

**SUMMARY OF RECOMMENDED CHANGES
2011 EVALUATION & APPRAISAL REPORT (EAR)**

Public Facilities Element – Potable Water Sub-Element

Goals, Objective and Policies: The entire Sub-Element will be revised to reflect the proper formatting for all Goals, Objectives and Policies, as defined below:

Goal: General statement defining what the plan will ultimately achieve, typically beginning with “TO” followed by a transitive verb, such as, TO PROTECT or TO ENSURE.

Objective: A more specific statement than the stated Goal; describing actions that will help achieve the goal(s), typically beginning with the active verb providing the general direction, such as, “Implement”, “Promote” or “Protect”. Objectives use the term “will” and allow Policies to specifically require an activity with “shall”.

Policies: Specific statements that provide directives on how to achieve the objectives and ultimately the Sub-Element’s goals, typically beginning with phrases like, “The County shall promote...”, “The County shall continue to...” or “The District shall expand...” or similar phrases. Policies use the terms “may” or “shall” to provide specific direction.

Goals, Objective and Policies: The entire Sub-Element should be revised to reflect Department name changes, designee changes, renumbering due to objective and/or policy additions and/or deletions, and grammatical changes.

Goal – revisions to reflect all that supplying potable water entails, and its interdependence with provisions found in other Elements and Sub-Elements

Objective 1 – minor revisions and reformatting

Policy 1.1 – minor revision to be more inclusive of jurisdictions under the Plan

Policy 1.3 – minor revision to provide additional specificity

Policy 1.5 – minor revision to be more inclusive of jurisdictions under the Plan

Policy 1.6 – minor revision to provide additional specificity

Objective 2 – reformatting

Policy 2.1 – minor revision to be more inclusive of jurisdictions under the Plan, and provide additional specificity

Policy 2.4 – minor revision to be more inclusive of jurisdictions under the Plan

Policy 2.5 – minor revision to recognize document updates

Policy 2.6 – minor revision to update Ordinance reference

Objective 3 – reformatting

Policy 3.1 – minor revisions to reconcile certain LOS standards; deleting an unnecessary statement; part of revision affecting multiple Elements to eliminate redundancy

Policy 3.2 – minor revision to abbreviate

Policy 3.3 – minor revision to abbreviate

Policy 3.4 – minor revisions to abbreviate, and provide additional specificity; additional statement specifying review procedure

Objective 4 – reformatting

Policy 4.5 – provide specificity if deemed necessary

Objective 5 – minor revision to provide new departmental reference; consider modification to strengthen this Objective and its subsequent Policies, in demonstrating support for reducing VMT and GHG emissions; reformatting

Potable Water Objective – New recommendation based on 2009 adoptions of HB 697 and the County Energy Audit & GHG Inventory

Potable Water Policy – New recommendation to follow County Energy Audit & GHG Inventory

Potable Water Sub-Element – Attached Documents – Numerous changes, with direction to cross-check GMP locations where similar references to maps & figures are found

**Assessment of the Successes & Shortcomings
and Recommendations
for the Public Facilities Element – Potable Water Sub-Element**

A. Introduction & Background:

The purpose of the Potable Water Sub-Element is defined within its single Goal, which reads as follows:

TO PROTECT THE HEALTH AND SAFETY OF THE PUBLIC BY ENSURING ACCESS TO ENVIRONMENTALLY SOUND, COST EFFECTIVE AND IMPLEMENTABLE POTABLE WATER FACILITIES AND SERVICES.

The intent of the Potable Water Sub-Element is to assure the provision of efficient and economical services that would enable the citizens of Collier County to meet their needs for a potable water supply while also assuring public health and safety in accordance with the criteria set forth in Rule 9J-5, F.A.C., and Chapter 163, Florida Statutes.

The provision of public facilities and services for potable water supply, stormwater management, floodplain management and flood protection, and aquifer recharge area protection and watershed management are planned in correlation with future land use projections. This Goal should be expanded to fully capture the County's goals in these areas and ensure collaboration in implementing Objectives and applying Policies. These interdepartmental collaborations should also be recognized, and strengthened if necessary, in the Conservation & Coastal Management Element (CCME) and Intergovernmental Coordination Element (ICE) of this Growth Management Plan.

As currently formatted, this Sub-Element consists entirely of a single Goal, and its supporting Objectives and Policies. As part of the EAR-based amendments, Comprehensive Planning staff is recommending specific formatting changes for the Sub-Element. In addition, the Sub-Element contains a number of references to the County's Water & Sewer District. The District's official name is the "**Collier County Water-Sewer District**," and the Sub-Element text needs to reflect this.

B. Objectives Analysis:

OBJECTIVE 1:

The County will locate and develop potable water supply sources to meet the future needs of the County owned and operated systems, said supply sources meeting – the minimum Level of Service Standards established by this Plan. The development and utilization of new potable water supply sources and the acquisition of land necessary for such development shall be based upon the information, guidelines and procedures identified within the County's Ten-Year Water Supply Facilities Work Plan (as updated annually), the Collier County Water-Sewer Master Plan, and the Lower West Coast Water Supply Plan prepared by the South Florida Water Management District.

Objective Achievement Analysis:

Section 3.2 of this EAR contains an analysis of the Collier County Growth Management Plan, including the Potable Water Sub-Element, relative to compliance with the South Florida Water

Management District's (SFWMD's) Lower West Coast Water Supply Plan. Additionally, the staff of the Collier County Public Utilities Division has prepared a Ten-Year Water Supply Facilities Work Plan. This Work Plan is to be transmitted to the Florida Department of Community Affairs at the conclusion of the SFWMD's update of the Lower West Coast Water Supply Plan. Along with the Work Plan, County staff will be transmitting related amendments to the Potable Water Sub-Element and the Capital Improvement Element.

Both the Work Plan and the Sub-Element are based upon the County's adopted Water Master Plan Update. The Master Plan utilizes population projections prepared by the Collier County Comprehensive Planning Department, approved by the Florida Department of Community Affairs (DCA) and accepted by the South Florida Water Management District (SFWMD).

As part of the EAR-based amendments, Objective 1 should be revised to delete the reference to the County Water Master Plan and the word "annually" that is in parentheses after the Ten-Year Water Supply Facilities Work Plan. This Objective should be rephrased to improve its formatting as an "objective".

Policy Relevance:

There are currently seven (7) policies within this Objective.

Policy 1.1:

The County shall continue to expand the ASR (Aquifer Storage and Recovery) system as a potential emergency and seasonal potable water source.

This Policy calls for the continuing expansion of the County's Aquifer Storage & Recovery (ASR) Program. This Policy remains relevant and *should be rewritten not to be utility specific*, but to mention those jurisdictions, generally, that have an ASR Program to expand.

[Public Comment from February 23, 2010 EAR Public Meeting – Suggesting that there is a concern over the potential waste of re-use water; asking if re-use water can be treated to a standard satisfactory as a drinking water source, and; observing that water should not be treated to a standard of which there is not a demand.]

Policy 1.2:

The County shall continue to implement a program for the protection of existing and potential potable water supply sources.

This Policy calls for continuation of a County program for protecting existing and potential water supply sources. Protection of existing and potential water supply sources is under the jurisdiction of the County's Pollution Control Department. This Policy remains relevant and *should be retained as written*.

Policy 1.3:

The County shall continue to identify sufficient quantities of water sources to meet the County's estimated growth-related needs. Potential water sources to meet the County's 2025 water demands include raw water from Hawthorn Zone I Aquifer (Intermediate Aquifer System) and Lower Hawthorn Aquifer (Florida Aquifer System), identified within the County's 2005 Water Master Plan. The County shall use these water sources as well as alternative sources, as permitted by the State, to meet the County's needs.

This Policy requires the County to identify sufficient water supply sources to address future needs. This Sub-Element may be affected by changes to Chapter 163, Florida Statute, which were adopted into law in 2005, as follows:

163.3191(2)(1): The Evaluation and Appraisal Report must determine whether the local government has been successful in identifying alternative water supply projects, including conservation and reuse, needed to meet projected demand. Also, the Report must identify the degree to which the local government has implemented its 10-year water supply workplan.

This Policy remains relevant and should be retained. Reporting the County's success in identifying alternative water sources and the degree to which the 10-year workplan has been implemented may or may not require revision of this Sub-Element to be in compliance with the above Statutory change.

This Policy should be revised to delete the second sentence referring to water sources only if allowed by Statute and reword the last sentence to "The County shall seek supply from all permissible sources of raw water cited in the Lower West Coast Water Supply Plan to meet the County's needs."

[Public Comment from February 23, 2010 EAR Public Meeting – Suggesting the County should develop new tools to predict future water availability.]

Policy 1.4:

The County shall coordinate with the South Florida Water Management District and other regulatory agencies in implementing effective linkages between growth management and water planning.

This Policy calls for continuation of a County program for protecting existing and potential water supply sources. Protection of existing and potential water supply sources is under the jurisdiction of the County's Pollution Control Department. This Policy remains relevant and *should be retained as written.*

[Public Comment from March 15, 2010 EAR Public Meeting – Suggesting a number of these 'other regulatory agencies' be identified, including the Federal Emergency Management Agency (FEMA), Department of Environmental Protection (DEP), and the U.S. Army Corps of Engineers (USACOE), as those among whom water resource management is coordinated – including surface water, stormwater, and water supplies for municipal services.]

Policy 1.5:

The County shall coordinate with the South Florida Water Management District in the development of the Water Master Plan Update, which is the primary planning document for the Collier County Water-Sewer District.

This Policy requires the County to identify sufficient water supply sources to address future needs. The Water Master Plan document does not cover all areas and jurisdictions in the County and this reference should be changed. *This Policy should be revised to replace "Water Master Plan Update" with "Lower West Coast Water Supply Plan" and to replace "the Collier County Water-Sewer District" with "Collier County".*

Policy 1.6:

The County shall coordinate with the South Florida Water Management District to produce Plans for water supply as described within the Water Master Plan Updates that ensure the County's ability to maintain its stated Level of Service standard.

This Policy calls for continuation of a County program for protecting existing and potential water supply sources. Protection of existing and potential water supply sources is under the jurisdiction of the County's Pollution Control Department. *This Policy should be revised to replace "Water Master Plan Updates" with "Lower West Coast Water Supply Plan".*

[Public Comment from March 15, 2010 EAR Public Meeting – Questioning the status of and responsibility for monitoring and maintaining our water resources.]

Policy 1.7:

The County shall reference the water supply guidelines of the most current version of the South Florida Water Management District's Lower West Coast Water Supply Plan in developing any future required Water Supply Facilities Work Plan.

This Policy requires the County to identify sufficient water supply sources to address future needs. This Policy remains relevant and *should be retained as written.*

OBJECTIVE 2:

The County shall implement the following policies to make certain that public and private sector potable water service utilities provide, repair and/or replace potable water supply, treatment and distribution facilities to correct existing deficiencies in their respective service areas as may be required to meet or exceed the Level of Service Standards established in this Plan. In addition, public sector potable water service utilities will be expanded as necessary to provide for future growth, as provided for in the following policies.

Objective Achievement Analysis:

Collier County's private water and wastewater utilities are regulated through the Utility & Franchise Regulation Section of the Community Development & Environmental Services (CDES) Operations Department. This agency serves as staff for the Collier County Water and Wastewater Authority. The Utility & Franchise Regulation Section is the County entity responsible for monitoring compliance with County regulations by the various private utilities located in Collier County. In addition to managing the operations of the Department and Section, the CDES Operations Director is also the Executive Director for the Water and Wastewater Authority. The Authority is the regulatory entity for the four (4) utility franchises operating in Collier County.

In regulating the operations of the County's private utilities the Authority, which is appointed by the Board of County Commissioners, exercises considerable power. They may set rates, adjust franchise boundaries, set quality of service standards and intervene in disputes between utilities and customers.

The publicly owned (as opposed to privately owned) water supply system is operated by Collier County as the Collier County Water District. The District is responsible for developing, operating and maintaining all of the County's public facilities related to potable water treatment and distribution.

This Objective is being achieved and *should be retained*, essentially as written. This Objective should be rephrased to improve its formatting as an “objective”.

Policy Relevance:

There are six (6) policies within this Objective.

Policy 2.1:

The Collier County Water-Sewer District shall continue the development of a Collier County Regional Potable Water System consistent with the Capital Improvement Element and the Collier County Water-Sewer Master Plan to correct existing deficiencies and provide for future growth.

This Policy calls for the County to continue development of a Regional Potable Water Utility System. *This Policy should be deleted or rewritten to not be utility specific - - - include both Water – Sewer District and the County Water and Wastewater Authority; replace Master Plan with **Lower West Coast Supply Plan**.*

Policy 2.2:

Consistent with the growth policies of the Future Land Use Element of this Plan, provision of central potable water service by the County is limited to the service areas shown in this Plan and depicted on the Collier County Water District Boundaries maps (Figure PW-1 and Figure PW-1.1); the Existing and Future Potable Water Service Areas maps (Figure PW-2 and Figure PW-2.1), which includes the Rural Transition Water and Sewer District; and, to areas where the County has legal commitments to provide facilities and services as of the date of adoption of this Plan. Additionally, the County may serve Towns, Villages, Hamlets, and Compact Rural Developments within the Rural Lands Stewardship Area Overlay at the County’s discretion; presently, the County has no plans to serve any portion of the Rural Lands Stewardship Area Overlay. This Overlay is depicted on the countywide Future Land Use Map and map series.

Within the Rural Lands Stewardship Area Overlay: Hamlets and those Compact Rural Developments one hundred (100) acres or less in size may be served by central potable water facilities; Towns, Villages, and those Compact Rural Developments greater than one hundred (100) acres in size are required to be served by central potable water facilities; and, Compact Rural Developments one hundred (100) acres or less in size may be required to be served by central potable water facilities, depending upon the permitted uses within the Compact Rural Development. These facilities may be provided by the private sector, an independent water authority, or some other non-County utility.

For the purposes of this policy and policies 2.4, 5.1, and 5.3, within the Rural Lands Stewardship Area Overlay, the term “central potable water facilities” includes decentralized community treatment systems. Innovative alternative water treatment systems such as decentralized community treatment systems shall not be prohibited by this policy if they meet all applicable regulatory criteria.

This Policy references several geographic areas of the County, relative to the Countywide Future Land Use Map (FLUM) and with respect to areas served by, or planned for future service by, the Collier County Water-Sewer District. The Policy also allows and/or requires (depending on size) future developments within the County to be served by centralized potable water systems. As this Policy was updated to reflect creation of the FLUM’s Rural Fringe Mixed Use District (RFMUD) and Rural Lands Stewardship Area (RLSA) Overlay, this Policy remains relevant and *should be retained as written*.

This includes mapping changes and new map information derived from the private, or smaller, providers or districts.

Policy 2.3:

The Collier County Water and Wastewater Authority (Authority), established by County Ordinance Number 96-6, regulates the operations of private sector potable water treatment utilities that provide potable water supply services to portions of unincorporated Collier County. All such private sector potable water supply service providers are required to meet the County's adopted potable water treatment Level of Service (LOS). All private sector potable water supply service providers shall file an annual statement with the Authority that provides current operating information regarding the private sector service provider, including, but not limited to: a statement of current policies and service criteria, the LOS maintained by the service provider and whether such level of service meets the County's LOS Standard for potable water treatment. The annual report shall also document any necessary or projected facility expansion and/or replacement projects that are required to correct observed deficiencies.

This Policy requires, to the extent of County authority, private water utilities to report current operating information and proposed system expansions or modifications to the County, including a statement as to how the proposed activity is consistent with the County's Growth Management Plan. This Policy remains relevant and *should be retained as written.*

Policy 2.4:

Collier County shall permit development of potable water supply systems as follows: within the Designated Urban Areas of the Plan, including the outlying urban areas of Immokalee, Copeland, Chokoloskee, Plantation Island, and Port of the Islands; within the areas depicted on the Collier County Water District Boundaries map (Figure PW-1); within the Existing and Future Potable Water Service Areas map (Figure PW-2), which includes the Rural Transition Water and Sewer District; in Sending Lands within the Rural Fringe Mixed Use District when Density Blending, as provided for in the Density Rating System of the Future Land Use Element, is utilized; in Towns, Villages, Hamlets and Compact Rural Developments within the Rural Lands Stewardship Area Overlay; and, in areas where the County has legal commitments to provide facilities and services as of the date of adoption of this Plan. For lands located within the Collier County Water-Sewer District, but in which County water service is not currently available, non-County potable water supply systems shall only be allowed on an interim basis until County service is available.

Individual potable water supply wells may be permitted within the areas depicted on the Collier County Water District Boundaries map (Figure PW-1) on an interim basis until County water service is available; individual potable water supply wells may be permitted in all Urban designated areas outside of the areas depicted on Figure PW-1 on an interim basis until a centralized potable water supply system is available; individual potable water supply wells may be permitted in the Rural Transition Water and Sewer District, depicted on the Existing and Future Potable Water Service Areas map (Figure PW-2), on an interim basis until County water service is available; individual potable water supply wells may be permitted in Sending Lands within the Rural Fringe Mixed Use District when Density Blending, as provided for in the Density Rating System of the Future Land Use Element, is utilized, on an interim basis until County water service is available; and, individual potable water supply wells may be permitted on lands outside of the Urban designated areas, outside of areas depicted on Figure PW-1, and outside of Towns, Villages and those Compact Rural Developments greater than one hundred (100) acres in size within the Rural Lands Stewardship Area Overlay – all areas where potable water supply systems are not anticipated. However, individual potable water supply wells may

or may not be permitted within Compact Rural Developments one hundred (100) acres or less in size, depending upon the uses permitted within the Compact Rural Development. Also, in Towns, Villages, and those Compact Rural Developments greater than one hundred (100) acres in size, potable water supply wells are allowed to serve no more than 100 acres, on an interim basis only, until central service is available.

This Policy remains relevant and allows development of new or expanded potable water systems in certain portions of unincorporated Collier County. It also allows the use of individual water supply wells in areas where County or other central water supply service is unavailable. *This Policy should be revised to replace "until County water service is available" with a more inclusive statement, such as, "until a centralized potable water supply system service is available". This includes mapping changes and new map information derived from the private, or smaller, providers or districts.*

Policy 2.5:

The County shall continue enforcement of ordinances requiring connection of existing and new development to central potable water systems when they become available. Connections to a central system shall be made pursuant to Collier County Ordinance 01-73, adopted December 11, 2001.

This Policy calls for the County to continue enforcing mandatory connection to a central water supply system, when such is available. *This Policy should be revised to add "as amended" to the end of the last sentence.*

Policy 2.6:

Where Community Development Districts, or other similar special districts are established to provide a tool for developers to finance infrastructure or other purposes, wholly or partially within the Collier County Water-Sewer District, water service shall be connected to the regional system, and internal facilities shall be conveyed, when acceptable, to the Collier County Water-Sewer District for operation and ownership in accordance with Collier County Ordinance 01-57, adopted October 23, 2001, or its latest revision, and District construction and operating policies.

This Policy requires Community Development Districts, or other Special Districts to connect to County water facilities when such are available. *This Policy should be revised to replace "Ordinance 01-57, adopted October 23, 2001" with "Ordinance 04-31, adopted May 11, 2004".*

OBJECTIVE 3:

Pursuant to Chapter 163.3202, F.S., including any amendments thereto, Collier County has implemented procedures to ensure that at the time a development order is issued, potable water facility capacity that meets or exceeds the minimum Level of Service Standards established herein is available or will be available to serve the development under the guidelines established for concurrency in the Capital Improvement Element of this Plan.

Objective Achievement Analysis:

This Objective is the County's potable water concurrency provision. The Collier County Water-Sewer District achieves concurrency of its stated LOS standard. The disclosure of this achievement is reported within the periodic updates of the County's Water Master Plan. This Objective is being achieved and it *should be retained, essentially as written.* This Objective should be rephrased to

improve its formatting as an “objective”. Add the parenthetical “(LOS)” or “(LOSS)” to allow use of acronyms in subsequent Policies.

Policy Relevance:

There are four (4) policies within this Objective.

Policy 3.1:

The following Level of Service Standards are hereby adopted and shall be used as the basis for determining the availability of facility capacity and the demand generated by a development:

Review of the historical ratio of residential to non-residential demand indicated that approximately 17% of the total water usage is non-residential. Thus, the residential demand is 154 gpcd and the total finished water demand is 185 gpcd.

FACILITY CAPACITY

FACILITY/SERVICE AREA	LEVEL OF SERVICE STANDARD
Collier County Water-Sewer District	185 gpcd
Goodland Water District	185 gpcd
Marco Island Water District	
Marco Shores	185 gpcd
CITY OF NAPLES FACILITIES	
Unincorporated Service Area	185gpcd
EVERGLADES CITY FACILITIES	
Unincorporated Service Area	185 gpcd
INDEPENDENT DISTRICTS	
Orangetree Utilities	100gpcd
Immokalee Water and Sewer District	100gpcd
Florida Governmental Utilities Authority	100gpcd

This Policy remains relevant and lists the Level of Service (LOS) Standards for the various Collier County potable water utilities, both public and private. *This Policy should be revised to delete the second paragraph and update the Level of Service Standards, as the Collier County Water-Sewer District is now 170 gpcd. The Policy should be revised to indicate the LOS standard for Ave Maria Water and Wastewater facilities, which are inside the County.*

The LOSS for wastewater treatment appearing in Policy 3.1 above is one of two locations within this GMP where these standards are shown. The other location is Policy 1.5; subsection “D” in the Capital Improvement Element. This dualism may be a simple matter of unnecessary redundancy, except that the two Policies are not the same. These differences should be reconciled and a single location selected for these LOSS to appear. If it is decided to show the LOSS in both locations, then the CIE could be formatted to provide the LOS Standards, while the Sub-Element entries could elaborate on the figures. This Policy will remain relevant in its reconciled format.

Policy 3.2:

In order to ensure that the Level of Service Standards contained in Policy 3.1 are maintained, methodologies for determining available capacity and demand shall incorporate appropriate peak demand coefficients for each facility and for the type of development proposed.

This Policy remains relevant and requires that public and private utility methodologies for determining available capacity and demand must incorporate appropriate peak demand coefficients for each facility and for the type of development proposed. *This Policy should be retained essentially as written. This Policy may be revised to abbreviate “Level of Service” to “LOS”.*

Policy 3.3:

The Level of Service Standards contained in Policy 3.1 are the minimum criteria for replacement, expansion or increase in capacity of potable water supply facilities.

This Policy remains relevant and states that the LOS Standards contained in Policy 1.3.1 “are the minimum criteria for replacement, expansion or increase in capacity of potable water supply facilities.” *This Policy should be retained as written. This Policy may be revised to abbreviate “Level of Service” to “LOS”.*

Policy 3.4:

The County will annually review historical potable water demand records and adjust the Level of Service Standards contained in Policy 3.1 if so indicated by the annual review.

This Policy remains relevant and requires an annual review of potable water demand records, with adjustment of the LOS Standards, as necessary, based upon the findings of the annual review. *This Policy should be revised to replace “County” with “Collier County Water and Wastewater Authority”, and add a second sentence, such as the following: “The Collier County Water-Sewer District shall review historical potable water demand records during Collier County Wastewater Master Plan updates and adjust the LOS standards, as referenced in Policy 3.1, if needed.” and retained as rewritten. This Policy may be revised to abbreviate “Level of Service” to “LOS”.*

OBJECTIVE 4:

The County shall continue to promote conservation of potable water supplies by developing and implementing an integrated, comprehensive conservation strategy which will identify specific consumption per capita goals.

Objective Achievement Analysis:

This Objective commits the County to the implementation of an ongoing water conservation program. This Objective is being achieved and as such, it *should be retained, essentially as written.* This Objective should be rephrased to improve its formatting as an “objective”.

Policy Relevance:

There are currently seven (7) policies within this Objective. The Objective and policies are similar to Objective 4 and its policies within the Sanitary Sewer Sub-Element (refer to the Sanitary Sewer Section of this Report).

Policy 4.1:

The County shall negotiate agreements with area golf courses to accept and use treated wastewater effluent for irrigation when and where such treated effluent is available from existing and future wastewater treatment plants.

This Policy remains relevant and requires the County to negotiate with area golf courses toward having these land uses accept treated wastewater as an irrigation source. A similar Policy also occurs in the Sanitary Sewer Sub-Element (refer to the Sanitary Sewer Section of this Report). *This Policy should be retained as written.*

Policy 4.2:

The County shall continue to connect existing and future publicly owned lands suitable for irrigation with treated wastewater effluent, such as government building grounds, parks, and highway medians when economically feasible.

This Policy remains relevant and calls for publicly owned lands to be connected to treated-effluent irrigation systems when economically feasible. *This Policy should be retained as written.*

Policy 4.3:

The County shall continue to connect existing and future privately owned lands suitable for irrigation with treated wastewater effluent, such as cemeteries, nurseries and commercial/industrial parks when economically feasible.

This Policy remains relevant and calls for suitable private lands to be connected to treated-effluent irrigation systems when economically feasible. *This Policy should be retained as written.*

Policy 4.4:

At such time as a source of treated effluent becomes available, the County shall permit the construction and connection of dual water systems (i.e., separate potable water and treated wastewater effluent networks) to the County's treated effluent irrigation system in new subdivisions, provided that said connection causes no adverse impact to the potable water system.

This Policy remains relevant and requires the County to promote the use of dual water systems so as to reduce irrigation potable water requirements. *This Policy should be retained as written.*

Policy 4.5:

Where Community Development Districts, or other similar special districts are established to provide a tool for developers to finance infrastructure or other purposes, wholly or partially within the Collier County Water-Sewer District, and where such districts make provisions for irrigation via dual systems utilizing effluent and/or other irrigation sources, said systems shall be connected to the regional system when available, and all internal irrigation systems shall remain in private ownership and be master metered by the County.

This Policy requires Community Development Districts, or other special infrastructure districts, to connect to the County Utility System when they irrigate using dual systems and are located within the Collier County Water-Sewer District Service Area. *This Policy remains relevant and should be retained as written.* SHOULD THIS POLICY PROVIDE A SPECIFIC ORDINANCE CITE?

Policy 4.6:

The County shall promote the use of xeriscape techniques (landscaping method that emphasizes water conservation in its use of drought resistant landscaping plants) to minimize potable water use for landscape irrigation.

This Policy remains relevant and requires the County to promote xeriscaping as part of its conservation program with regard to irrigation reduction. *This Policy should be retained as written.*

Policy 4.7:

The County shall seek to expand the availability of irrigation water from supplemental sources through connection of such sources to the County's reclaimed water system.

This Policy remains relevant and *should be retained.*

OBJECTIVE 5:

The County shall discourage urban sprawl and the proliferation of private sector potable water service suppliers in an effort to maximize the use of existing public facilities through the development order approval process by implementing the following policies.

Objective Achievement Analysis:

This Objective seeks to discourage urban sprawl through maximization of existing public water supply utilities. Further, the Objective states that this action will be achieved through the local development review process. The Public Utilities Engineering Department coordinates with the Zoning & Land Development Review Department in the review of development order applications to ensure that the requirements of this Objective are met. This Objective is being achieved and his Objective *should be retained, essentially as written.* This Objective should be rephrased to improve its formatting as an "objective".

Consideration should be given to revisions that recognize the importance of reducing GHG emissions in furtherance of HB 697.

Policy Relevance:

There are four (4) policies within this Objective.

Policy 5.1:

The County shall discourage urban sprawl by permitting universal availability of central potable water systems only: in the Designated Urban Area, in Receiving and certain Neutral Lands within the Rural Fringe Mixed Use District, in the Designated Urban-Rural Fringe Transition Zone Overlay, and in the Rural Settlement District, all of which are depicted on the Future Land Use Map, and in Towns, Villages, Hamlets and Compact Rural Developments within the Rural Lands Stewardship Area Overlay. These areas are further identified as: within the Collier County Water District Boundaries on Figure PW-1 of the Potable Water Sub-element, except the outlying urban areas of Immokalee, Copeland, Chokoloskee, Plantation Island, and Port of the Islands; or within the Rural Transition Water and Sewer District Boundaries on Figure PW-2 of the Potable Water Sub-element; or in Sending Lands within the Rural Fringe Mixed Use District when Density Blending, as provided for in the Density Rating System of the Future Land Use Element, is utilized; within the Rural Lands Stewardship Area Overlay, as each Town, Village, Hamlet, and Compact Rural Development is designated; and, in areas

where the County has legal commitments to provide facilities and service outside the Urban Area as of the date of adoption of this Plan.

This Policy remains relevant and states that “universal availability of central potable water systems” will only be permitted in certain specific areas of the County. This Policy is a restatement of Policy 2.2, but with an emphasis on limiting urban sprawl. *This Policy remains relevant and should be retained.* Check the validity of references such as those to “Figure PW-2” as a number of map and figure changes are also recommended.

Consideration should be given to revisions that recognize the importance of reducing GHG emissions in furtherance of HB 697.

Policy 5.2:

The County shall discourage urban sprawl and the proliferation of private sector and/or package potable water treatment systems through the development order approval process to ensure maximum utilization of the existing and planned public facilities. No existing private sector or potable water treatment systems shall be permitted to add customers unless all Levels of Service Standards are met, and operations are in conformance with all FDEP permits.

This Policy remains relevant and seeks to limit the ability of private or public utilities to add customers. No existing private sector or potable water treatment systems will be permitted to add customers unless all Levels of Service Standards are met, and operations are in conformance with all FDEP permits. *This Policy should be retained as written.*

Consideration should be given to revisions that recognize the importance of reducing GHG emissions in furtherance of HB 697.

Policy 5.3:

As provided for in the Rural Lands Stewardship Area Overlay, and in Policies 2.2 and 2.4 of this Sub-Element, central potable water systems are permitted in Towns, Villages, Hamlets, and Compact Rural Developments. Though not anticipated, it is possible that central potable water system distribution lines may extend through lands not designated as a Town, Village, Hamlet or Compact Rural Development; in such instance no properties designated other than as a Town, Village, Hamlet or Compact Rural Development are permitted to connect to these distribution lines.

This Policy contains the conditions for connection of development within the RLSA to a central water system. Specifically, the Policy states that “no properties designated other than as a Town, Village, Hamlet or Compact Rural Development” are permitted to connect to central potable water distribution lines. This Policy remains relevant and *should be retained.*

Policy 5.4:

Under criteria, projects may be eligible for central potable water service from Collier County Utilities, or a private sector/independent district, within the Rural Transition Water and Sewer District, depicted on the Existing and Future Potable Water Service Areas map (Figure PW-2) of this Potable Water Sub-element, subject to availability. Qualifying criteria shall be limited to the requirements and incentives established in the Future Land Use Element and Conservation and Coastal Management Elements of this Plan to obtain preservation standards established for environmentally sensitive lands in the Sending Lands of the Rural Fringe Mixed Use District (RFMUD). Criteria for potable water service eligibility may include, but are not limited to, plans for development, which utilize creative planning techniques such as clustering,

density blending, rural villages, and transfer of development rights (TDRs) from RFMUD Sending Lands. Criteria for eligibility may be amended and additional Sending and Receiving Lands may be designated in the future. Central Potable Water distribution lines, within the Rural Transition Water and Sewer District, may extend through Sending Lands; however, no properties designated as Sending Lands are permitted to connect to the distribution lines.

This Policy creates the Rural Transition Water & Sewer District. This District corresponds to the County's Rural Fringe Mixed Use District. This Policy remains relevant and *should be retained*.

INTRODUCE A NEW OBJECTIVE AND POLICY FOLLOWING FROM THE 2009 ADOPTIONS OF HB 697 AND COUNTY ENERGY AUDIT.

OBJECTIVE PWSE:

Reduce Greenhouse Gas (GHG) emissions by developing programs to reduce energy use at County potable water facilities and by County potable water operations, and through community oriented programs helping residents reduce their energy use.

Policy PWSE.1:

The County will strive to meet the recommendations of the Energy Audit and Greenhouse Gas Inventory for Collier County governmental facilities and operations, prepared by Twentyfifty, LLC and adopted by the Board of Commissioners in July 2009.

[Public Comment from March 15, 2010 EAR Public Meeting – Suggesting the County should study ideas to target GHG sources – beside transportation, to address a lack of energy efficient plans, to address the need to plan for sea level rise.]

C. Attached Documents Analysis:

PW-1.1 Collier County Water District Boundaries

This map has the same title as Figure PW-1 and is wrong. This map, and references to it in Policies, should be deleted.

PW-1.2 Existing and Future Potable Water Service Areas

This map has the same title as Figure PW-2 and is wrong. This map, and references to it in Policies, should be deleted.

Table PW-8 Capital Improvement Projects FY 2003-2022

This table is not referenced in any Objective or Policy and is specific to the Collier County Water-Sewer District. For those reasons, this table should be deleted.

Figure PW-1 Collier County Water District Boundaries

This map is referenced in multiple Policies and is wrong. The references to this map should be changed to reference “Existing and Future Potable Water Service Areas” since the District Boundaries are included.

Figure PW-2 Existing and Future Potable Water Service Areas

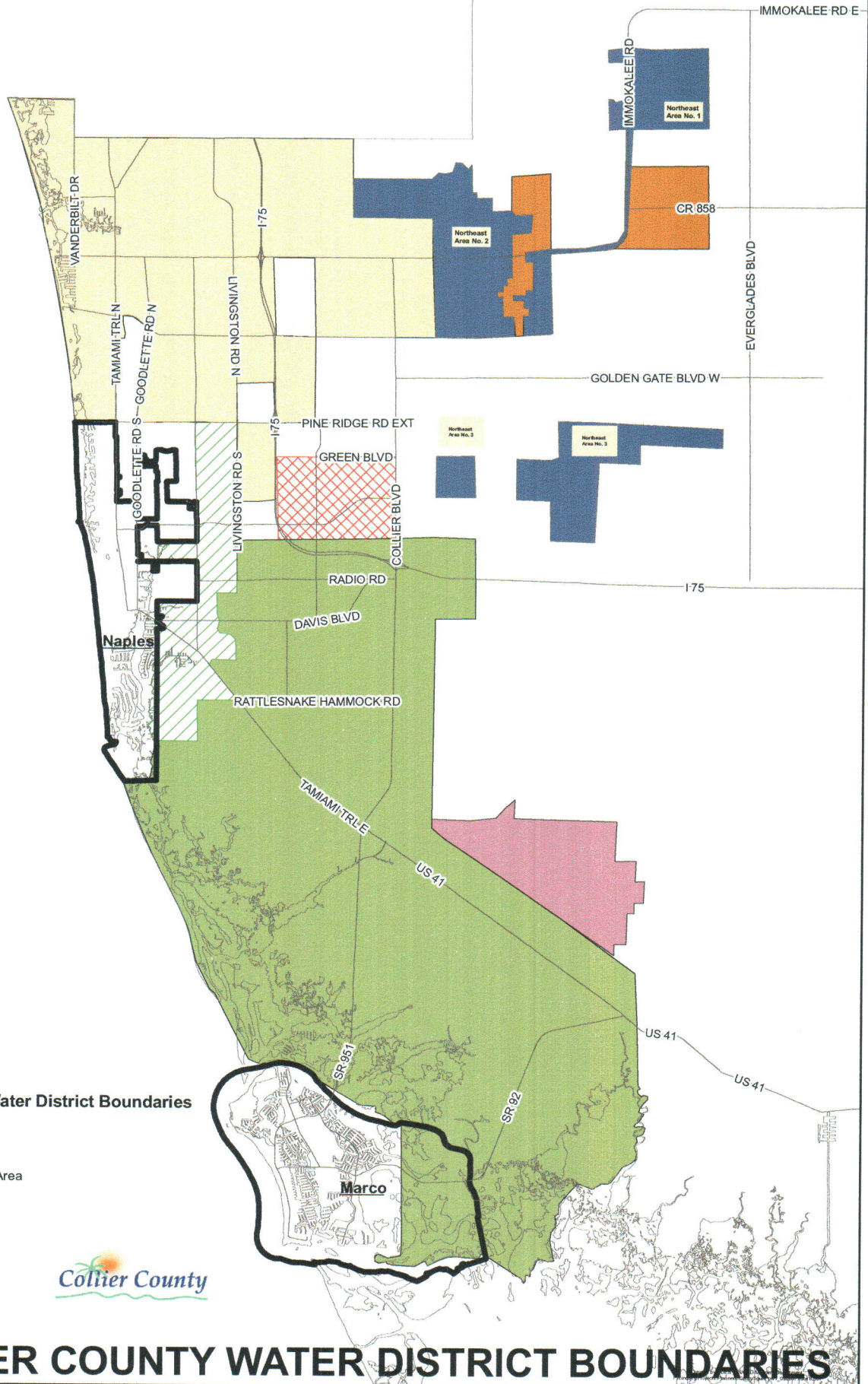
This map is referenced in the same Policies as Figure PW-1 and should also be updated to the 2008 Water Master Plan Figure 1-1 (attached). Recommend similar maps be added for other Water Systems overseen by the Collier County Water and Wastewater Authority.

Figure PW-3 Potable Water Treatment and Transmission Facilities

This map is not referenced in any Objective or Policy and should be deleted.

Look for the “Attached Document Analysis” items above to appear in the Capital Improvement Element as cross references, and revise or delete in manners similarly with above instructions








FIGURE PW-1.1



Legend

Collier County Water District Boundaries

Entity

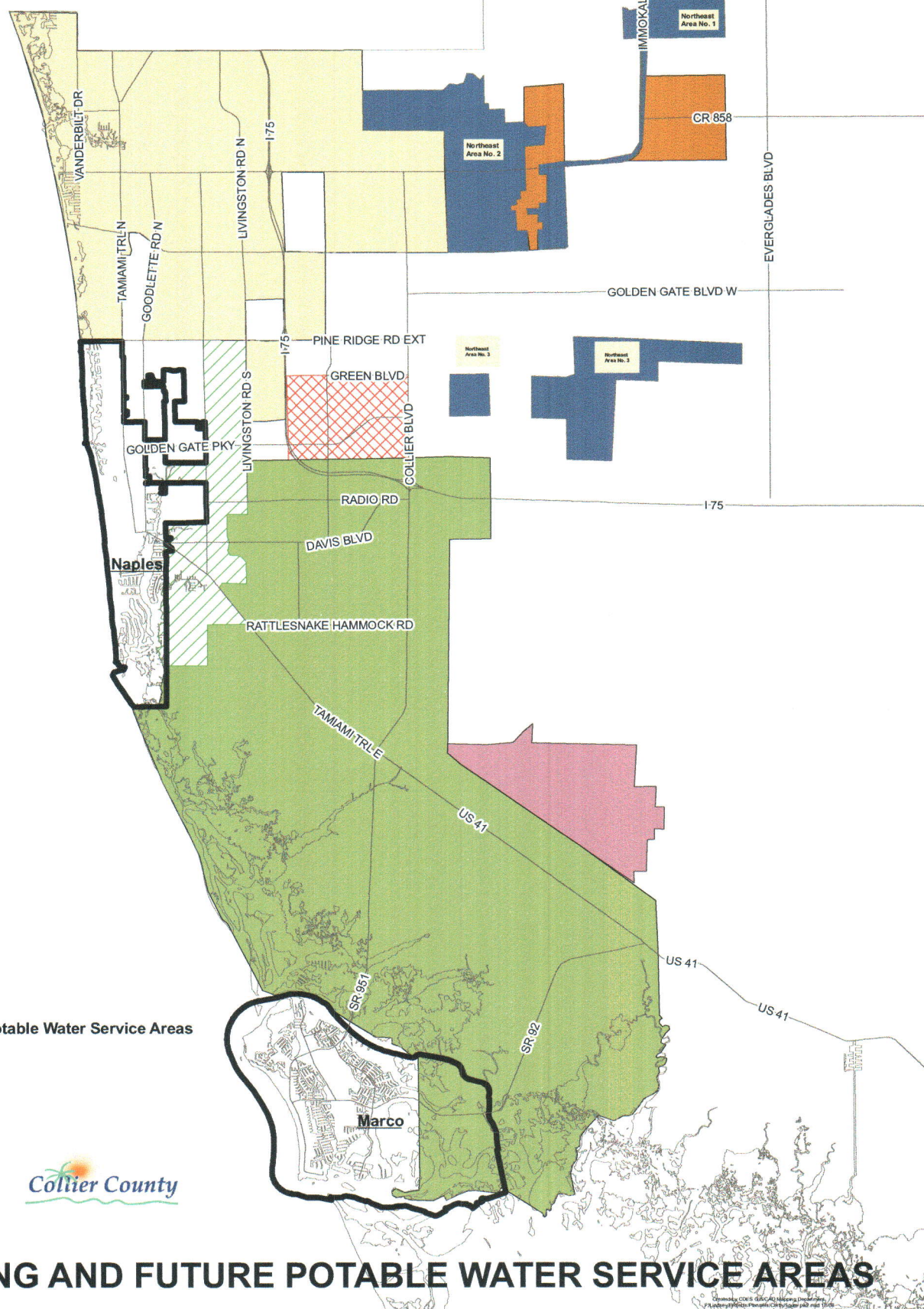
-  City of Naples
-  FGCU Service Area
-  North Area
-  Northeast Area
-  Orange Tree
-  South Area
-  Southeast Area



COLLIER COUNTY WATER DISTRICT BOUNDARIES

FIGURE PW-2.1

IMMOKALEE RD E



Legend

Existing and Future Potable Water Service Areas

- Entity**
- City of Naples
 - FGCU Service Area
 - North Area
 - Northeast Area
 - Orange Tree
 - South Area
 - Southeast Area



EXISTING AND FUTURE POTABLE WATER SERVICE AREAS

TABLE PW-8

**CAPITAL IMPROVEMENT PROJECTS FY 2003-2022
PROJECT DESCRIPTIONS
WATER TREATMENT, TRANSMISSION AND DISTRIBUTION**

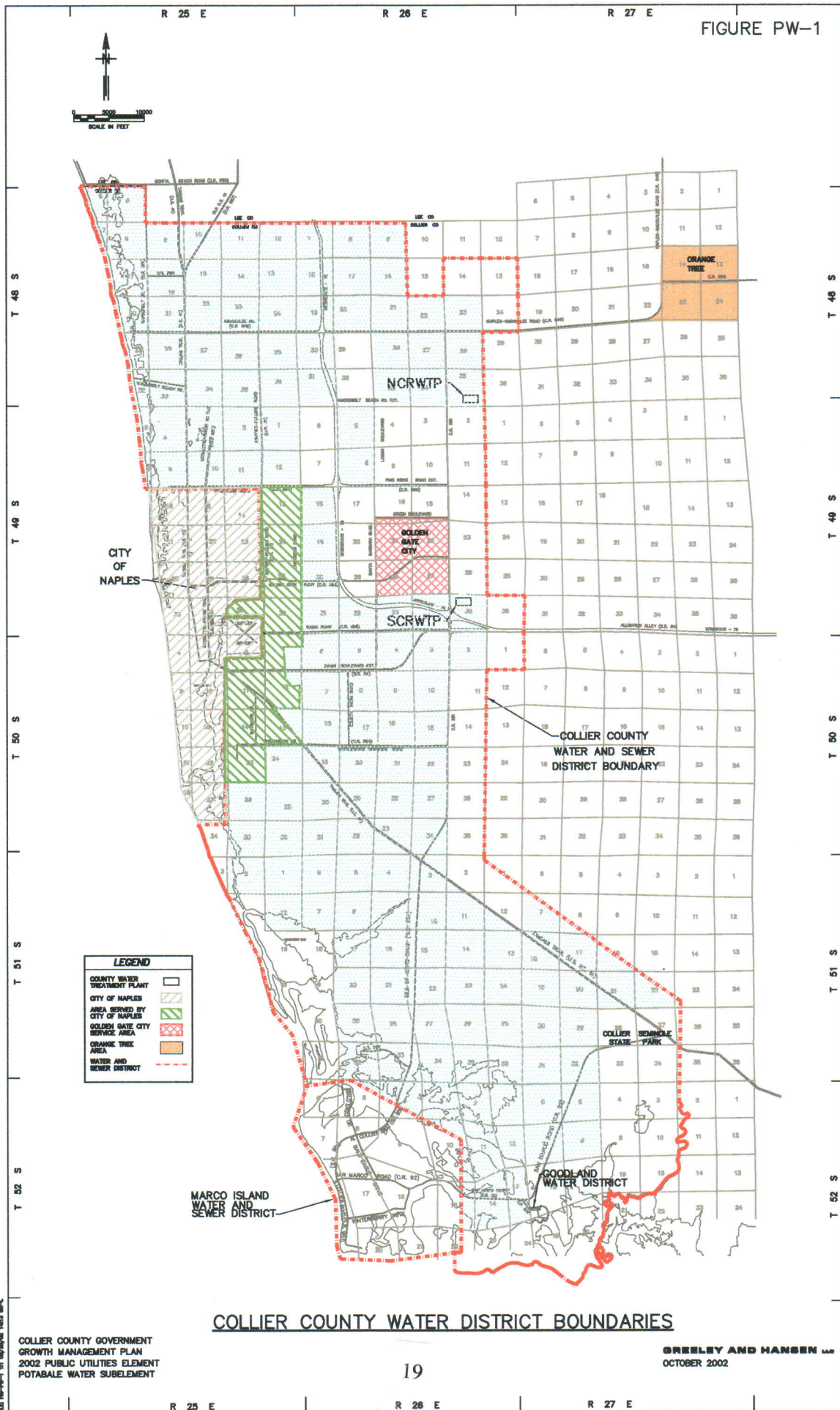
Greeley and Hansen LLP
October 2002

Fund/Type (A)	Project No.	Project Name	Description
		Existing Water 411 (Growth Related) Projects	
411/GD	70040	City/County Interconnect	Construct interconnections east of intersection of Goodlette-Frank and Pine Ridge and east of intersection of Lakewood Blvd. And Davis Blvd. Project will make provisions for the interconnection of City and County water systems in the event of an emergency.
411/GD	70052	Manatee Station Pump Upgrade	Upsize pumps and upgrade instrumentation and control of the Water Storage Facility on Manatee Road to meet growth.
411/GD	70054	SCRWTP 8 MGD RO Plant and 12MGD Expansion	New 8-MGD RO Expansion at 12-MGD lime softening SCRWTP. RO system, storage tank, 12 new water supply wells and pumps, 2 deep injection wells, raw water pipe lines, new SCADA system, O&M manuals, water blending system, emergency generators and chemical storage system. RO Plant will be expandable to 20-MGD.
411/GD	70075	NCRWTP 3 Additional Brackish Water Supply Wells	Add three new R.O. wells
411/GD	70093	Immokalee Road East 36" WTM	Phase 1- Design and construct a 36" water main along Immokalee Road from CR 951 to Orangetree. Phase 1 is to be constructed with the road construction project. Phase 2 is design and construction of a 36" water main from Immokalee Road to the proposed NE WTP.
411/GD	70096	Water Master Plan Updates	Annual Update of Water Master Plan.
411/GD	70097	SCRWTP 12 MGD RO Expansion	Design and construction of 12-MGD reverse osmosis expansion at SCRWTP
411/GD	70099	Growth Management Plan Update	Update water subelement of Growth Management Plan every five years.
411/GD	70140	East Central WTM	Design and construction of East Central water transmission main.
411/GD	70150	Vanderbilt Beach Road Parallel Water Main	Design and construction of a parallel water transmission main from Airport Road to CR 951
411/GD	70151	CR 951 WTM-Davis Blvd to Rattlesnake Hammock	Design and construction of a 36" water transmission main along CR 951 from Davis Boulevard to Rattlesnake Hammock Road
411/GD	70152	CR 951 WTM-Rattlesnake Hammock to US 41	Design and construction of a 24" water transmission main along CR 951 from Rattlesnake Hammock Road to US 41
411/GD	70153	US 41 WTM- South from CR951	Design and construction of a 16" water main along US 41 from CR 951 to Manatee Road
411/GD	70154	Land Acquisition for NERWTP (Orange Tree)	Purchase 147 ac site at Orange Tree for site of WTP and WRF.
411/GD	70155	Land Acquisition for SERWTP	Purchase additional property adjacent to existing Manatee Road Pumping Station property for new WTP.
411/GD	70156	Vanderbilt Drive Booster PS	Design and Construction for Vanderbilt Drive Booster PS
411/GD	70157	Manatee Road Potable Water ASR Wells	Design and construction of expansion of the ASR system at the Manatee Road site.
411/GD	70862	US 41 WM - Manatee to Boyne South	Construction of water main along US 41 from Manatee to Boyne South,
411/GD	70888	Livingston Road Water Main from Pine Ridge Road to Vanderbilt Beach Road	Construct a 16" WM along Livingston Road from Pine Ridge Road to Vanderbilt Beach Road concurrent with Road project.
411/GD	70891	Livingston Immokalee-Vanderbilt	Construct 16" WM along Livingston Road from Vanderbilt Beach Road to Immokalee Road concurrent with Road project.
411/GD	70892	SCRWTP 20MGD Expansion Well Easement Study	Future well study and easement acquisition
411/GD	00000	Remote Disinfection Booster	Study, design and construction of remote disinfection booster stations.
		New Water 411 Projects	
411/GD	W5	Vanderbilt Drive Water Booster Station	Design and construct new water booster pumping station.
411/GD	W13	NERWTP	Study, design and construction of new 3.0 mgd WTP (expandable to 15 mgd) to replace existing Orange Tree plant and serve potential new customers in Areas A and B.
411/GD	W14	SERWTP	Study, design and construction of new 3.0 mgd WTP (expandable to 15 mgd) to serve potential new customers in south area and Area D.
411/GD	W17	Rattlesnake Hammock 8"/12" WTM Upgrade	Design and construct a 24" WM between CR 951 to US 41 along Rattlesnake Hammock Rd.
411/GD	W29	New Wellfield Study for Proposed NERWTP	Evaluate potential wellfield locations and address permitting issues
411/GD	W30	New Wellfield Study for Proposed SERWTP	Evaluate potential wellfield locations and address permitting issues
411/GD	W31	Land Acquisition for NERWTP Wellfield	Purchase property for NERWTP wellfield following wellfield study
411/GD	W32	Land Acquisition for SERWTP Wellfield	Purchase property for SERWTP wellfield following wellfield study
		Existing Water 412 (Renewal and Replacement) Projects	
412/R,R&E	70027	Clean water Act RM Study	EPA mandated study for chlorine and Ammonia storage accidental air release implications and development of program to minimize risk of accidental air release.
412/R,R&E	70028	Goodlette Rd Water Main	Goodlette-Frank Road four laning improvements (Jct. Pine Ridge Rd. to Jct. Vanderbilt Beach Rd) Relocate 12,500 LF of 24" WM plus relocate City/County Interconnect at Pine Ridge Rd. as part of the road widening project 80134.
412/R,R&E	70033	Water System Mapping	Create a set of System maps for the Water and Wastewater Depts. To be utilized for location of all facilities. Additionally the maps will be utilized by the PUEd Section in planning for future expansion of our System to keep up with anticipated growth.
412/R,R&E	70045	FDOT Joint Project	Contingency fund for relocation of water mains for FDOT projects at various locations. US 41 to Lee County Line; Airport Rd. to Rattlesnake Hammock Rd.; Rattlesnake Hammock Rd. to CR 95; and any other FDOT projects requiring relocations.
412/R,R&E	70047	Relocate 20"/12" Water Main US 41	Relocate water mains for FDOT construction. Poor record drawings and unforeseen conditions delayed contractor & required additional work by additional crews. Additional inspector is required for additional crews. The portion of the County deposit that was previously refunded by FDOT will be redeposited to cover the additional work.
412/R,R&E	70048	Relocate 12" Water Main US41	Relocate water mains for FDOT construction. Poor record drawings and unforeseen conditions delayed contractor & required additional work by additional crews. Additional inspector is required for additional crews. The portion of the County deposit that was previously refunded by FDOT will be redeposited to cover the additional work.
412/R,R&E	70053	County Barn Road Water Main Relocate	Rattlesnake Hammock Rd. to Davis Blvd., Relocation of water mains for County Barn Rd. widening. Rd. project currently scheduled for FY 2007.
412/R,R&E	70057	Facility Rehabilitation	Rehabilitate various components of the NCRWTP, SCRWTP, wellfield and remote stations.

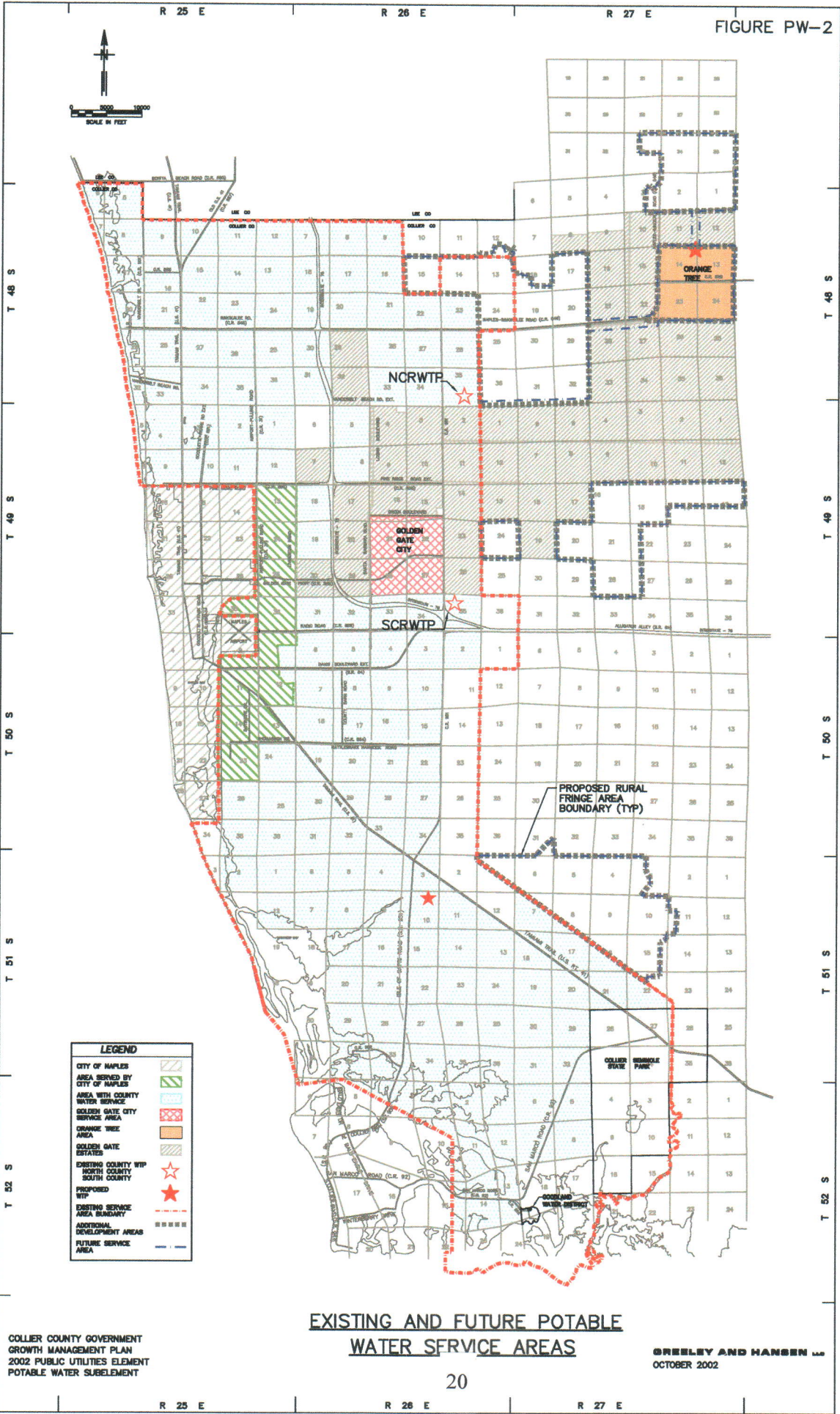
TABLE PW-8

Fund/Type (A)	Project No.	Project Name	Description
412/R,R&E	70058	Distribution System Rehabilitation	Rehabilitate older areas of the Collier County Water District to ensure a clean and reliable source of water for all customers. Additionally, there are several areas within the Distribution System where adequate fire flow is not available due to the size of the mains in these areas. This project will correct those deficiencies, as well as rehabilitate a number of older meters in the System that have become unavailable.
412/R,R&E	70059	Public Utilities Operations Center	Relocate the Water Distribution Warehouse from a residential neighborhood. The present site was constructed as a temporary facility to house a maximum of 15 employees. The current staff is now 38, with growth anticipated to 50 employees within the next five years. Additionally, the warehouse is incompatible with the surrounding neighborhood. This facility will house the Water Distribution Facility, Water Administration and Public Works Administration.
412/R,R&E	70063	NCWTP Noise Abatement	Perform a noise study consisting of noise readings at seven homesites in close proximity to the plant site at various operating modes.
412/R,R&E	70065	NCWTP Manatee & Carica Chlorine Gas Conversion	Convert the existing chlorine gas facilities at the NCRWTP Manatee Road Tans and Carica Tanks to Liquid Bleach.
412/R,R&E	70066	Golden Gate Wellfield Improvement	Improve reliability of GG Wellfield by adding 5 backup wells to the existing 27 wells and approximately 3,000 LF of raw water transmission main. Also, secure additional easements adjacent to the 27 existing wells in the event the existing well needs to be abandoned and replaced.
412/R,R&E	70067	Golden Gate Blvd 10" Water Main	Relocate 10" water main on Golden Gate Blvd. From under proposed pavement.
412/R,R&E	70069	Upgrade NCWTP Emergency Power Distribution	New electrical distribution feed and switchgear upgrades to allow full plant operation from two existing emergency generators, with the remaining two generators for back-up redundancy.
412/R,R&E	70071	CCDOT Utility Relocates	Funds are for relocating utilities as may be needed given accelerated county road construction schedule.
412/R,R&E	70074	Port Au Prince Water/Sewer Improvements	Replace existing water distribution system concurrent with project to replace sub-standard wastewater collection system serving 4 streets off of Port au Prince Road.
412/R,R&E	70075	NCRWTP Brackish Supply Water Wells	Design and Construction of new brackish water supply wells for the NCRWTP
412/R,R&E	70076	Auto Meter Read Installation	Installation of system-wide automatic meter reading facilities.
412/R,R&E	70078	Special Assessment Software	Replace outdated software for Special Assessments.
412/R,R&E	70090	Master PS Fuel Storage	Add capacity for 10 days fuel storage at raw water master pump station
412/R,R&E	70094	NCRWTP Improvements	Design and construction of process improvements at the NCRWTP
412/R,R&E	70095	2003 Facility Rehabilitation	Rehabilitate various components of the NCRWTP, SCRWTP, wellfield and remote stations.
412/R,R&E	70098	2003 Distribution System Rehabilitation	Rehabilitate older areas of the Collier County Water District to ensure a clean and reliable source of water for all customers. Additionally, there are several areas within the Distribution System where adequate fire flow is not available due to the size of the mains in these areas. This project will correct those deficiencies, as well as rehabilitate a number of older meters in the System that have become unavailable.
412/R,R&E	70100	NCRWTP ASR Conversion	NCRWTP ASR Conversion
412/R,R&E	70124	Water Distribution Telemetry	Multi-year program to add telemetry system-wide.
412/R,R&E	70127	Crystal Lake FM Relocation	Relocate aerial crossing
412/R,R&E	70128	County Utility Standards	Update County utility standards
412/R,R&E	70158	Lower Tamiami Well Replacement Program	Replace one well per year to increase system reliability.
412/R,R&E	70170	Vulnerability Assessment Study	Perform a vulnerability assessment study for the water system
412/R,R&E	70202	2003 Utility Standards	2003 Update to County utility standards
412/R,R&E	70300	Immok. Rd.-US41-I75 Relocate	Design and construction for relocation of existing water main on Immokalee road from US 41 to I75
412/R,R&E	70301	VBR - Airport/CR951 Relocate	Design and construction for relocation of existing water main on Vanderbilt Beach Road from Airport Road to CR 951
412/R,R&E	70302	CR951 - GGP to Immok. Rd. Relocate	Design and construction for relocation of existing water main on CR 951 from Golden Gate Parkway to Immokalee Road.
412/R,R&E	70303	Golden Gate Parkway - Airport Rd. to SBB relocate	Design and construction for relocation of existing water main on Golden Gate Parkway from Airport Rd to Santa Barbara Blvd.
412/R,R&E	70306	Rattlesnake Hammock Rd. - Polly to CR951 relocate	Design and construction for relocation of existing water main on Rattlesnake Hammock Rd from Polly to CR951
412/R,R&E	70881	BackFlow / Cross-connection	Perform air services in the Collier County Water District to meet DCF mandated cross connection control levels. This is a five year project, with the bulk of the funds being expended in the first three years of the project.
412/R,R&E	70882	Billing System	Update the Billing System software currently utilized by the Dept. of Revenue for water and wastewater accounts. The current software does not have report writing or generation capabilities. Additionally, the software is outdated for the number of customers that Collier County has and will continue to gain.
		New Water 412 Projects	
412/R,R&E	W8	NCRWTP RO Membrane Replacement	Replacement required every six years.
412/R,R&E	W9	NCRWTP Nanofilter Replacement	Replacement required every six years.
412/R,R&E	W10	SCRWTP Membrane Replacement	Replacement required every six years.
412/R,R&E	2002-1	As needed consulting services	As needed engineering consulting services
412/R,R&E	2002-2	NCRWTP Saltwater Feasibility	Study to determine feasibility of treating saltwater at existing and new plants
412/R,R&E	2002-3	Auto Ranch Road MSBU	Auto Ranch Road MSBU
412/R,R&E	2002-4	Asset Management	Perform Asset Management Study
412/R,R&E	2002-5	SCRWTP Lime Softening New Fourth Reactor	Study, design and construction of new fourth lime softening reactor for reliability
412/R,R&E	W33	NERWTP RO Membrane Replacement	Replacement required every six years.
412/R,R&E	W34	SERWTP RO Membrane Replacement	Replacement required every six years.

- 411/GD = Growth Driven (Funded by Impact Fee)
- 412/R,R&E = Renewal, Replacement & Enhancement (Funded by User Fee)



COLLIER COUNTY WATER DISTRICT BOUNDARIES



LEGEND

CITY OF MAPLES	[Hatched pattern]
AREA SERVED BY CITY OF MAPLES	[Hatched pattern]
AREA WITH COUNTY WATER SERVICE	[Dotted pattern]
GOLDEN GATE CITY SERVICE AREA	[Cross-hatched pattern]
ORANGE TREE AREA	[Solid orange fill]
GOLDEN GATE ESTATES	[Diagonal hatched pattern]
EXISTING COUNTY WTP NORTH COUNTY SOUTH COUNTY	[Red star symbol]
PROPOSED WTP	[Red star symbol]
EXISTING SERVICE AREA BOUNDARY	[Dashed line]
ADDITIONAL DEVELOPMENT AREAS	[Dotted line]
FUTURE SERVICE AREA	[Dashed line]

EXISTING AND FUTURE POTABLE WATER SERVICE AREAS

BREELEY AND HANSEN, LLC
OCTOBER 2002

FILED 10/10/02 10:51 AM 2002