times level of service standard) and the target maximum capacities represent the projected increase in demand for the next eight years.

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**POTABLE WATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
CHANGES FROM 2005 AUIR**

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1. New Plant Constructed Capacity Schedule:

A. SCRWTP: Changed 12.0 MGD expansion in 2007 to be 8.0 MGD in 2007 and 4.0 MGD in 2008 to match new SCRWTP wellfield delivery schedule

B. The following changes were made from the 2005 AUIR to match the 27 Sep 06 CDES populations and resulting water demands:

- NERWTP: Changed 5.0 MGD expansion from FY 2014 to FY 2016; changed 10.0 MGD expansion from FY 2017 to FY 2020; changed 5.0 MGD expansion from FY 2021 to FY 2026
- SERWTP: Changed new 14.0 MGD plant from FY 2017 to FY 2014; changed 12.0 MGD expansion from FY 2021 to FY 2024

2. Available Aquifer Storage and Recovery (ASR) Capacity Schedule:

Adjusted ASR on-line schedule after 2010 to maintain recommended target constructed system capacities. A comparison of ASR capacities in the 2005 and 2006 AUIR's is shown below:

<u>Fiscal Year</u>	<u>2005 AUIR ASR Capacity (MGD)</u>	<u>2006 AUIR ASR Capacity (MGD)</u>
2011	5.0	3.0
2012	6.0	4.0
2013	6.0	6.0
2014	7.0	6.0
2015	7.0	6.0
2016	10.0	6.0
2017	10.0	6.0
2018	10.0	6.0
2019	10.0	6.0
2020	10.0	6.0
2021	10.0	6.0
2022	10.0	6.0
2023	10.0	9.0
2024	10.0	9.0
2025	10.0	9.0
2026		9.0

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**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR NORTH COUNTY WATER RECLAMATION FACILITY (NCWRF) SERVICE AREA**

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1	2	3	4	5	6	7	7a
Fiscal Year	Peak Population (Seasonal)	Required Treatment Capacity @ 145 gpcd MGD	Constructed Plant Capacity On- line MGD	New Plant Capacity MGD	Total Available Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity Target Values MGD
2001	88,483	12.83	12.30	6.50	18.80	5.97	1.0 (Min) - 8.0 (Max)
2002	96,676	14.02	18.80		18.80	4.78	1.0 (Min) - 8.0 (Max)
2003	104,536	15.16	18.80		18.80	3.64	1.0 (Min) - 8.0 (Max)
2004	111,391	16.15	18.80		18.80	2.65	1.0 (Min) - 8.0 (Max)
2005	118,617	17.20	18.80	5.30	24.10	6.90	1.0 (Min) - 8.0 (Max)
2006	126,891	18.40	24.10		24.10	5.70	1.0 (Min) - 8.0 (Max)
2007	135,538	19.65	24.10		24.10	4.45	1.0 (Min) - 8.0 (Max)
2008	144,517	20.95	24.10		24.10	3.15	1.0 (Min) - 8.0 (Max)
2009	153,892	22.31	24.10		24.10	1.79	1.0 (Min) - 8.0 (Max)
2010	162,006	23.49	24.10	6.50	30.60	7.11	1.0 (Min) - 8.0 (Max)
2011	166,911	24.20	30.60		30.60	6.40	1.0 (Min) - 8.0 (Max)
2012	178,574	25.89	30.60		30.60	4.71	1.0 (Min) - 8.0 (Max)
2013	193,646	28.01	30.60		30.60	2.59	1.0 (Min) - 8.0 (Max)
2014	201,076	29.09	30.60		30.60	1.51	1.0 (Min) - 8.0 (Max)
2015	208,772	30.20	30.60		30.60	0.40	1.0 (Min) - 8.0 (Max)

The NCWRF ultimate capacity is reached in 2015.

Notes: (References are to the column numbers above)

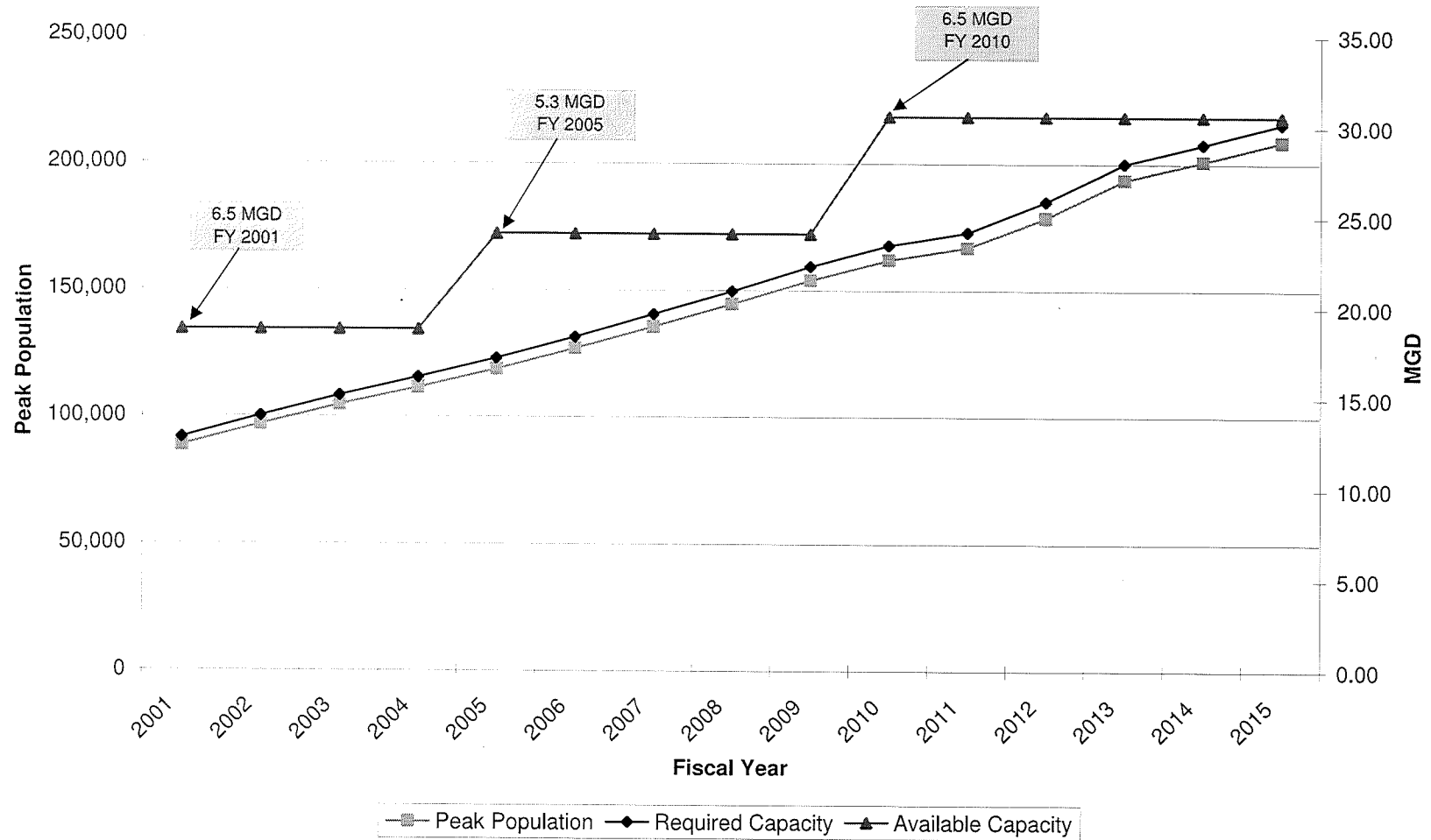
- Fiscal Year starts October 1 and ends September 30.
- 2001 - 2015 Peak Population (Seasonal) estimates and projections for the existing service area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated September 27, 2006, prepared by Collier County Comprehensive Planning Department. Populations are based on using BEBR High Range growth rate through 2011 and 95% of BEBR High Range growth rate from 2012 through 2015. The NCWRF ultimate capacity is reached in 2015. The service area peak population and required capacity for the NCWRF do not change after 2015.
- Required Treatment Capacity @ 145 gpcd is obtained by multiplying the Peak Population (Seasonal) (Column 2) times 145 gallons per capita (peak population) per day. 145 gpcd is the established level of service standard (LOSS) for the North Service Area as adopted in the 2005 Wastewater Master Plan Update.
- Constructed Plant Capacity On-line is the treatment plant capacity at the beginning of the fiscal year in Million Gallons per Day (MGD). All plant capacities are reliable plant capacities stated in Maximum Month Average Daily Flow (MMADF).
- New Plant Capacity schedule is as follows:

Fiscal Year	New Plant Capacity	Description	Source of Information
2001	6.5 MGD	Expansion to NCWRF	Completed
2005	-1.2 MGD	Pelican Bay plant removed from service	Completed
2005	6.5 MGD	Expansion to NCWRF	Completed
2010	6.5 MGD	Expansion to NCWRF	2005 Wastewater Master Plan Update

- Total Available Constructed Capacity in MGD (Column 4 + Column 5).
- Retained/(Deficit) Constructed Capacity is the difference between Total Available Constructed Capacity (Column 6) and Required Treatment Capacity (Column 3).
- Retained/(Deficit) Constructed Capacity Target Values for planning purposes are 1.0 MGD minimum and 8.0 MGD maximum through FY 2015, when ultimate plant capacity is reached. The target minimum capacities represent the projected increase in the next year's wastewater flow (peak population times level of service standard) and the target maximum capacities represent the projected increase in wastewater flow for the next eight years.

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**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR PROPOSED NORTHEAST WATER RECLAMATION FACILITY (NEWRF) SERVICE AREA**

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1	2	3	4	5	6	7	7a
Fiscal Year	Peak Population (Seasonal)	Required Treatment Capacity @ 120 gpcd MGD	Constructed Plant Capacity On-line MGD	New Plant Capacity MGD	Total Available Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity Target Values MGD
2011	8,035	1.09	0.00	4.00	4.00	2.91	0.9 (Min) - 7.2 (Max)
2012	22,858	2.87	4.00		4.00	1.13	0.9 (Min) - 7.2 (Max)
2013	24,505	3.07	4.00		4.00	0.93	0.9 (Min) - 7.2 (Max)
2014	26,220	3.28	4.00	4.00	8.00	4.72	0.9 (Min) - 7.2 (Max)
2015	27,969	3.49	8.00		8.00	4.51	0.9 (Min) - 7.2 (Max)
2016	36,569	4.69	8.00		8.00	3.31	0.9 (Min) - 7.2 (Max)
2017	45,455	5.93	8.00		8.00	2.07	0.9 (Min) - 7.2 (Max)
2018	54,638	7.22	8.00	4.00	12.00	4.78	0.9 (Min) - 7.2 (Max)
2019	64,127	8.55	12.00		12.00	3.45	0.9 (Min) - 7.2 (Max)
2020	73,282	9.83	12.00		12.00	2.17	0.9 (Min) - 7.2 (Max)
2021	82,074	11.06	12.00		12.00	0.94	0.9 (Min) - 7.2 (Max)
2022	91,119	12.33	12.00	4.00	16.00	3.67	0.9 (Min) - 7.2 (Max)
2023	100,426	13.65	16.00		16.00	2.35	0.9 (Min) - 7.2 (Max)
2024	110,000	15.00	16.00		16.00	1.00	0.9 (Min) - 7.2 (Max)
2025	119,350	16.33	16.00	4.00	20.00	3.67	0.9 (Min) - 7.2 (Max)
2026	128,459	17.62	20.00		20.00	2.38	0.9 (Min) - 7.2 (Max)

The NEWRF is constructed and ready for service in 2011.

Notes: (References are to the column numbers above)

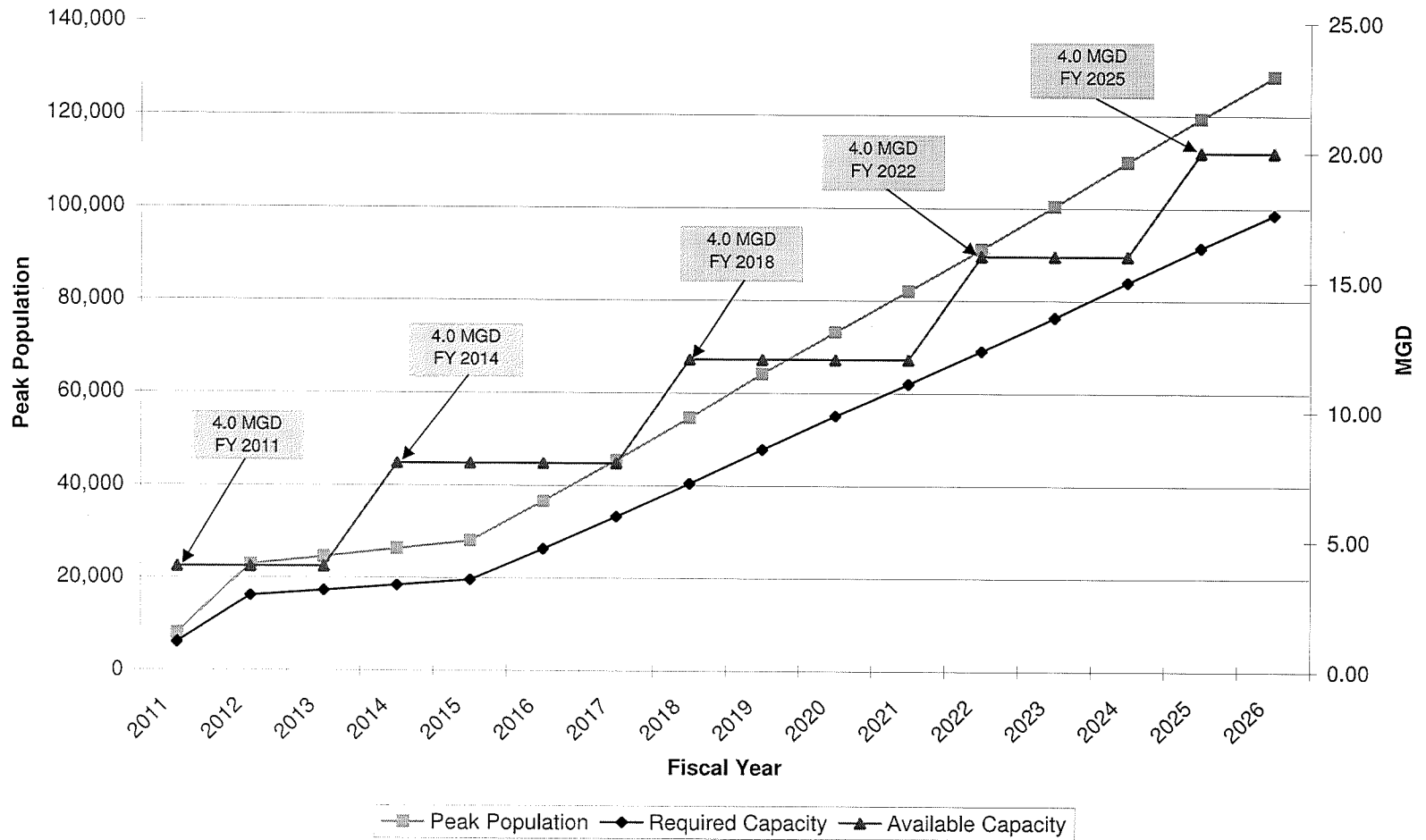
1. Fiscal Year starts October 1 and ends September 30.
2. 2011 - 2026 Peak Population (Seasonal) estimates and projections for the existing service area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated September 27, 2006, prepared by Collier County Comprehensive Planning Department. Populations are based on using BEBR High Range growth rate through 2011 and 95% of BEBR High Range growth rate from 2012 through 2026.
3. Required Treatment Capacity @ 120 gpcd is obtained by multiplying the Peak Population (Seasonal) (Column 2) times 120 gallons per capita (peak population) per day. 120 gpcd is the established level of service standard (LOSS) for the North Service Area as adopted in the 2005 Wastewater Master Plan Update.
4. Constructed Plant Capacity On-line is the treatment plant capacity at the beginning of the fiscal year in Million Gallons per Day (MGD). All plant capacities are reliable plant capacities stated in Maximum Month Average Daily Flow (MMADF).
5. New Plant Capacity schedule is as follows:

Fiscal Year	New Plant Capacity	Description	Source of Information
2011	4.0 MGD	New NEWRF	2005 Wastewater Master Plan Update
2014	4.0 MGD	Expansion to NEWRF	2005 Wastewater Master Plan Update
2018	4.0 MGD	Expansion to NEWRF	Recommended based on 27 Sep 06 CDES population projections
2022	4.0 MGD	Expansion to NEWRF	Recommended based on 27 Sep 06 CDES population projections
2025	4.0 MGD	Expansion to NEWRF	Recommended based on 27 Sep 06 CDES population projections

6. Total Available Constructed Capacity in MGD (Column 4 + Column 5).
7. Retained/(Deficit) Constructed Capacity is the difference between Total Available Constructed Capacity (Column 6) and Required Treatment Capacity (Column 3).
- 7a. Retained/(Deficit) Constructed Capacity Target Values for planning purposes are 0.9 MGD minimum and 7.2 MGD maximum through FY 2026. The target minimum capacities represent the projected increase in the next year's wastewater flow (peak population times level of service standard) and the target maximum capacities represent the projected increase in wastewater flow for the next eight years.

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**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR SOUTH COUNTY WATER RECLAMATION FACILITY (SCWRF) SERVICE AREA**

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1	2	3	4	5	6	7	7a
Fiscal Year	Peak Population (Seasonal)	Required Treatment Capacity @ 100 gpcd MGD	Constructed Plant Capacity On-line MGD	New Plant Capacity MGD	Total Available Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity Target Value MGD
2001	96,056	9.61	9.20		9.20	(0.41)	0.26 (Min)
2002	99,816	9.98	9.20		9.20	(0.78)	0.26 (Min)
2003	103,883	10.39	9.20		9.20	(1.19)	0.26 (Min)
2004	107,983	10.80	9.20	6.80	16.00	5.20	0.26 (Min)
2005	113,986	11.41	16.00		16.00	4.59	0.26 (Min)
2006	121,076	12.12	16.00		16.00	3.88	0.26 (Min)
2007	128,624	12.87	16.00		16.00	3.13	0.26 (Min)
2008	136,623	13.67	16.00		16.00	2.33	0.26 (Min)
2009	145,100	14.52	16.00		16.00	1.48	0.26 (Min)
2010	152,562	15.27	16.00		16.00	0.73	0.26 (Min)
2011	155,570	15.58	16.00		16.00	0.42	0.26 (Min)
2012	157,494	15.74	16.00		16.00	0.26	0.26 (Min)

The SCWRF ultimate capacity is reached in 2012.

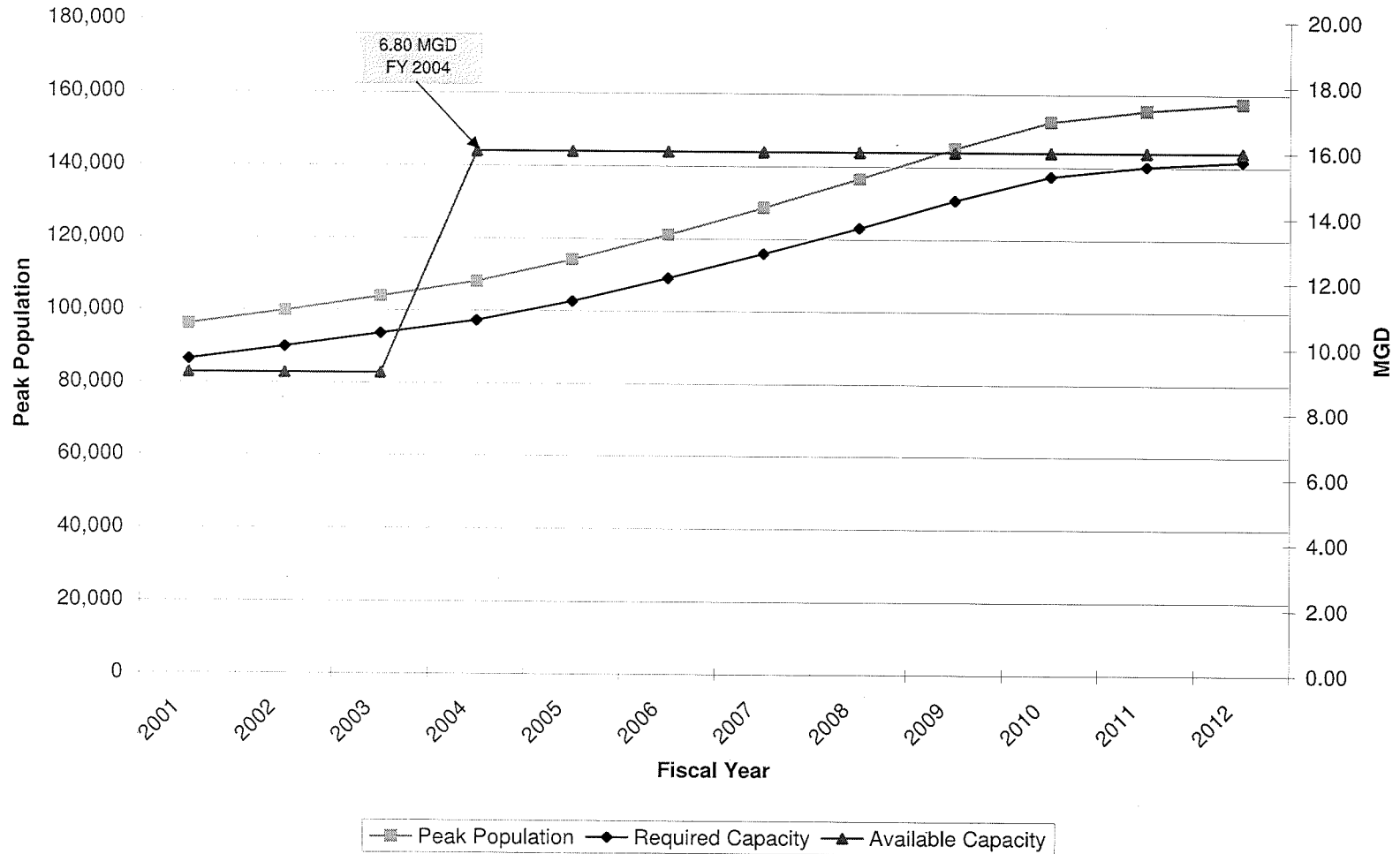
Notes: (References are to the column numbers above)

- Fiscal Year starts October 1 and ends September 30.
- 2001 - 2012 Peak Population (Seasonal) estimates and projections for the existing service area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated September 27, 2006, prepared by Collier County Comprehensive Planning Department. Populations are based on using BEBR High Range growth rate through 2011 and 95% of BEBR High Range growth rate for 2012. The SCWRF ultimate capacity is reached in 2012. The service area peak population and required capacity for the SCWRF do not change after 2012.
- Required Treatment Capacity @ 100 gpcd is obtained by multiplying the Peak Population (Seasonal) (Column 2) times 100 gallons per capita (peak population) per day. 100 gpcd is the established level of service standard (LOSS) for the South Service Area as adopted in the 2005 Wastewater Master Plan Update.
- Constructed Plant Capacity On-line is the treatment plant capacity at the beginning of the fiscal year in Million Gallons per Day (MGD). All plant capacities are reliable plant capacities stated in Maximum Month Average Daily Flow (MMADF).
- New Plant Capacity schedule is as follows:

Fiscal Year	New Plant Capacity	Description	Source of Information
2004	6.8 MGD	Expansion to SCWRF	Completed

- Total Available Constructed Capacity in MGD (Column 4 + Column 5).
- Retained/(Deficit) Constructed Capacity is the difference between Total Available Constructed Capacity (Column 6) and Required Treatment Capacity (Column 3).
- Retained/(Deficit) Constructed Capacity Target Value for planning purposes is 0.26 MGD minimum through FY 2012, when ultimate plant capacity is reached.

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**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR PROPOSED SOUTHEAST WATER RECLAMATION FACILITY (SEWRF) SERVICE AREA**

02 Nov 06

1	2	3	4	5	6	7	7a
Fiscal Year	Peak Population (Seasonal)	Required Treatment Capacity @ 120 gpcd MGD	Constructed Plant Capacity On-line MGD	New Plant Capacity MGD	Total Available Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity Target Values MGD
2014	7,220	0.72	0.00	4.00	4.00	3.28	0.7 (Min) - 5.6 (Max)
2015	13,582	1.42	4.00		4.00	2.58	0.7 (Min) - 5.6 (Max)
2016	20,168	2.10	4.00		4.00	1.90	0.7 (Min) - 5.6 (Max)
2017	26,975	2.79	4.00		4.00	1.21	0.7 (Min) - 5.6 (Max)
2018	34,008	3.51	4.00	4.00	8.00	4.49	0.7 (Min) - 5.6 (Max)
2019	41,276	4.26	8.00		8.00	3.74	0.7 (Min) - 5.6 (Max)
2020	48,289	4.97	8.00		8.00	3.03	0.7 (Min) - 5.6 (Max)
2021	55,022	5.66	8.00		8.00	2.34	0.7 (Min) - 5.6 (Max)
2022	61,951	6.37	8.00		8.00	1.63	0.7 (Min) - 5.6 (Max)
2023	69,078	7.10	8.00		8.00	0.90	0.7 (Min) - 5.6 (Max)
2024	76,412	7.85	8.00	4.00	12.00	4.15	0.7 (Min) - 5.6 (Max)
2025	83,574	8.58	12.00		12.00	3.42	0.7 (Min) - 5.6 (Max)
2026	90,550	9.30	12.00		12.00	2.70	0.7 (Min) - 5.6 (Max)

The SEWRF is constructed and ready for service in 2014.

Notes: (References are to the column numbers above)

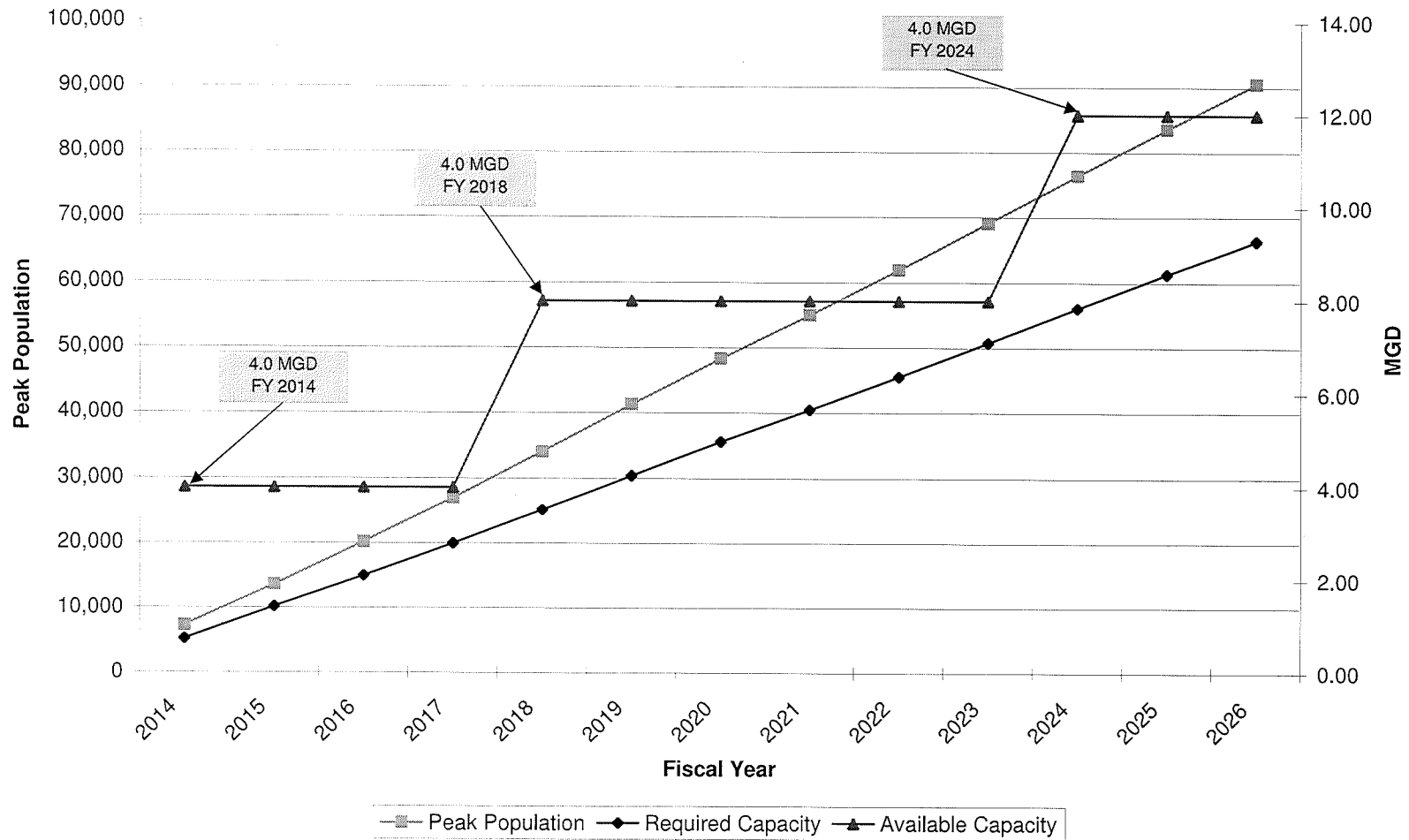
1. Fiscal Year starts October 1 and ends September 30.
2. 2014 - 2026 Peak Population (Seasonal) estimates and projections for the existing service area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated September 27, 2006, prepared by Collier County Comprehensive Planning Department. Populations are based on 95% of BEBR High Range growth rate from 2014 through 2026.
3. Required Treatment Capacity @ 120 gpcd is obtained by multiplying the Peak Population (Seasonal) (Column 2) times 120 gallons per capita (peak population) per day. 120 gpcd is the established level of service standard (LOSS) for the Southeast Service Area as adopted in the 2005 Wastewater Master Plan Update.
4. Constructed Capacity On-line is the treatment plant capacity at the beginning of the fiscal year in Million Gallons per Day (MGD). All plant capacities are reliable plant capacities stated in Maximum Month Average Daily Flow (MMADF).
5. New Plant Capacity schedule is as follows:

Fiscal Year	New Plant Capacity	Description	Source of Information
2014	4.0 MGD	New SEWRF	2005 Wastewater Master Plan Update
2018	4.0 MGD	Expansion to SEWRF	Recommended based on 27 Sep 06 CDES population projections
2024	4.0 MGD	Expansion to SEWRF	Recommended based on 27 Sep 06 CDES population projections

6. Total Available Constructed Capacity in MGD (Column 4 + Column 5).
7. Retained/(Deficit) Constructed Capacity is the difference between Total Available Constructed Capacity (Column 6) and Required Treatment Capacity (Column 3).
- 7a. Retained/(Deficit) Constructed Capacity Target Values for planning purposes are 0.7 MGD minimum and 5.6 MGD maximum through FY 2026. The target minimum capacities represent the projected increase in the next year's wastewater flow (peak population times level of service standard) and the target maximum capacities represent the projected increase in wastewater flow for the next eight years.

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**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
CHANGES FROM 2005 AUIR**

02 Nov 06

New Plant Constructed Capacity Schedule:

1. East Central Area population and wastewater flows are not shown separately since the East Central Water Reclamation Facility was deleted in the adopted 2005 Wastewater Master Plan
2. The following changes were made from the 2005 AUIR to match the 27 Sep 06 CDES populations and resulting wastewater flows:
 - NEWRF: 8.0 MGD Expansion in FY 2017 changed to 4.0 MGD in FY 2018 and 4.0 MGD in FY 2022; and 4.0 MGD Expansion in FY 2024 changed to FY 2025
 - SEWRF: 4.0 MGD Expansion changed from FY 2020 to FY 2018; and 4.0 MGD Expansion added in FY 2024 (from FY 2027 in 2005 Master Plan Update)