Special Publication SJ96-SP6

Water Supply Needs and Sources Assessment
Alternative Water Supply Strategies Investigation
Systems Interconnection Methodology

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EXECUTIVE SUMMARY

The purpose of Task B.1 Methodology Development is to produce a methodology for collection, development, presentation, and utilization of information concerning public water supply systems' facilities and wastewater systems' facilities in an effort to investigate potential alternative water supply strategies relative to systems interconnection. Resource utilization and its respective costs can then be optimized.

To plan for the potential interconnection of water system or reuse system facilities, a considerable amount of information needs to be obtained. An outline of information requirements pertinent to the scope of services has been identified. Generally, the outline serves as a guide in gauging the amount of information to be collected.

LAW has received and reviewed relevant information submitted by St. Johns River Water Management District (SJRWMD). SJRWMD provided appropriate GIS files and other information from their library for the methodology of the initial task, Public Water Supply and Wastewater Facility Information. In addition, two surveys have been conducted by SJRWMD involving the collection of information from wastewater systems' and public water supply systems' facilities.

After comparing the data currently obtained to the information requirements, LAW has determined that supplementary data needs to be collected. To obtain additional data, systems information will be collected from public water supply utilities and wastewater utilities through the completion of a questionnaire followed by a personal interview (if necessary) with the utilities selected.

In addition, component cost information will be collected from the responses in the questionnaires as well as from supplemental reference sources for the proposed methodology of Task B.1.b (2) Public Water Supply and Wastewater Facility Component Cost Information. This information will be presented in tabular form as capital costs and operation costs for various major supply and treatment facility components. Preliminary Cost Summaries will be utilized to present the capital and operational cost of a potential interconnection system project. A matrix will be developed listing the potential projects by cost.

The proposed methodology developed for Task B.1.b (3), Utilizing Information for Assessing Feasibility, is addressed by developing a screening criteria for potential interconnections. This will be

accomplished through an Evaluation Matrix which contains six engineering/socio-economic criteria and cost criteria relevant to potential interconnections. By ranking the interconnection, the Evaluation Matrix aides in identifying those potential interconnection projects that are viable and can be evaluated with other alternative water supply strategies in meeting the needs of the future.

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INTRODUCTION

The purpose of Task B.1 Methodology Development is to develop a detailed methodology for:

(1) Collection and presentation of information concerning public water supply systems' facilities and wastewater systems' facilities.

(2) Development and presentation of preliminary cost information relative to significant components of the public water supply systems' facilities and wastewater systems' facilities.

(3) Utilizing the referenced information for the purpose of assessing the technical feasibility of interconnecting public water supply systems and wastewater systems and the costs associated with these interconnections.

The developed methodology considers the variations in the amount of information to be collected from each water and wastewater utility as well as provides for information to be input into the SJRWMD's GIS system. Also the methodology provides guidelines for the use of the developed cost information for the purpose of calculating capital and operation costs related to the public water supply systems and wastewater systems.

SJRWMD developed a water supply needs and sources assessment (Vergara 1994) for SJRWMD's 19 county area. This analysis identified the water resource needs for potable, agricultural, recreational, and other uses through the year 2010. It also identified proposed sources of supply and areas associated with unacceptable impacts that may be caused by implementing current water supply plans for 2010 water use. These areas, called water resource caution areas, include all or portions of Volusia, Brevard, Orange, Seminole, Osceola, Lake, St. Johns, Putnam, and Flagler counties.

To plan for future water supply in SJRWMD and to prevent projected unacceptable impacts, SJRWMD has identified seven alternative water supply strategies for investigation. These strategies are:

- Surface Water Supply Source Development
- Artificial Recharge
- System Interconnection
- Development of "Lower" Quality Water Sources
- Aquifer Storage and Recovery

- Water Conservation and Reuse of Reclaimed Wastewater and Stormwater
- Mitigation of the Impact of Ground Water Withdrawal

This methodology relates to a water resource strategy of potential interconnections of water supply and wastewater facilities in and around the water resource caution area. The interconnection strategy not only considers the development of proposed new facilities, but the optimal use of the resource with existing and proposed facilities and the cost of this effort.

The development and implementation of an interconnection strategy offers a number of advantages in meeting the water resource needs of the future. A number of the potential benefits of an interconnection strategy are listed below.

- Existing excess withdrawal and treatment facility capacities can be used to their fullest advantage while local redundancy requirements are reduced.

- Sharing of facility capacity development results in the apportionment of costs and benefits through improved economies of scale.

- Provides for an increased emergency response capability while supplementing source availability.

- Allows for the phasing of the interconnection of systems with utility plans to offer both short- and long-term solutions.

- Reclaimed water alternatives can provide a source of supply for public, agriculture, or industrial use and for the possible exchange of water allowing the lowest acceptable water quality to be beneficially used while preserving higher quality water for other needs.

- Defer individual source and facility expansion while minimizing cost.

- Blending of source waters to gain acceptable quality without the expense of more extensive treatment.

- Wellfield rotation and environmental management is improved due to greater operational flexibility.

- Reduce maximum day to average day ratio as the interconnection acts to join service areas.

METHODS

In general, methodologies for the development, collection, presentation, and utilization of information of public water supply systems' facilities and wastewater systems' facilities, related to potential interconnection strategies, will be described. The approach taken to attain Task B.1, which is outlined in the scope of services and generally stated in the Introduction, contains the following:

- Obtain and review information from SJRWMD that is relevant to the development of interconnection strategies.
- Understand SJRWMD's overall information needs relative to public water supply systems' wastewater systems' facilities through discussion with the appropriate SJRWMD staff.
- Exercise knowledge of previous activities to determine how to obtain relevant information that is not readily available and a format for the presentation of facility information.
- Identify required major component cost for the water and wastewater facilities. Obtain current information from utilities. Develop cost based on this information and other relevant sources.
- Develop a proposed methodology utilizing information collected from the previous activities to develop potential interconnections. Prepare an evaluation/screening process of the feasibility of the identified interconnections and present the findings.

DISCUSSION

INFORMATION REQUIREMENTS

The development and subsequent evaluations of potential interconnection between water systems and between reuse systems requires a substantial amount of information. The following is a list of information that should be collected, as a minimum, on each utility system that will be considered.

Systems Information

- Service Boundaries
  - Water
  - Wastewater
  - Reuse
- Schematic of Piping Network (minimum 12-inch diameter)
  - Water
    - Raw (minimum 8-inch diameter)
    - Potable
  - Wastewater
  - Reuse
- Withdrawal, Treatment and Pumping Facilities
  - Finished Water
    - Location
    - Source
    - Schematic
    - Capacity
      - Hydraulic
      - Permitted
  - Raw Water
    - Location
    - Source
    - Schematic
    - Capacity
      - Hydraulic
      - Permitted
- Existing Interconnection with Other Systems
  - Location
  - Schematic
  - Capacity
    - Hydraulic
    - Permitted

- Proposed Interconnection with Other Systems
  - Location
  - Capacity
  - Status
- General System Information
  - Water
    - Service Population
    - Number of Customers
    - System Demand
    - Overall System Operation and Maintenance Cost
  - Wastewater
    - Service Population
    - Number of Customers
    - System Flow
    - Overall System Operation and Maintenance Cost
  - Reuse
    - Service Population
    - Number of Customers
    - System Demand
    - Existing Contracts
    - Future Commitments
    - Overall System Operation and Maintenance Cost
- Future Plans (Planning Period - 2010)
  - Water
    - Capacity
    - Estimated Capital Cost
    - Estimated Operating Cost
  - Wastewater
    - Capacity
    - Estimated Capital Cost
    - Estimated Operating Cost
  - Reuse
    - Capacity
    - Estimated Capital Cost
    - Estimated Operating Cost
    - Other
    - Any anticipated problem with meeting future needs?
    - Current or future alternatives to meet needs.

In addition to facilities information, data relating to the construction cost of facilities will be required. Public water supply system facilities and wastewater system facilities consist of several components that are related to allow functional operation of the facility. By breaking down both systems into components, a unit capital cost for the component

can be estimated as well as a unit operational cost. This will create a foundation of cost information to refer to and use as a tool while building cost estimates for potential interconnections.

The following two lists outline basic components of public water system facilities and wastewater system facilities.

Public Water Supply System Components

- Land Acquisition
- Well Construction
- Well Pumps
- Surface Water Supply
- Aquifer Storage and Recovery Systems
- Water Treatment Components
- Disinfection Systems
- Storage Facilities
- Pumping Facilities
- Metering and Backflow Prevention
- Transmission Mains
- Operation and Maintenance Costs

Wastewater System Components

- Land Acquisition
- Force Mains
- Pumping Facilities
- Filtration (Automatic Back Wash)
- Filtration (Deep Bed Dual Media)
- High Level Disinfection
- Pumping Facilities (Reuse)
- Transmission Mains (Reuse)
- Operation and Maintenance Costs

AVAILABLE SJRWMD INFORMATION

All or a portion of this information may be found within SJRWMD's files. LAW has acquired and reviewed relevant information from the SJRWMD concerning public water supply systems' facilities and wastewater systems' facilities in the study area. Discussions were held with staff regarding the SJRWMD's information needs concerning interconnections among public water supply systems' facilities and between wastewater systems' facilities.

GENERAL INFORMATION

GIS files were requested and received. LAW staff successfully accessed and viewed the GIS data provided on digital tape. The layers received from the SJRWMD are as follows:

- Water Resource Caution Area Boundary (wrca_bnd.e00)
- Indian River Citrus League Boundary (ircl_bnd.e00)
- Water Service Area Boundaries (wsa.e00)
- Highways and Major Roads (majrds.e00)
- County Boundaries 1:24,000 (cb24.e00)
- District Boundary 1:24,000 (db24.e00)
- Cities/Municipalities (distcity.e00)
- Tile Coverage of Land Use from 1986-1990 (luXXXX.e00.z)
- Hydrography, Lakes, Rivers, Major Tributaries 1:500,000 (distwb.e00)
- Wastewater Treatment Facilities Data Base (FDER GMS 80 or 78 data base)

WASTEWATER SYSTEMS INFORMATION

The following two maps were provided by SJRWMD depicting wastewater treatment facilities and other data pertinent to reuse.

- Volusia County Wastewater Treatment and Reuse
- Seminole and Orange Counties Wastewater Treatment and Reuse

A survey of the wastewater systems was conducted by SJRWMD and spreadsheet information was provided. A summary of the information collected is presented in Appendix A. Copies of the completed questionnaires submitted by the utilities are being provided. Copies of reuse piping plans for the following systems were provided.

- Brevard County Utility Department
- Cocoa
- John F. Kennedy Space Center
- City of Melbourne
- Palm Bay

- City of Rockledge
- Apopka
- Orange County
- University of Central Florida WWTP
- Reedy Creek
- Northwest Water Reclamation Facility
- City of Sanford Utilities Department
- Seminole County
- City of Winter Springs
- Daytona Beach
- New Smyrna Beach
- Port Orange
- Barefoot Bay
- City of Saint Cloud
- Edgewater
- Ormond Beach
- Eustis
- Titusville

WATER SYSTEMS INFORMATION

SJRWMD is currently conducting a survey of the major water systems within the water resource caution areas. Presented in Table 1 is a listing of the utilities being surveyed. Also included in this table are the associated average daily demand and average daily flow rates for each utility. The utilities being surveyed were selected based upon the following criteria developed by SJRWMD:

- Brevard County - Utilities that cumulatively provide 97 percent of the county's water supply needs.
- Lake County - Because of the large number of small utilities, the survey is limited to those utilities providing greater than .05 mgd of service.
- Orange County - Utilities that cumulatively provide 99 percent of the county's water supply needs. The percentage was increased for Orange County because of the large percentage of the total supply provided by one utility.
- Seminole County - Utilities that cumulatively provide 97 percent of the county's water supply needs.
- Volusia County - Utilities that cumulatively provide 97 percent of the county's water supply needs.

A copy of the questionnaire is presented in Appendix B. The questionnaire has been mailed to the selected utilities in all the

counties. SJRWMD has also provided a spreadsheet that includes mailing addresses, contact person, and telephone numbers for the public water supply facilities for the utilities.

A copy of the Volusia City-County Water Supply Cooperative Water Supply Master Plan Expansion and Update, February 1994, was provided by SJRWMD. In addition, the following copies of plans for the Volusia City - County Water Supply Cooperative Raw Water Wellfield Interconnections - Preliminary Design Project were provided by SJRWMD.

- Ormond Beach to Daytona Beach
- Holly Hill to Daytona Beach
- Daytona Beach to Port Orange
- Port Orange to New Smyrna Beach
- New Smyrna Beach to Edgewater

WATER SYSTEMS AND WASTEWATER SYSTEMS COMPONENT COST INFORMATION

SJRWMD does not have available information on component costs for the construction of new public water supply and wastewater treatment facilities. Also the SJRWMD does not have available component costs related to facilities' interconnections.

A literature search of reference materials in SJRWMD's library was conducted for appropriate material related to potable water supply, wastewater, and reuse. Other than the material listed in this section only two other documents were found on the subjects searched. Both of the documents relate to facilities outside the study area of this technical memorandum.

CONCLUSION

The necessary information to develop water supply facilities and reuse facility interconnections has been identified. SJRWMD has collected a significant amount of relevant data that is directly related to the development of these strategies. This data has been provided by SJRWMD in hard copy or electronic format where available. Procedures have been established to transmit information that is now being collected by SJRWMD in a timely manner. However, the available existing information and data is not complete relative to the identified information requirements.

SJRWMD has surveyed the wastewater utilities within the study areas and is currently surveying the water utilities. The information collected from both surveys will be used to develop interconnection strategies. However, additional information will have to be obtained from those utilities who have previously responded to SJRWMD's questionnaire. The remaining water supply utilities that will receive SJRWMD's current water supply questionnaire will also need to provide additional information.

Based on SJRWMD's experience with the wastewater and water supply questionnaires, any request for additional information will require a follow-up telephone contact or possibly a site visit. The water, wastewater, and reuse component cost information, developed as part of the interconnection strategy, will be used, as appropriate, in the development of the other supply strategies. SJRWMD does not have information on component cost. Cost information may be requested from appropriate utilities but these may be limited. The majority of the cost component information will be developed or obtained from other sources.

The alternative strategies developed not only through this effort but through all of the other concurrent activities will be optimized using an optimization model being developed by the University of Florida for SJRWMD. An initial evaluation criteria of potential interconnections will facilitate the final optimization by focusing on appropriate interconnections. This evaluation or screening criteria may also provide input to the overall optimizing process of resource utilization and associated costs.

The information and work product generated during the development of the interconnection strategy should be in a form and format compatible for use in the development of the other supply strategies.

In addition, all information should be readily compatible with SJRWMD's systems.

RECOMMENDATIONS

PROPOSED FACILITY INFORMATION METHODOLOGY

Facility Information

Information Collection

The conclusions indicate that additional information is needed beyond what has currently been provided to fulfill the information requirements outlined in the Discussion section. The proposed approach to collect the supplementary information from the utilities is to develop a questionnaire that requests the appropriate information..

The Water Supply and Wastewater Systems Facilities Questionnaire developed by LAW was designed to supplement the information that SJRWMD has previously collected. A copy of the questionnaire for water supply facilities is presented in Appendix C and a copy for wastewater and reuse facilities is presented in Appendix D. The questionnaires focus on the collection of facility specific information, such as, raw water, potable water, and reuse pipe network schematics (minimum pipe diameter of 12 inches, 8 inches for raw water), treatment information, and existing and or proposed interconnection information. The questionnaires also have a section requesting fiscal information regarding the cost of system components that have been recently constructed, operation and maintenance costs, planning information through the year 2010, and reuse system contractual information.

The questionnaire will be distributed to 65 public water supply utilities in Brevard, Lake, Orange, Seminole, and Volusia Counties identified using the utility selection criteria described in the Discussion section.

The selection criteria that will be used for wastewater treatment facilities includes utilities corresponding to the public water supply systems providing 97% of the water supply within the five-county area. In addition, a minimum flow of 0.75 mgd for wastewater systems will be used as an overlay parameter to the previous selection criteria.

The wastewater treatment facilities that are highlighted in Table 2 which is an adaptation of the SJRWMD spreadsheet, will receive a questionnaire. During the data collection process, if it is determined

that several wastewater systems are interconnected and their combined flow exceeds 0.75 mgd, they will be added to the contact list. Facilities not surveyed may also be considered for other factors such as ease of connection to a reuse pipeline or if the facility needs or meet a specific reuse need.

Information Presentation

The information will be presented in summary spreadsheets (EXCEL) and formatted for import or transfer into SJRWMD's GIS system. Maps and drawings containing pipeline schematics will be digitized so that the information can be transferred into SJRWMD's GIS system. Assistance will be provided to SJRWMD, such as reviewing digitized work products, to facilitate SJRWMD's current effort to digitize reuse service areas and update the water service boundaries.

The completed questionnaires and follow-up interviews will be presented as raw data in an appendix format. The support documents, maps and drawings will be indexed and presented in a tabular form for inclusion in an appendix. The original documents will be provided to SJRWMD.

Public Water Supply and Wastewater Facility Component Cost Information

Information Development

Limited component cost information will be collected through the questionnaires and follow-up conversations will be conducted with utilities in the study area on recently completed (1-3 years) projects. Cost information will also be collected from water supply and wastewater systems outside the study area that have recently constructed or are planning to construct appropriate components. Also, the available master plans and studies provided by the utilities and obtained from other entities will be accessed for component cost information to the extent necessary to supplement the above data.

The following two lists outline basic components of public water system facilities and wastewater system facilities.

Public Water Supply System Components

- Land Acquisition
- Well Construction
- Well Pumps
- Surface Water Supply

- Aquifer Storage and Recovery Systems
- Water Treatment Components
- Disinfection Systems
- Storage Facilities
- Pumping Facilities
- Metering and Backflow Prevention
- Transmission Mains
- Operation and Maintenance Costs

Wastewater System Components

- Land Acquisition
- Force Mains
- Pumping Facilities
- Secondary Treatment
- Filtration (Automatic Back Wash)
- Filtration (Deep Bed Dual Media)
- High Level Disinfection
- Pumping Facilities (Reuse)
- Transmission Mains (Reuse)
- Operation and Maintenance Costs

Information Presentation

The capital costs of a project consist of the estimated cost to construct a component plus contingency costs. The contingency cost is comprised of three parts, which are percentages times the estimated construction cost, engineering cost of 15 percent times the estimated construction cost; administrative cost of 10 percent of the construction cost; and general contingency of 20 percent times the construction cost. The capital cost will be developed for each component listed above. The operation and maintenance costs are not included in the capital cost of the project. They are addressed on an annual basis and are independent of the project cost. However, the total annual cost consists of an annualized capital cost using a facility life at an interest rate, plus the annual operation and maintenance cost. SJRWMD has prescribed economic analysis criteria to be used in this evaluation. These criteria are described in Appendices E, F, and G.

The information collected associated with the capital and operation and maintenance costs for each component of public water supply systems and wastewater systems will be transposed into a unit component cost format. For example, the cost information will be provided in units of dollars per square foot, dollars per 1,000 gallons, and dollars per diameter inch per foot as outlined in Appendix F.

This information will then be summarized and presented by using tables and graphs. The tables and graphs containing the unit cost information of the system components will provide a foundation to enable the development of preliminary cost estimates for potential interconnections or other supply strategies.

The component cost information presented in graphical and tabular form will be established for use in evaluating the economic feasibility of the potential interconnection systems. Preliminary cost summaries will be prepared for each potential interconnection. The preliminary cost summaries will estimate capital costs and annual operation and maintenance costs. These costs will be presented in the format shown in Table 3.

The value of each potential interconnection preliminary cost summary will be entered into a matrix comparing the potential interconnections by the cumulative cost of their combined system components. The factors of matrix are as follows: flow of the potential interconnection; capital cost of the potential project; and operation and maintenance costs for the potential project. The cost for each potential project will be presented in units of dollars per 1,000 gallons. This information allows a comparison of potential projects by yielding a rank of cost in units of dollars per 1,000 gallons. An example of the matrix is presented in Table 4.

Utilizing Information For Assessing Feasibility

The list of potential interconnections could be lengthy and difficult to evaluate and optimize. The evaluation of the potential interconnection of sources of supply initially appears to only depend on route cost and exchange quality. However, many other criteria must be considered to properly evaluate interconnection.

The evaluation methodology, which is discussed below, involves a decision-making process that provides a ranking scheme (including ranking criteria), develops a ranking matrix, and provides a cross-evaluation for particular elements in relation to other elements.

Evaluation Methodology

The evaluation will be used to prepare a list of selected interconnection based on various parameters and constraints. The decision-making process presented within this report functions not only to select the favorable interconnections but also to provide a

comparative evaluation of the interconnections based on specific criteria.

In the ranking process, all of the interconnections must be given fair and equitable treatment. That is, the process must be carried out such that:

- all constraints and criteria are unilaterally applied to each element;
- adequate evaluation is conducted on all of the elements; and
- a mechanism is available to identify and exclude those options that cannot meet specific criteria.

The evaluation of interconnections is accomplished through the use of an Evaluation Matrix. The matrix aides in the evaluation of specific criteria as it relates to the proposed water supply elements. Each element is evaluated based on the criteria resulting in an equitable comparison. Six criteria are proposed for evaluation of interconnections. These criteria are listed as follows:

- Route Characteristics
- Availability of Supply Capacity
- Availability of Facility Capacity
- Compatibility of Raw or Treated Water Quality
- Location
- Projected Deficits

Each of these criteria are discussed in the following sections that include a rationale for the numerical evaluation of each element. Some of the criteria, such as, Route Characteristics, Water Quality Control, and Location, are subjective in nature, requiring engineering judgment rather than objective technical measures. Availability of Supply Capacity, Availability of Facility Capacity and Projected Deficits are considered to be objective criteria.

Criteria Development

Route Characteristics

The feasibility of the interconnection of facilities is dependent upon route characteristics. That is, the success of implementation of an interconnection strategy which includes an optimal pipeline route is dependent on resolving potential site-specific obstacles.

Among several route characteristics, some of the more significant are availability of easements/ right-of-way areas, special crossings, topography, environmental considerations and mitigation requirements, permit requirements, and constructability.

0 Physical constraints render route unusable
1 Significant constraints, no available existing right-of-way
2 Significant constraints, available existing right-of-way
3 Routine constraints, no available existing right-of-way
4 Routine constraints, limited available existing right-of-way
5 Routine constraints, sufficient right-of-way

Availability of Supply Capacity

The availability of permitted supply capacity is an important factor in the ranking of alternatives. This factor deals with the permitted volume of water that is currently available from the supply source. The availability of supply considers the permitted quantities as compared to actual use associated with each source. This factor does not consider the impact of facility related constraints on the supply system.

0 No additional supply available
1 Minimal 0-5 percent of additional permitted capacity exists
2 Minimal 5-10 percent of additional permitted capacity exists
3 Moderate 10-15 percent of additional permitted capacity
4 Moderate 15-20 percent of permitted capacity is available from the source
5 Extensive 20+ percent additional permitted supply available

Availability of Facility Capacity

The availability of facility capacity relates to the physical structures or infrastructure the produces the supply. This may include wells, pump stations, treatment works, storage, piping, etc. Thus, this factor

measures the additional supply facilities that are available for each source.

0 No additional supply facilities exist.
1 Minimal additional capacity
3 Moderate additional capacity exists
5 Extensive additional supply facilities exist

Projected Deficits

Projected deficits relate to the volume of demand for a specific supply source that is above its current ability of production. This may relate to an existing deficit in supply capacity but in most cases relates to the expanding demand for potable water supply from a specific source and its ability or inability to meet that demand for the year 2010 planning horizon.

0 Source does not have sufficient capacity to meet its current demand.
1 Severe deficit is where a supply source can expect a 50-percent increase in demand over current available capacity
2 Source expects to have a deficit of between 20 and 50 percent increase in demand
3 Source expects to have a deficit of between 0 and 20 percent in relationship to projected demand
4 Source has supply to just meet demand over the current planning horizon.
5 Source has capacity to provide all of its projected demand with excess capacity

Compatibility of Raw or Treated Water Quality

The quality of the potential water supply is extremely important analyzing elements. It is essential that the quality of the water be of sufficient character such that it can be blended with other sources without additional treatment. The blend water must meet all known regulatory requirements and meet the customers' expectations. Although water quality information will not be requested, information obtained relating to current sources of supply and existing methods of treatment will provide the necessary information for this level of compatibility assessment. For the purpose of the ranking matrix, water quality will be ranked as follows:

0 Unacceptable water quality

1 Poor water quality - incompatible blending
2 Marginal water quality - may require additional treatment
3 Good water quality - may blend water of different levels of treatment
4 Above average water quality
5 Excellent water quality

Location

The location of an element relative to the Utilities service area is an important aspect of viability. If a water supply element, which meets other criteria approximately, is located an extreme distance from the service area, it would be considered less desirable for this criteria. Thus, location criteria are ranked as:

0 Source outside SJRWMD area
1 Source within the SJRWMD area
2 Source adjacent to the potential water resource caution area
3 Source within the potential water resource caution area
4 Source near demand center
5 Source at demand center

Matrix Evaluation and Ranking Results

The cost of the interconnection will be presented along with the descriptions. A ranking of the sum of the capital costs plus the projected annual operation and maintenance costs, will be expressed in dollars per 1,000 gallons of water produced, and presented in tabular form.

The results of the evaluation matrix of the non-cost criteria will be presented in tabular form. The rank of potential projects by cost is associated with a non-cost cumulative ranking matrix and an example is presented in Table 5. The matrix will be produced through an evaluation and comparison of criteria as previously described. These impacts are used as constraints in the cumulative ranking matrix and render the feasibility of the project. In this matrix the cost rank and the non-cost cumulative rank are weighted and compared to yield an overall rank for each potential interconnection.

This ranking represents an appropriate process by a technical team. Other categories that are more appropriately addressed by elected officials or appointed boards could be considered. Two examples of potential categories are Socio/Political and Public Acceptance. Since this task is the investigation of strategies, then it may be appropriate to

consider these two categories when recommended plans are being developed for public discussion and consideration.

The potential interconnections of water supply facilities and interconnections of reuse systems remaining after the evaluation of the screening process were presented in Technical Memorandum B.3.a. The screening processing will be summarized in the memorandum. The associated cost and piping schematics of the potential interconnections will also be presented.

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Tables

TABLES

Table 1

Major Public Water Supply Systems Within The Lake, Orange, Seminole, Volusia and Northern Brevard Counties for 1993

	COUNTY	UTILITY	PUBLIC WATER SUPPLY USE (mgd)	CUMULATIVE PUBLIC WATER SUPPLY USE (mgd)	PERCENT of TOTAL (65 utilities)	CUMULATIVE PERCENT of TOTAL (65 utilities)	POPULATION SERVED
1	Orange	Orlando Ut. Comm	74.33	74.33	27.68%	27.68%	253,267
2	Orange	Orange City Utilities	27.93	102.26	10.40%	38.08%	81,511
3	Brevard	Cocoa Wellfield	25.06	127.32	9.33%	47.42%	146,450
4	Volusia	Daytona Beach	12.78	140.10	4.76%	52.18%	79,664
5	Orange	Winter Park	11.57	151.67	4.31%	56.49%	75,404
6	Seminole	Seminole City Utilities	9.59	161.26	3.57%	60.06%	47,671
7	Volusia	Deltona Utilities	9.23	170.49	3.44%	63.49%	57,300
8	Seminole	Sanlando Utilities	9.22	179.71	3.43%	66.93%	47,409
9	Seminole	Altamonte Springs	6.7	186.41	2.50%	69.42%	36,770
10	Seminole	Casselberry	5.85	192.26	2.18%	71.60%	50,000
11	Brevard	Titusville	5.43	197.69	2.02%	73.62%	40,339
12	Seminole	Sanford	5.39	203.08	2.01%	75.63%	38,272
13	Volusia	Port Orange	5.23	208.31	1.95%	77.58%	46,326
14	Orange	Apopka	4.94	213.25	1.84%	79.42%	32,596
15	Volusia	Ormond Beach	4.75	218.00	1.77%	81.19%	37,876
16	Volusia	Deland	4.57	222.57	1.70%	82.89%	32,000
17	Volusia	New Smyrna Beach	4.14	226.71	1.54%	84.43%	24,560
18	Seminole	Winter Springs	3.63	230.34	1.35%	85.78%	24,008
19	Lake	Leesburg	3.5	233.84	1.30%	87.09%	23,783
20	Lake	Villages of Lake	3.14	236.98	1.17%	88.26%	10,476
21	Orange	Ocee	3.08	240.06	1.15%	89.40%	16,418
22	Orange	Maitland	2.82	242.88	1.05%	90.45%	9,096
23	Lake	Mt. Dora	2.81	245.69	1.05%	91.50%	18,389
24	Lake	Eustis	2.54	248.23	0.95%	92.45%	22,445
25	Seminole	Oviedo	2.45	250.68	0.91%	93.36%	15,772
26	Seminole	Lake Mary	1.65	252.33	0.61%	93.97%	6,673
27	Lake	Clermont	1.57	253.90	0.58%	94.56%	7,013
28	Volusia	Edgewater	1.54	255.44	0.57%	95.13%	16,745
29	Lake	Tavares	1.49	256.93	0.55%	95.69%	9,462
30	Orange	Winter garden	1.42	258.35	0.53%	96.22%	14,283
31	Volusia	Holly Hill	1.26	259.61	0.47%	96.69%	11,258
32	Orange	Southern States Utility.	0.92	260.53	0.34%	97.03%	7,783
33	Volusia	Volusia County Utilities	0.81	261.34	0.30%	97.33%	7,772
34	Brevard	N. Brevard Utilities	0.61	261.95	0.23%	97.56%	5,172
35	Orange	Zellwood Station	0.58	262.53	0.22%	97.77%	1,950
36	Lake	Fruitland Park	0.44	262.97	0.16%	97.94%	4,025
37	Orange	Eatonville	0.44	263.41	0.16%	98.10%	2,470
38	Lake	Deanza, Mid Fl Lakes	0.41	263.82	0.15%	98.25%	2,675
39	Lake	Water Oak Estates	0.31	264.13	0.12%	98.37%	1,260
40	Lake	Lady Lake	0.29	264.42	0.11%	98.48%	4,990
41	Lake	Sunlake Estates	0.29	264.71	0.11%	98.58%	734
42	Lake	Groveland	0.28	264.99	0.10%	98.69%	2,373
43	Volusia	Orange City Cnty Vil	0.26	265.25	0.10%	98.79%	1,392
44	Lake	Astor Park Water	0.25	265.50	0.09%	98.88%	3,577
45	Orange	Rock Springs MHP	0.24	265.74	0.09%	98.97%	1,771
46	Lake	Minneola	0.24	265.98	0.09%	99.06%	1,783
47	Seminole	Palm Valley MHP	0.23	266.21	0.09%	99.14%	1,610
48	Lake	Howey-In-The-Hills	0.22	266.43	0.08%	99.23%	1,400
49	Orange	Shadow Hills MHP	0.21	266.64	0.08%	99.30%	1,700
50	Lake	Mascotte	0.21	266.85	0.08%	99.38%	1,775
51	Volusia	John Knox Village	0.21	267.06	0.08%	99.46%	880
52	Volusia	Lake Helen	0.18	267.24	0.07%	99.53%	2,381
53	Volusia	Lake Beresford	0.17	267.41	0.06%	99.59%	1,035
54	Orange	Starlight Ranch MHP	0.15	267.56	0.06%	99.65%	2,583
55	Lake	Monteverde	0.15	267.71	0.06%	99.70%	1,050
56	Orange	Zellwood Water As.	0.14	267.85	0.05%	99.75%	1,172
57	Orange	Tangerine	0.12	267.97	0.04%	99.80%	525
58	Lake	Utilities Inc. of Fl	0.11	268.08	0.04%	99.84%	469
59	Volusia	Tymber Creek Utility	0.11	268.19	0.04%	99.88%	905
60	Volusia	Pierson	0.11	268.30	0.04%	99.92%	1,222
61	Orange	Oakland	0.11	268.41	0.04%	99.96%	746
62	Orange	Utilities Inc. of Fl	0.1	268.51	0.04%	100.00%	1,007
63	Orange	Central Fl. Res. Dev.		268.51	0.00%	100.00%	
64	Orange	UCF		268.51	0.00%	100.00%	
65	Seminole	Lake Harney		268.51	0.00%	100.00%	
		TOTAL	268.51				1,403,423

UTILLIS7

Data Source: SJRWMD

Owner or Operator	Facility Name	Location		Latitude	Longitude		Population Served		Treatment Level		Disinfection Level		Permitted Treatment Capacity mgd		Mean Flow mgd	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Aquarina Dev., Inc.	Aquarina Utility	SR A1A S Melbourne Beach	S	275530	802930	D	225	S	2	M	HI	D	0.300	S	0.004	S
Brevard County	John D. Wright Regional	2880 Pine Ave, Mims	5	284105	805225	D	2600	5	2	5	BA	5	1.000	5	0.260	5
Brevard County	Port St. John	3710 Juanita, Cocoa	5	282848	804655	D	2341	5	2	5	IM	5	0.350	5	0.217	5
Brevard County	South Beaches Regional	2800 S A1A, Melbourne Beach	5	280229	803240	D	15000	5	2,3	5	BA,HI	5	9.000	5	6.587	5
Brevard County	South Central Regional	10001 N. Wickham Road, Melbourne	5	281200	804730	D	18000	5	3	5	HI	5	3.000	5	1.863	5
Brevard County	Sykes Creek Regional	3630 N. Courtenay Pkwy., Merritt Island	5	282533	804222	D	25800	5	3	5	HI	5	6.000	5	3.737	5
Cape Canaveral, City of	Cape Canaveral	600 Tower Blvd., Cape Canaveral	5	282322	803704	D	5300	D	2	5	BA	M	1.800	5	1.159	5
Cocoa Beach, City of	Cocoa Beach	1600 Minutemen Cswy, Cocoa Bch	5	281903	803802	D	26000	5	3	5	HI	5	6.000	5	4.200	5
Cocoa, City of	Jerry Sellers	US 1 Taft & Bellefonte	5	282145	804454	D	20000	5	3	5	HI	5	4.500	5	2.760	5
Connecticut Gen. Util.	Snug Harbor Village	7600 US-1, Micco	D	275332	803041	D	500	D	2	M	BA	M	0.100	D	0.049	EF
Florida Cities Water Co.	Barefoot Bay	Dottie Lane, Barefoot Bay	5	275330	803200	D	9000	5	2	5	BA	5	0.900	5	0.597	5
Walter T. Murphy (NASA)	S.T.P. #4	Kennedy Space Center, K6-792, LC-39 Area	5	283520	803804	D	7422	5	2	5	BA	5	0.200	5	0.105	5
Walter T. Murphy (NASA)	S.T.P. #1	Kennedy Space Center, M6-895, Industrial Ar	5	283100	803915	D	5458	5	2	5	BA	5	0.375	S	0.146	5
Walter T. Murphy (NASA)	S.T.P. #10	Kennedy Space Center, Visitor Infor. Center	5	283119	804103	D	6005	5	2	5	BA	5	0.100	5	0.035	5
Kennedy Space Center	Cape Canaveral Main	Industrial Rd, C Canaveral AFS	D	282942	803503	D	3500	D	2	M	BA	M	0.490	D	0.133	K
The Lakes of Melbourne	The Lakes of Melbourne	4000 Hollywood Blvd., Melbourne	5	280320	804102	D	750	5	2	5	BA	5	0.130	5	0.060	5
Melbourne, City of	David B. Lee	Sarno Rd, W US-1, Melbourne	D	280715	803805	D	26350	D	3	R	HI	R	7.500	D	0.461	K
Melbourne, City of	Grant Street	2300 S Grant St, Melbourne	D	280424	803736	D	47950	D	2	M	HI	R	3.250	D	3.203	K
Palm Bay Utility Commission	Palm Bay	1103 Troutman Blvd.	5	280100	803639	D	75000	5	3	5	HI	5	5.200	5	2.606	5
Rockledge, City of	Rockledge	1700 S. Garden Rd, Rockledge	5	281945	804303	D	17000	5	2	5	BA,HI	5	4.500	5	1.543	5
Titusville, City of	North Water Reclamation	1105 Buffalo Road	5	283724	804858	D	40865	5	2	5	HI	5	2.750	5	3.041	5
Titusville, City of	South	1125 Knox Mckrae Drive, Titusville	S	283357	804901	D	17228	S	2	S	BA	S	2.000	S	1.800	S
United States Air Force	Partick AFB Capehart	Patrick AFB	D	281504	803645	D	5000	D	2	M	BA	R	1.000	D	0.500	R
United States Air Force	Patrick AFB Main (North)	Patrick AFB	D	281246	803635	D	3500	D	2	M	BA	M	1.000	D	0.838	K
West Melbourne, City of	West Melbourne	1415 Henry Avenue, West Melbourne	5	280432	803838	D	13000	5	2	5	X	5	1.930	5	1.117	5
Indian River County	Central Regional	3550 49th Street	5	274045	802530	D	4270	5	3	5	HI	5	1.000	5	0.427	5
Indian River County	Laurelwood	6th St./21st Ct., Vero Beach	5	273652	802433	D	400	5	2	5	BA	5	0.100	5	0.070	5
Indian River County	North Regional	5150 77th Street	5	274405	802619	D	3420	5	3	5	HI	5	1.000	5	0.342	5
Indian River County	Sea Oaks	State Road A-1-A, Indian River Shores	5	274431	802300	D	500	5	2	5	HI	5	0.210	5	0.052	5
Indian River County	South Regional	6th Avenue S.W. and 25th Street S.W.	5	273330	802240	D	3670	5	2	5	BA	5	0.450	5	0.315	5
Indian River County	Vista Royale	100 Vista Royale Blvd., Vero Beach	5	273600	802242	D	450	5	3	5	HI	5	0.500	5	0.368	5
Indian River County	Vista Garden	US Highway 1, Vero Beach	5	273615	802240	D	800	D	2	5	BA	5	0.150	5	0.129	5
Indian River County	West Regional	8405 8th St., West Vero Bch.	5	273657	803604	D	6750	5	3	5	HI	5	1.000	5	0.671	5
Sebastian, City of	Sebastian Highlands	810 Bailey Drive, Sebastian	5	274725	802838	D	1390	5	2	5	BA	5	0.142	5	0.074	5
Vero Beach, City of	Vero Beach	Ind. Riv. Blvd./17th St., Vero Beach	D	273740	802235	D	45000	D	2	M	BA	R	4.500	D	2.581	R
Wilder Corporation	Sunlake Estates	1045 Great Lakes Blvd., Grand Island	5	285681	814654	D	600	5	2	5	BA	5	0.150	5	0.024	5
Boll, John	Oak Springs MHP	12 Highland Ave., Sorrento	D	284723	813152	D	1150	D	2	M	BA	M	0.150	D	0.113	EF
Clerbrook RV Resorts	Clerbrook MHP	US 27, 6 mi. N of Clermont	D	283810	814730	D	600	D	2	M	BA	R	0.120	R	0.050	R
Clermont, City of	Clermont	400 Twelfth Street	5	283308	814636	D	7200	5	2	5	BA	5	0.990	5	0.767	5
M.H.C. Corporation	Mid-Florida Lakes	201 Forest Drive, Leesburg	5	285215	814612	D	2296	5	2	5	BA	5	0.180	5	0.127	5
Eustis, City of	Eustis	901 Bates Avenue, Eustis	5	285130	814035	D	13700	5	2	5	IM	5	1.800	5	1.253	5
Florida Dept. of Corrections	Lake Correctional Inst.	U.S. 27 & Labor Camp Rd.	D	283718	814602	D	571	D					0.180	D	0.056	EF
Groveland, City of	Groveland WWTP	1109 Sampey Road, Groveland	5	283410	815040	D	2406	5	2	5	BA	5	0.250	5	0.035	5
Lakewood Devs.	Plantation at Leesburg	US 27, 2 mi. S of SR 48, Leesburg	D	284241	815243	D	960	D	2	M	BA	M	0.200	D	0.094	EF
Leesburg, City of	Leesburg	808 N Canal St., Leesburg	D	284829	815230	D	11000	D	2	M	IM	R	3.500	R	2.746	R
Mount Dora, City of	Mount Dora	SR 19A, Mt. Dora	D	284824	814025	D	15000	D	2	M	HI	R	1.500	R	0.586	R
Southern States Utilities	Sunshine Parkway	US 27/SR 19, Minneola	D	283837	814752	D	916	EP	2	M	BA	R	0.250	D	0.090	K
Southlake Utilities	Southlake Utilities	800 US 27, Clermont	5	282339	814357	D	701	5	2	5	HI	5	0.350	5	0.069	EF
Taveres, City of	Caroline Street	525 Caroline St., Tavares	D	284819	814354	D	5500	D	2	M	BA	R	0.750	R	0.542	R
Taveres, City of	Woodlea Road	Woodlea Road, Tavares	D	284730	814500	D	7000	D	2	M	BA	R	1.000	R	0.380	R
Thousand Trails, Inc.	Thousand Trails	7175 US 27 S, Clermont	D	282230	814020	D	700	D	2	M	BA	R	0.140	R	0.026	R
Umatilla, City of	Umatilla	Golden Gem Dr./Cemetery Rd., Umat.	D	285458	814101	D	3000	D	2	M	BA	R	0.300	R	0.155	R
Village Center Comm. Dev. Dist.	The Villages of Lake-Sumter	501 Sunbelt Road, Lady Lake	5	285652	815650	D	13166	5	3	5	HI	5	1.000	5	0.679	5
Wilder Corporation	Sunlake Estates	1045 Great Lakes Blvd, Grand Island, FL 327	5	285633	814602	D	240	EP	2	5	BA	5	0.150	5	0.024	5
Apopka, City of	Apopka	333 Snowden Road, Apopka	5	283906	813015	D	25075	5	3	5	HI	5	4.000	5	1.815	5
Econ Utility Corp.	Wedgefield Subdivision	Bancroft Blvd & Nettleton St, E of Orl	D	283000	810500	D	768	D	2	S	HI	S	0.200	S	0.165	S
Fairways MHP Village	Fairways MHP Village	14205 E Colonial Dr, Orlando	D	283400	811045	D	1800	S	2	M	HI	R	0.150	D	0.124	R
Dale Whittington	Gulfstream Harbor MHP	4505 S Goldenrod Rd (SR 15A) Orl	5	282908	811629	D	690	5	2	5	BA	5	0.100	5	0.069	5

Source: Adapted from SJRWMD WastewaterTreatment and Reuse Inventory for 1995

Owner or Operator	Facility Name	Location		Latitude		Longitude		Population Served		Treat-ment Level		Disin-fection Level		Treatment Capacity mgd		Mean Flow mgd	
Ocoee, City of	#2	1800 A.D. Mims Rd., Ocoee	S	283459		813420	D	10000	D	2	S	BA	R	3.000	S	0.800	S
Orange County	Cypress Walk WWTP	11900 SR 535, Orlando	S	282335		813045	D	10000	D	3	S	HI	S	1.000	S	15.632	S
Orange County	Meadow Woods	1707 Rhode I. Woods Circ, Orl.	S	283614		812656	D	22000	D	3	S	HI	S	0.714	S	0.400	S
Orange County	Eastern	1621 South Alafaya Trail, Orlando	S	283048		811205	D	80000	S	3	S	HI	S	19.000	S	7.927	S
Orange County	South	4780 Sand Lake Rd, Orlando	S	282652		812824	D	165903	EP	2	S	HI	S	30.500	S	16.300	S
Orange County	Northwest	701 West McCormick Rd, Apopka	S	283744		813119	D	28240	S	2	S	BA	S	3.500	S	2.824	S
Orlando FL. Hotel, Ltd.	Howard Johnson's	3835 McCoy Rd, Orlando	S	282710		811854	D	988	x	2	S	BA	S	0.130	S	0.085	S
Orlando, City of	Water Conserv I	11401 Boggy Cr Rd, Orlando	S	282402		811950	D	14957	S	3	S	HI	S	7.500	S	2.964	S
Orlando, City of	Water Conserv II	5420 L.B. McLeod Road, Orlando	S	283010		812711	D	125000	S	3	S	HI	S	25.000	S	14.794	S
Orlando, City of	Lake Nona	7500 Dowden Road, Orlando	S	282509		811649	D	153	S	3	S	HI	S	0.165	S	0.026	S
Park Manor Water Wks.	Park Manor	1527 Park Manor Dr, Orlando	S	283359		811331	D	1300	S	3	S	BA	S	0.350	S	0.284	S
Reeco Properties	Rock Springs MHP	13 E. Tanglewood Drive, Apopka	S	284241		813100	D	1800	S	2	S	BA	M	0.150	S	0.118	S
Reedy Creek Impr. Dist.	Reedy Creek	Bear Island Rd., Lk. Buena Vista	S	282230		813530	D	136500	S	3	S	HI	S	15.000	S	8.425	S
Southern States Utilities	University Shores #1	2600 Jarrell Rd, Orlando	D	283445		811618	D	5000	D	3	D	BA	M	0.275	D	0.174	K
Southern States Utilities	University Shores #2	2600 Jarrell Rd, Orlando	D	283445		811616	D	5495	S	2	D	BA	M	1.000	D	0.409	K
Starlight Ranch MHP	Starlight Ranch MHP	6000 E Pershing Ave. Orlando	D	282919		811800	D	1000	D	2	M	BA	M	0.120	D	0.098	EF
Univ. of Central Fla.	Univ. of Central Fla.	Main Campus, Alafaya Trail, Orlando	S	283500		811300	D	20000	D	2	S	X	S	0.500	S	0.372	S
Winter Garden, City of	Winter Garden	101 E Crest Ave Winter Garden	S	283435		813555	D	11851	S	3	S	BA	S	2.000	S	1.366	S
Winter Park, City of	Winter Park	Belfort Dr & Bongart Rd, Winter Pk	D	283623		811857	D	4987	EP	2	M	HI	R	0.750	D	0.490	R
Zellwood Station Coop.	Zellwood Station Coop.	2126 Spillman Drive, Zellwood	S	284302		813508	D	1470	S	2	S	BA	S	0.300	S	0.100	S
Alafaya Utilities, Inc.	Alafaya PUD	1057 McKinnon Rd, Oviedo	D	283824		811116	D	12000	D	3	R	HI	R	2.400	D	0.623	R
Altamonte Spr, City of	Altamonte Springs	Keller Rd, Altamonte Spra	D	284000		812100	D	125000	D	3	R	HI	R	12.500	D	6.300	R
Casselberry, City of	Casselberry	700 N Winter Park, Casselberry	D	284114		811852	D	3167	D	3	R	HI	R	0.643	D	0.635	R
Longwood Utilities, Inc.	Shadow Hills	910 Longwood Hills Rd, Longwood	S	284254		812143	D	1600	S	2	S	BA	S	0.500	S	0.434	S
Orlando, City of	Iron Bridge Regional	601 Iron Bridge Circle, Oviedo	S	283720		811310	D	270000	S	3	S	BA	S	40.000	S	27.163	S
Palm Valley Association	Palm Valley MHP	3751 Alafaya Tr, Oviedo	D	283720		811145	D	1409	D	2	M	BA	M	0.126	D	0.113	D
Sanford, City of	Sanford	1201 W Seminole Blvd, Sanford	S	284828		811645	D	34000	S	3	S	S	S	7.300	S	5.310	S
Sanlando Utilities	Wekiva Hunt Club	105 Ledbury Drive, Longwood	S	284142		812558	D	22989	S	2	S	BA	S	2.900	S	2.248	S
Sanlando Utilities	Des Pinar/Woodlands	125 Western Fork Ave, Longwood	S	284215		812229	D	4680	S	2	S	BA	S	0.500	S	0.476	S
Seminole County	Greenwood Lakes	701 Greenway Blvd. Lake Mary	S	284400		812049	D	24000	S	3	S	HI	S	3.500	S	1.984	S
Seminole County	Northwest Regional	501 Yankee Lake Road, Sanford	S	284950		812344	D	5000	S	3	S	HI	S	2.500	S	0.400	S
Southern States Utilities	Chulota	4th & C Ave, Chuluota	D	283846		810730	D	1000	D	2	M	BA	D	0.100	D	0.098	EF
Utilities Inc.	Lincoln Heights	20th St, off Arpt. Blvd, Sanford	S	284736		811811	D	865	S	2	S	BA	S	0.120	D	0.080	S
Utilities Inc.	Weathersfield	200 Weathersfield Ave, Altamonte Spr	S	283930		812230	D	3208	D	2	S	BA	S	0.360	S	0.105	S
Winter Springs, City of	Winter Springs East	1580 Winter Spr Blvd, Winter Springs	S	284035		811438	D	12500	S	3	S	HI	S	2.012	S	0.955	S
Winter Springs, City of	Winter Springs West	1000 W SR 434, Winter Springs	S	284231		811912	D	11500	S	3	S	HI	S	1.546	S	1.075	S
Daytona Beach, City of	Bethune Point	1 Shady Place, Daytona Beach	S	291205		810031	D	38700	S	3	S	HI	S	12.000	S	6.333	S
Daytona Beach, City of	Regional	3651 LPGA Blvd.	S	291031		810641	D	51300	S	X	S	HI	S	10.000	S	6.500	S
Deland, City of	Brandy Trails	465 E Lake Mamel Rd, Deland	P	290502		811930	D	3150	D	2	P	BA	P	0.630	P	0.120	P
Deland, City of	Regional	1032S Amelia Ave, Deland	S	290034		811756	D	16000	D	3	S	HI	S	4.000	S	2.660	R
Edgewater, City of	Edgewater	West Ocean Avenue, Edgewater	S	285828		805455	D	16700	S	3	S	HI	S	2.250	S	1.342	S
Holly Hill, City of	Holly Hill	465 LPGA Blvd.	S	291426		810240	D	11900	S	3	S	LO	S	1.200	S	0.783	S
Indian River Utilities	Hacienda del Rio	US 1, S of Edgewater	D	285527		805222	D	600	D	2	M	BA	M	0.116	D	0.059	EF
N. Peninsula Util. Corp.	Seabridge Subdiv.	SR A1A N of Ormond Beach	D	292300		810500	D	545	D	2	M	BA	M	0.150	D	0.054	EF
New Smyrna Beach Util. Comm.	NSBUB	20 N Causeway SR 44 N Smyrna Bch	S	290150		805503	D	19000	S	2	S	HI	S	4.000	S	2.840	S
Ormond Beach, City of	Breakaway Trails	N of SR 40, E of I-95, Ormond Bch	D	291500		810704	D	3000	D	2	M	HI	R	0.300	R	0.106	R
Ormond Beach, City of	Ormond Beach	550 North Orchard Street, Ormond Beach	S	291720		810428	D	42000	S	3	S	HI	S	6.000	S	3.635	S
Port Orange, City of	R. Dwayne Huffman	817 Oak St, Port Orange	S	290812		805949	D	40000	S	3	S	HI	S	12.000	S	5.040	S
Southern States Utilities	Deltona Lakes	Fisher & Providence Drs, Deltona	D	285227		811507	D	11858	D	2	M	BA	M	0.900	D	0.887	R
Tymber Creek, Inc.	Tymber Creek Subdiv.	Service road off Sand Spr, Ormond Bch	D	291554		810738	D	414	D	2	M	BA	M	0.131	D	0.041	EF
Volusia County	Deltona North	Wolf Pack Run, Deltona	D	285510		811510	D	1242	EP	2	M	BA	M	0.500	R	0.122	R
Volusia County	Four Townes	Iris Dr, Orange City	D	285545		811710	D	2840	EP	2	M	BA	M	0.600	D	0.279	K
Volusia County	Southwest Regional	US 17/92 & Enterprise Rd, Debarry	D	285430		811933	D	350	D	3	P	HI	M	0.500	Pa	0.280	P
Volusia County	Spruce Creek	Taylor Rd & Lindy Lp, Daytona Bch	D	290443		810318	D	3500	D	2	M	BA	M	0.350	D	0.187	K
																	WWTPLIST

Source: Adapted from SJRWMD WastewaterTreatment and Reuse Inventory for 1995

TABLE 3 - EXAMPLE EXPANDED COST SUMMARY

System Interconnection

Project Name, Potential Flow

Project Description Section

Preliminary Cost Estimate

Capital Cost		
Pipeline Capital Cost[1]		$0
Pump Station (mgd*$/gallon/day)		0
Storage Tank (mg tank @ $/tank)		0
Land (acres @ $/acre)		0
Capital Cost Subtotal		0
Contingency:		
Engineering Design and Construction Phase Services @ 15%	0	
Administration, Legal, Etc. @ 10%	0	
General Contingency @ 20%	0	
Total Contingency @45%		0
Total Capital Cost		**$0**
Annual Cost		
Annual Capital Cost (based on composite life and 7% interest)		$0
Annual Operating and Maintenance (O&M) Cost		
Power		0
Pipeline O&M ($/1000 gallons*0 mgd*365 days)		0
G&A ($/1000 gallons*0 mgd*365 days)		0
		0
Operations and Maintenance Subtotal		$0
Evaluation and Monitoring		0
Total Annual O&M		$0
Total Annual Cost (Capital and O&M)		**$0**

[1] Pipe Diameter (in) | Total Link Length (ft) | Pipeline Cost ($/dia. in*foot)

0	0	$0
0	0	0
0	0	0
0	0	0
0	0	0
	Pipeline Capital Cost	$0

sjcostex

TABLE 4
EXAMPLE RANK OF INTERCONNECTIONS BY COST($/1000 GAL)

Interconnection Number	Project Name	Flow (mgd)	Capital Cost	Operation & Maintenance Cost	Cost $/1,000 gallons	Rank of Cost $/1,000 gallons

SJTAB4

TABLE 5

EXAMPLE CUMULATIVE RANKING MATRIX

Element Number	Project Name	Flow (mgd)	Route Characteristics	Availability of Supply Capacity	Availability of Facility Capacity	Water Quality Compatibility	Projected Deficits	Location	Total Score	Rank	Cost Rank	Rank Total	Overall Rank

SJTAB5

Appendix A

APPENDIX A

SPREADSHEET SUMMARY OF SJRWMD WASTEWATER TREATMENT AND REUSE SURVEY, MAY 1995

[redacted] STEW[redacted]EATME[redacted]REUSE[redacted]ORY [redacted]

County Code	Not Sub	Owner or Operator	Facility Name		Location		DEP Permit #		Latitude		Longitude		Population Served		Treatment Level			Disinfection Level			Permitted Treatment Capacity mgd		Permitted Reuse Capacity mgd		Jan.	Feb
1	N	Alachua; City of	Alachua	*	1/4 mi. S on US 441; SE 4 St	D	3101M02780		294653		822849	D	2500	D	2	Q	BA	R		0.400	R	0.400				
1		Gainesville Regional Util.	STP #1 & #2		200 SE 16th St.	D	3101M00222		293803		821933	D	55000	D	2	D	BA	M		7.500	D					
1		Gainesville Regional Util.	STP #5; Kanapaha	#	3901 SW 63rd St.	5	3101M1665		293706		822442	D	60200	5	3	5	HI	5		10.000	D	10.000		7.790	8.190	
1		Hawthorne; City of	Hawthorne		SE 2nd Ave. and Miller Dr.	D	3101M05011		293512		820432	D	1100	D	2	D	BA	M		0.150	D	0.150				
1	N	Newberry; City of	Newberry	*	S of city limit; 9th St.	D	3101M06080		293800		823700	D	3870	D	2	Q	BA	R		0.415	R	0.415				
1	N	Turkey Creek; Inc.	Family Diner (Turkey Cr.)	*	US 441; 5mi. S of Alachua	D	3101P00170		294528		822529	D	3500	D	2	Q	BA	R		0.350	R	0.060				
1		University of Florida	U of Fla.; Lake Alice	#	Museum Dr.; U. of F. campus	5	3101S00709		293802		822100	D	45000	5	3	5	HI	5		3.000	D	3.000		1.390	1.600	
1	N	Waldo; City of	Waldo	*	East North Street	D	3101M01663		294728		821000	D	790	D	2	D	BA	M		0.100	D					
3	N	Florida Dept. of Corrections	Baker Correctional Inst.	*	US 90; 3.5 mi. E of Olustee	D	3102S00165		301250		822230	D	1280	D	2	D	BA	M		0.190	D					
3		Macclenny; City of	Macclenny STP		SR 121 at at Turkey Cr.	D	3102M01828		301610		820730	D	2500	D	2	D	BA	M		0.636	D	0.636				
3		NE Fla. State Hospital	NE Florida State Hospital	#	SR 121 4 mi. S. of Macclenny	5	3102S00027		301533		820817	D	1686	5	2	5	BA	5		0.300	D			0.148	0.158	
9		Aquarina Dev.; Inc.	Aquarina Utility		SR A1A S Melbourne Beach	S	3005P00330		275530		802930	D	225	S	2	M	HI	D		0.300	S					
9		Brevard County	John D. Wright Regional (North?	#	2880 Pine Ave; Mims	5	3005C00439		284105		805225	D	2600	5	2	5	BA	5		1.000	5	1.000		0.235	0.233	
9		Brevard County	Port St. John	#	3710 Juanita; Cocoa	5	3005C04012		282848		804655	D	2341	5	2	5	IM	5		0.350	5	0.350	O	0.192	0.189	
9		Brevard County	South Beaches Regional	#	2800 S A1A; Melbourne Beach	5	3005C02330		280229		803240	D	15000	5	2;3	5	BA;HI	5		9.000	5	1.560	O	5.813	5.880	
9		Brevard County	South Central Regional	#	10001 N. Wickham Road; Melbourne	5	3005C01639		281200		804730	D	18000	5	3	5	HI	5		3.000	5	3.000	O	1.457	1.629	
9		Brevard County	Sykes Creek Regional	#	3630 N. Courtenay Pkwy.; Merritt Island	5	3005C01839		282533		804222	D	25800	5	3	5	HI	5		6.000	5	4.500	O	3.388	3.403	
9		Cape Canaveral; City of	Cape Canaveral	#	600 Tower Blvd.; Cape Canaveral	5	3005M01158		282322		803704	D	5300	D	2	5	BA	M		1.800	5	1.800		1.010	1.130	
9		Cocoa Beach; City of	Cocoa Beach	#	1600 Minutemen Cswy; Cocoa Bch	5	3005M00413		281903		803802	D	26000	5	3	5	HI	5		6.000	5	6.000	O			
9		Cocoa; City of	Jerry Sellers	#	US 1 Taft & Bellefonte	5	3005M01167		282145		804454	D	20000	5	3	5	HI	5		4.500	5	4.500	O	2.130	2.330	
9		Connecticut Gen. Util.	Snug Harbor Village		7600 US-1; Micco	D	3005P00265		275332		803041	D	500	D	2	M	BA	M		0.100	D	0.100				
9		Florida Cities Water Co.	Barefoot Bay	#	Dottie Lane; Barefoot Bay	5	3005P03394		275330		803200	D	9000	5	2	5	BA	5		0.900	5	0.900		0.608	0.605	
9		Great Outdoors	Great Outdoors		4505 W. SR 50; Titusville	D	3005P03381		283050		805135	D	750	D	2	M	HI	M		0.253	D	0.253				
9		Patrick Air Force Base	Cape Canaveral Main		Industrial Rd; C Canaveral AFS	D	3005F00582		282942		803503	D	3500	D	2	M	BA	M		0.490	D	0.490				
9		*Melbourne; City of*	*David B. Lee*	#	*Appolo Blvd.; Melbourne*	2	*3005M00200*		*280715*		*803805*	D	*31673*	5	3	5	*HI*	5		*5.000*	5	*0.500*	O	*2.850*	2.670	
9		Melbourne; City of	Grant Street	#	2300 S Grant St; Melbourne	D	3005M00201		280424		803736	D	31088	5	2	5	HI	5		5.100	5	0.500	O	3.760	3.580	
9		Palm Bay Utility Commission	Palm Bay	#	1103 Troutman Blvd.	5	3005M02746		280100		803639	D	75000	5	3	5	HI	5		5.200	5	1.200	O	2.394	2.562	
9		Rockledge; City of	Rockledge	#	1700 S. Garden Rd; Rockledge	5	3005M00302		281945		804303	D	17000	5	2	5	BA;HI	5		4.500	5	0.045	O	1.610	1.770	
9		Sun Lake Estates Home Owner	Sun Lake Estates		Canaveral Blvd.; Sharps	D	3005P00377		282533		804608	D	1350	D	2	M	BA	M		0.135	D	0.135				
9		Lakes of Melbourne	Lakes of Melbourne	#	4000 Hollywood Blvd.; Melbourne	5	3005P00313		280320		804102	D	750	5	2	5	BA	5		0.130	5			0.061	0.057	
9		Titusville; City of	North Water Reclamation	#	1105 Buffalo Road	5	3005M00336		283724		804856	D	40865	5	2	5	HI	5		2.750	5	2.750		3.021	3.664	
9		Titusville; City of	South		1125 Knox Mckrae Drive; Titusville	S	3005M01162		283357		804901	D	17228	S	2	S	BA	S		2.000	S					
9		Kennedy Space Center (NASA)	S.T.P. #1	#	Kennedy Space Center; M6-895; Industrial Area	5	3005F00103		283100		803915	D	5458	5	2	5	BA	5		0.375	S	0.375		0.120	0.135	
9		Kennedy Space Center (NASA)	S.T.P. #10	#	Kennedy Space Center; Visitor Infor. Center	5	3005F00104		283119		804103	D	6005	5	2	5	BA	5		0.100	5			0.031	0.039	
9		Kennedy Space Center (NASA)	S.T.P. #4	#	Kennedy Space Center; K6-792; LC-39 Area	5	3005F00217		283520		803804	D	7422	5	2	5	BA	5		0.200	5	0.200		0.085	0.096	
9		West Melbourne; City of	West Melbourne	#	1415 Henry Avenue; West Melbourne	5	3005M02329		280432		803838	D	13000	5	2	5	X	5		1.930	5	1.930		0.940	1.040	
19		Avery; Ron	Mid Clay		Near SR 739A; Orange Park	D	3110P01246		300324		814732	D	1500	D	2	M	BA	M		0.150	D	0.150				
19		Clay County Utility Authority	Fleming Island System	#	5680 US 17 South; 3 mi. S of Orange Park	5	3110C01677		300506		814323	D	3978	5	2	5	BA	5		0.750	D					
19		Clay County Utility Authority	Fleming Oaks	#	6572 Bahia Rd; Fleming Island	5	3110C00281		300430		814215	D	4760	5	2	5	BA	5		0.720	D			0.707	0.628	
19		Clay County Utility Authority	Meadow Lakes	#	2727 Henley Road; Green Cove Springs	5	3110C07???		300324		814732	D	790	5	2	5	BA	5		0.150	D			0.048	0.065	
19		Clay County Utility Authority	Miller Street	#	1000 Miller St.; Orange Park	5	3110C05475		301040		814146	D	38256	5	2	M	BA	5		5.000	D			4.181	4.087	
19		Clay County Utility Authority	Ridaught Landing	#	SR 21 AND CR 220A; Middleburg	D	3110C05520		300545		814729	D	9794	5	2	5	BA	5		1.300	D			0.797	0.775	
19		Florida National Guard	Camp Blanding		SR 16; E of Starke	D	3110S02709		295640		815720	D	5000	D	2	M	BA	M		0.900	D					
19		Green Cove Spr; City of	Green Cove Springs		Harbor Rd.	D	3110M00851		300025		814130	D	7597	[redacted]	2	M	BA	M		1.200	D					
19		Green Cove Spr; City of	S Green Cove Springs		3 mi. E of US 17 and SR 16	D	3110M01826		295910		814005	D	5000	D	2	M	BA	M		0.500	D					
19		Orange Park; Town of	Orange Park	#	700 Ash St.; Orange Park	5	3110M04233		301015		814237	D	9978	5	2	5	BA	5		2.500	D			1.516	1.258	
31		Atlantic Beach; City of	Atlantic Beach	#	1100 Sandpiper Lane; Atlantic Beach	5	3116M00473		302007		812432		15000	5	2	5	BA	5		2.000	5			2.630	2.250	
31		Atlantic Beach; City of	Buccaneer	#	739 Wonderwood Dr; Jacksonville	5	3116M00108		302213		812442	D	10000	5	2	5	BA	5		1.300	D	0.100		1.076	1.055	
31		Baldwin; town of	Baldwin		Main Street; Baldwin	D	3116M06085		301740		815830	D	1320	D	2	M	BA	M		0.200	D					
31		Beauclerc Utilities	Brierwood Subdivision	#	8460 Brierwood Road; Jax.	5	3116P00074		301341		813555	D	2470	5	2	5	BA	5		0.741	D			0.605	0.559	
31		Demetree; Jack C.	Villa del Rio; Ortega Arms		5000 Ortega Farms Blvd.; Jax.	D	3116P02807		301507		814306	D	1239	[redacted]	2	M	BA	M		0.250	D					
31		Jacksonville Bch; City of	Jacksonville Beach	#	910 10th Street South; Jax Beach	5	3116M00293		301642		812300	D	1235	5	3	5	HI	5		0.500	D	0.500		0.074	0.046	
31		Jacksonville Bch; City of	Jacksonville Beach	#	910 10th Street South; Jax Beach	5	3116M00293		301642		*812351*		16765	5			BA	5		4.500				3.150	2.680	
31		Jacksonville Port Auth.	International Airport		2111 Cole Flyer Rd.; Jax.	D	3116M03144		302910		814044	D	5000	D	2	M	BA	M		0.500	D					
31		Jacksonville; City of	Arlington East	#	1555 Millcoe Rd.; Jax.	5	3116M00035		302044		813230	D	100000	D	2	5	BA	5		11.000	D			9.360	8.760	
31		Jacksonville; City of	Buckman	#	2221 Buckman St.; Jax.	5	3116M01973		302108		813742	D	350000	D	2	5	BA	5		52.500	D	3.700		38.220	35.810	
31		Jacksonville; City of	District II	#	1840 Cedar Bay Rd.; Jax.	5	3116M01479		302532		813707	D	35486	[redacted]	2	5	BA	5		10.000	D			4.320	4.310	
31		Jacksonville; City of	Mandarin	#	10828 Hampton Road; Jax.	5	3116M03343		301050		813720	D	40000	D	2	5	BA	5		5.000	D			4.390	4.210	
31		Jacksonville; City of	Southwest District	#	5420 118th St. and Catoma St.; Jax.	5	3116M05144		301350		814310	D	50000	D	2	5	BA	5		10.000	D			6.610	6.070	
31		Neptune Beach; City of	Neptune Beach	#	2010 Forest Avenue; Neptune Beach	5	3116M00812		301854		812515	D	6700	5	2	5	BA	5		1.500	D			1.755	1.727	
31		Normandy Village Util.	Normandy Village		7800 DeLeroche Dr.; Jax.	D	3116P02091		301640		814630	D	3500	D	2	M	BA	M		0.400	D					
31		*Ortega Utilities*	*Airport*		14690 Duval Rd.; Jax.	D	3116P02051		302841		813845	D	690	D	2	M	BA	M		0.175	D					
31		Ortega Utilities	Blanding		7703 Blanding Blvd.; Jax.	D	3116P03428		301226		814407	D	6235	[redacted]	2	M	BA	M		0.350	D					
31		Shadowrock Utility; Inc.	Springtree Village	#	End of Willison Road; West I-295	5	3116P01681		301556		814727	D	2800	5	2	5	BA	5		0.300	D	0.300		0.215	0.206	
31		Southern States Utilities	Beacon Hills		Beacon Drive; Jax.	D	3116P01328		302255		813114	D	7351	[redacted]	2	M	BA	M		1.800	D					
31		Southern States Utilities	Woodmere Subdivison		5710 Edenfield rd.; Jax.	D	3116P02312		302712		813610	D	5000	D	2	M	BA	M		0.500	D					
31		United States Navy	Cecil Field	#	Bldg. 1A; Cecil Field	5	3116F00271		301324		815312	D	8512	5	2	5	HI	5		1.200	D			0.756	0.779	
31		United States Navy	Mayport		Bon Homme Richard St.; Mayport	D	3116F00252		302349		812351	D	17670	D	2	M	BA	M		1.800	D					
31		United States Navy	Naval Air Station		NAS Bldg. 826; NAS Jax.	D	3116F00260		301429		814033	D	15516	[redacted]	2	M	BA	M		3.000	D					
31		United Water Florida	Holly Oaks subdiv.	#	10797 Ft. Caroline Rd.; Jax.	5	3116P00901		302122		813120	D	7805	5	3	5	BA	5		1.000	D			0.615	0.614	
31		United Water Florida	Jacksonville Heights	#	5957 Tampico Rd.; Jax.	5	3116P01970		301425		814705	D	12082	5	3	5	BA	5		2.500	D			1.059	0.993	
31		United Water Florida	Monterey Subdivison	#	5802 Harris St.; Jax.	5	3116P01316		301945		813610	D	18361	5	3	5	BA	5		3.000	D			2.778	2.695	
31		United Water Florida	Ortega Hills Subdivision	#	5033 Greenway Drive; Jax.	5	3116P00334		301306		814248	D	1533	5	3	5	BA	5		0.170	D			0.236	0.182	

Facility Name	Monthly Wastewater Treatment Flow										Mean Flow mgd		DEP Reuse Total		DEP Unreused Flow mgd	DEP reuse for wetlands & recharge	Unreused flow plus wetlands & recharge	Disposal							
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec								Evap./ Perc. Pond	Over land flow	Spray Field	Surf. Disch.	Under ground inject.	Reuse	Other	
Alachua											0.347	R	0.347	R	0.000	0.000	0.000						0.347		R
STP #1 & #2											4.626	K	0.000	D	4.626	0.000	4.626								D
STP #5; Kenapaha	7.360	6.150	5.170	7.430	7.640	6.640	6.910	8.270	8.240	7.190	7.248		0.300	5	6.948	0.000	6.948					6.700	0.300		5
Hawthorne											0.116	EF	0.116	D	0.000	0.116	0.116						0.116		D
Newberry											0.280		0.280	R	0.000	0.000	0.000						0.280		R
Family Diner (Turkey Cr.)											0.058		0.058	R	0.000	0.000	0.000						0.058		R
U of Fla.; Lake Alice	1.590	1.950	1.410	1.680	1.780	1.860	1.960	1.900	1.500	1.420	1.670		0.350	5	1.320	0.000	1.320					1.320	0.350		5
Waldo											0.084	EF	0.000	D	0.084	0.000	0.084								D
Baker Correctional Inst.											0.135	EF	0.000	D	0.135	0.000	0.135								D
Macclenny STP											0.561	K	0.561	D	0.000	0.000	0.000						0.561		D
NE Florida State Hospital	0.115	0.113	0.116	0.139	0.101	0.133	0.106	0.124	0.093	0.115	0.122		0.000	D	0.122	0.000	0.122		0.121						5
Aquarina Utility											0.004		0.000	S	0.004	0.000	0.004								S
John D. Wright Regional (North?	0.224	0.230	0.233	0.300	0.279	0.278	0.240	0.266	0.336	0.269	0.260		0.260	5	0.000	0.266	0.266	0.238					0.260	0.022	5
Port St. John	0.213	0.198	0.192	0.219	0.212	0.215	0.209	0.210	0.284	0.269	0.217		0.217	5	0.000	0.240	0.240	0.200					0.217		5
South Beaches Regional	5.720	5.494	5.684	6.667	6.658	7.716	7.258	7.803	7.719	6.629	6.587		0.669	5	5.918	0.000	5.918					5.540	0.669		5
South Central Regional	1.696	1.667	1.701	1.984	1.826	2.193	1.943	2.097	2.214	1.950	1.863		1.032	5	0.831	0.000	0.831	0.545					1.032		5
Sykes Creek Regional	3.115	3.385	3.443	3.790	3.991	4.054	4.206	4.437	3.756	3.870	3.737		0.825	5	2.912	0.000	2.912					3.311	0.825		5
Cape Canaveral	1.100	1.030	0.940	1.050	1.070	1.110	1.210	1.300	1.550	1.410	1.159		1.159	5	0.000	1.159	1.159				1.160		1.159		5
Cocoa Beach											4.200		4.200	5	0.000	0.000	0.000				1.047		4.200		5
Jerry Sellers	2.280	2.230	2.240	2.810	2.570	3.400	3.630	3.470	3.160	2.870	2.760		1.090	5	1.670	0.000	1.670				1.670		1.090		5
Snug Harbor Village											0.053	EF	0.053	D	0.000	0.053	0.053						0.053		D
Barefoot Bay	0.538	0.494	0.413	0.684	0.596	0.645	0.671	0.698	0.651	0.559	0.597		0.080	5	0.517	0.080	0.597			0.093	0.534		0.080		5
Great Outdoors											0.079	EF	0.079		0.000	0.000	0.000						0.079		
Cape Canaveral Main			0.133		0.134			0.145		0.119	0.133	K	0.133	D	0.000	0.133	0.133						0.133		D
David B. Lee	2.520	2.290	3.420	4.210	4.830	4.860	4.970	5.040	4.430	4.200	3.858		1.540	R	2.318	0.000	2.318					2.950	1.540		5
Grant Street	3.480	3.450	4.420	3.130	4.610	4.430	4.300	4.460	3.560	3.240	3.868		0.340	R	3.528	0.000	3.528					3.120	0.340		5
Palm Bay	2.498	2.263	1.931	2.800	2.494	2.962	2.924	2.904	2.868	2.675	2.606		0.941	5	1.665	0.000	1.665					2.606	0.941		5
Rockledge	1.720	1.690	1.580	1.770	1.100	1.320	1.480	1.330	1.250	1.900	1.543		0.539	5	1.004	0.000	1.004					0.810	0.941		5
Sun Lake Estates											0.143	EF	0.143	D	0.000	0.143	0.143						0.143		
Lakes of Melbourne	0.054	0.053	0.046	0.054	0.066	0.068	0.067	0.064	0.069	0.068	0.060		0.000	5	0.060	0.000	0.060	0.060							5
North Water Reclamation	3.165	2.159	2.502	2.722	2.726	3.390	3.060	3.329	3.774	2.984	3.041		2.980	5	0.061	0.000	0.061						2.980		5
South											1.800		0.000	S	1.800	0.000	1.800								S
S.T.P. #1	0.150	0.142	0.131	0.159	0.145	0.172	0.156	0.131	0.159	0.150	0.146		0.146	5	0.000	0.182	0.182			0.145			0.146		5
S.T.P. #10	0.040	0.036	0.030	0.031	0.042	0.045	0.030	0.031	0.027	0.035	0.035		0.000	5	0.035	0.000	0.035	0.035							5
S.T.P. #4	0.102	0.109	0.112	0.122	0.115	0.117	0.112	0.103	0.095	0.086	0.105		0.105	5	0.000	0.105	0.105						0.105	0.105	5
West Melbourne	1.000	0.990	0.930	1.100	1.130	1.340	1.350	1.230	1.270	1.080	1.117		0.160	5	0.957	0.105	1.062			0.025		0.950	0.160		5
Mid Clay											0.159	EF	0.159		0.000	0.159	0.159						0.159		
Fleming Island System		0.348	0.333	0.488	0.518	0.531	0.503	0.516	0.499	0.495	0.470		0.000		0.470	0.000	0.470				0.470				5
Fleming Oaks	0.645	0.452	0.310	0.216	0.192	0.205	0.211	0.237	0.220	0.213	0.353		0.000		0.353	0.000	0.353				0.353				5
Meadow Lakes	0.063	0.069	0.050	0.070	0.076	0.076	0.079	0.084	0.071	0.088	0.070		0.000	5	0.070	0.000	0.070	0.081							5
Miller Street	3.910	3.703	3.700	4.124	4.032	3.787	4.090	4.179	3.923	3.778	3.958		0.000		3.958	0.000	3.958				3.958				5
Ridaught Landing	0.767	0.760	0.748	0.860	0.793	0.789	0.765	0.872	0.846	0.780	0.796		0.000		0.796	0.000	0.796				0.796				5
Camp Blanding											0.664	K	0.000		0.664	0.000	0.664								D
Green Cove Springs											0.803	K	0.000		0.803	0.000	0.803								D
S Green Cove Springs											0.529	EF	0.000		0.529	0.000	0.529								D
Orange Park	1.200	1.166	1.127	1.230	1.774	1.669	1.473	1.517	1.576	1.457	1.414		0.000		1.414	0.000	1.414				X				5
Atlantic Beach	2.040	1.880	1.830	1.960	2.010	2.560	2.510	2.420	2.260	2.540	2.238		0.000	5	2.238	0.000	2.238				X				5
Buccaneer	0.990	0.969	0.941	0.982	1.035	1.050	1.065	1.159	1.052	0.959	1.028		0.001	5	1.027	0.000	1.027				1.000		0.001		5
Baldwin											0.140	EF	0.000	D	0.140	0.000	0.140								D
Brierwood Subdivision	0.525	0.510	0.504	0.503	0.588	0.616	0.627	0.644	0.625	0.598	0.575		0.000	5	0.575	0.000	0.575				0.575				5
Villa del Rio; Ortega Arms											0.131	K	0.000	D	0.131	0.000	0.131								D
Jacksonville Beach	0.152	0.227	0.378	0.264	0.330	0.139	0.199	0.135	0.173	0.097	0.185		0.185	5	0.000	0.000	0.000						0.185		5
Jacksonville Beach	2.030	2.270	2.230	2.380	1.860	1.930	2.300	3.800	4.730	2.980	2.695		0.000		2.695	0.000	2.695				2.700				5
International Airport											0.529	EF	0.000	D	0.529	0.000	0.529								D
Arlington East	8.230	8.210	8.480	10.190	11.000	9.590	10.110	11.380	10.370	8.900	9.548		0.000	5	9.548	0.000	9.548				9.550				5
Buckman	32.470	32.170	30.890	40.570	42.240	39.040	39.860	52.230	43.960	38.230	38.808		3.700	5	35.108	0.000	35.108				38.810		3.700		5
District II	3.260	3.120	2.970	3.630	3.910	3.800	3.530	4.610	3.790	3.760	3.751	5	0.000	5	3.751	0.000	3.751				3.750				5
Mandarin	4.090	3.980	4.090	4.410	4.510	4.610	4.580	4.650	4.630	4.420	4.381		0.000	5	4.381	0.000	4.381				4.380				5
Southwest District	5.950	5.910	5.990	7.110	7.110	7.120	6.320	7.040	6.350	6.210	6.483		0.000	5	6.483	0.000	6.483				6.480				5
Neptune Beach	1.500	1.527	0.721	0.838	0.835	0.835	0.900	1.250	1.100	1.200	1.182		0.000	5	1.182	0.000	1.182				1.183				5
Normandy Village											0.293	K	0.000	D	0.293	0.000	0.293								D
Airport											0.073	EF	0.000	D	0.073	0.000	0.073								D
Blanding											0.659	K	0.000	D	0.659	0.000	0.659								D
Springtree Village	0.207	Lost	0.200	0.219	0.225	0.234	0.279	0.214	0.217	0.208	0.202		0.202	5	0.000	0.202	0.202	0.210					0.202		5
Beacon Hills											0.777	K	0.000	D	0.777	0.000	0.777								D
Woodmere Subdivison											0.529	K	0.000	D	0.529	0.000	0.529								D
Cecil Field	0.662	0.700	0.695	0.942	0.928	1.010	0.921	0.883	0.700	0.597	0.798		0.000	5	0.798	0.000	0.798				0.700				5
Mayport											1.296	K	0.000	D	1.296	0.000	1.296								D
Naval Air Station											1.640	K	0.000	D	1.640	0.000	1.640								D
Holly Oaks subdiv.	0.587	0.614	0.596	0.646	0.672	0.678	0.641	0.736	0.682	0.631	0.643		0.000	5	0.643	0.000	0.643				X		X		5
Jacksonville Heights	0.891	0.862	0.874	1.060	1.229	1.334	1.144	1.305	1.090	0.998	1.070		0.000	5	1.070	0.000	1.070				X		X		5
Monterey Subdivison	2.539	2.590	2.781	3.031	3.131	2.882	2.908	3.683	3.466	3.143	2.969		0.000	5	2.969	0.000	2.969				X		X		5
Ortega Hills Subdivision	0.142	0.117	0.112	0.164	0.201	0.189	0.160	0.188	0.181	0.168	0.170		0.000	5	0.170	0.000	0.170				X				5

Facility Name	Receiving Water body for surface discharge		Anticipated Upgrade or Expansion		Reuse broken down into major categories: Agricultural Irrigation								Agricultural Irrigation Reuse Broken Down Into Subcategories								Public Area Reuse Broken down			
					Agric. & Silviculture	Golf	Public Non-golf	Comm./ Indust.	Wet lands	Gr Wat Rech	Other	Reuse Total		Citrus	Other Edible Crops	Feed/ Fodder	Pasture	Sod Farm	Tree Farm	Wholesale Nursery	Other	Oriental Reuse System	Pond; Pool; Fount.	Golf Course	Stadium; Park; & Playgr.
Alachua					0.347							0.347	R												
STP #1 & #2	Creek	D										0.000	D												
STP #5; Kanapaha		#	Yes	5		0.400	0.150					0.300	5												
Hawthorne										0.116		0.116	D												
Newberry					0.280							0.280	D												
Family Diner (Turkey Cr.)					0.058							0.058	D												
U of Fla.; Lake Alice	Lake Alice	#	No	5				0.250				0.350	5											0.100	
Waldo	Wetland	D										0.000	D												
Baker Correctional Inst.												0.000	D												
Macclenny STP	Turkey Cr/St Marys				0.561							0.561	D												
NE Florida State Hospital	J Rowe Br/St. Marys	#	Yes	5								0.000	D												
Aquarina Utility						0.250	0.050					0.000	S												
John D. Wright Regional (North?		#	Yes	5						0.266	0.001	0.260	5												
Port St. John		#	Yes	5			0.031			0.240	0.001	0.217	5												0.015
South Beaches Regional		#	Yes	5		0.493	0.176					0.669	5											0.493	
South Central Regional		#	Yes	5	0.265	0.427	0.340					1.032	5					0.265				0.340		0.427	
Sykes Creek Regional		#	X	5	0.405	0.260	0.145				0.015	0.825	5	0.390						0.015				0.260	
Cape Canaveral	Banana River	#	Yes	5						1.159		1.159	5												
Cocoa Beach	Banana River	#	No	5		1.000	3.200					4.200	5									3.000		1.000	0.200
Jerry Sellers	Indian River Lagoon	#	Yes	5			1.050	0.010			0.030	1.090	5									0.810	0.030		0.050
Snug Harbor Village										0.053		0.053	5												
Barefoot Bay	San Sebastian Canal	#	Yes	5						0.080		0.080	5												
Great Outdoors						0.079						0.079	D												
Cape Canaveral Main										0.133		0.133	D												
David B. Lee	Crane Creek (emergency)	#	Yes	5		0.700	0.740				0.100	1.540	5											0.700	0.040
Grant Street	Crane Creek (emergency)	#	Yes	5		0.240					0.100	0.340	5											0.240	
Palm Bay		#	No	5		0.500	0.441					0.941	5									0.209		0.500	0.097
Rockledge		#	No	5	0.162	0.199	0.160	0.018				0.539	5							0.162				0.199	
Sun Lake Estates										0.143		0.143	D												
Lakes of Melbourne		#	X	5								0.000	5												
North Water Reclamation	Titusville Wetland System	#	No	5			2.980					2.980	5									2.980			
South	Indian RiVer Lagoon	S										0.000	S												
S.T.P. #1		#	Yes	5					0.182			0.146	5												
S.T.P. #10		#	No	5								0.000	5												
S.T.P. #4		#	Yes	5						0.105		0.105	5							0.105					
West Melbourne		#	Yes	5			0.110				0.050	0.160	5											0.110	
Mid Clay										0.159		0.159													
Fleming Island System	St. Johns River	#	Yes	5								0.000												X	
Fleming Oaks	St. Johns River	#	No	5								0.000													
Meadow Lakes		#	Yes	5								0.000													
Miller Street	St. Johns River	#	Yes	5								0.000													
Ridaught Landing	Little Black Creek	#	Yes	5								0.000													
Camp Blanding	S Fk Black Cr/St. J.	D										0.000													
Green Cove Springs	St. Johns River	D										0.000													
S Green Cove Springs	St. Johns River	D										0.000													
Orange Park	St. Johns River	#	No	5								0.000													
Atlantic Beach		#	Yes	5								0.000	5												
Buccaneer		#	Yes	5			0.001					0.001	5												
Baldwin	Cedar R./St. Marys	D										0.000	D												
Brierwood Subdivision	Goodby's Lake	#	No	5								0.000	5												
Villa del Rio; Ortega Arms	Ortega/St. Johns R.	D										0.000	D												
Jacksonville Beach		#	No	5		0.185						0.185	5											0.185	
Jacksonville Beach	St. Johns River	#	No	5								0.000													
International Airport	Cedar Cr./St. Johns	D										0.000	D												
Arlington East	St. Johns River	#	Yes	5								0.000	5												
Buckman	St. Johns River	#	No	5				3.700				3.700	5												
District II	St. Johns River	#	No	5								0.000	5												
Mandarin	St. Johns River	#	Yes	5								0.000	5												
Southwest District	St. Johns River	#	No	5								0.000	5												
Neptune Beach	St. Johns River	#	No	5								0.000	5												
Normandy Village	Wells Br./St. Johns	D										0.000	D												
Airport	L. Cedar Cr./ St J.	D										0.000	D												
Blanding	Ortega/St. Johns R.	D										0.000	D												
Springtree Village		#	No	5						0.202		0.202	5												
Beacon Hills	St. Johns River	D										0.000	D												
Woodmere Subdivison	Fairfield Br/St Johns	D										0.000	D												
Cecil Field	Rowell Cr./St. Johns	#	No	5								0.000	5												
Mayport	St. Johns River	D										0.000	D												
Naval Air Station	St. Johns River	D										0.000	D												
Holly Oaks subdiv.	Cowhead Cr./St. J.	#	Yes	5								0.000	5							0.030					
Jacksonville Heights	Ortega River	#	Yes	5								0.000	5							0.090					
Monterey Subdivison	St. Johns River	#	Yes	5								0.000	5							0.040					
Ortega Hills Subdivision	Ortega/St. Johns R.	#	No	5								0.000	5												

Facility Name	Into Subcategories: Lawn & Landscape	Cemetery	Other	Ground Water Recharge Cats. Drain or Ponds	RIBS		Information in paper or GIS files: Large Individual Reuse Sites	Reuse Charge Rates	Ordinance or Incentive Program	Map of Reuse Lines and Sites	WASTEWATER TREATMENT AND REUSE SURVEY MAILING LIST CONTACT NAME AND TITLE	AFFILIATION	ADDRESS
Alachua											Paul O'Dea; Director of Public Works	City of Alachua	P.O. Box 9; Alachua; FL; 32615-0
STP #1 & #2											David Richardson; Senior Engineer	City of Gainesville	301 SE 4th Avenue
STP #5; Kanapaha						5				X	David Richardson; Senior Engineer	City of Gainesville	301 SE 4th Avenue
Hawthorne				0.116							John McFarlane; City Manager	City of Hawthorne	P.O. Box 1270
Newberry				0.280							Blaine Suggs; Utilities Director	City of Newberry	P.O. Box 369;
Family Diner (Turkey Cr.)				0.058								Turkey Creek; Inc.	P.O. Box 158;
U of Fla.; Lake Alice						5	X			X	Ken Kisida	UF Reclamation	Bldg. 702; SW Radio Road; PO Bo
Waldo											Steve F. Henning; City Manager	City of Waldo;	P.O. Drawer B
Baker Correctional Inst.											David Scott; Prison Facilities Chief	Florida Dept. of Corrections	2601 Blair Stone Rd.
Macclenny STP											Gerald Dopson; City Manger	City of Macclenny	118 E. Macclenny Ave.
NE Florida State Hospital						5					Jack A. LaLonde; Utilities Supervisor	Northeast Florida State Hospital	Rt. 1; Box 519
Aquarina Utility											James Bates; Vice Pres.	Aquarina Developments	235 Hammock Shore Dr.
John D. Wright Regional (North?				0.266		5	X	X		X	T. Scott Linkenhoker; Water & Wastewater Dir.	Brevard County Utility Dept.	2725 St. Johns St.
Port St. John			0.016	0.240		5	X	X		X	T. Scott Linkenhoker; Water & Wastewater Dir.	Brevard County Utility Dept.	2725 St. Johns St.
South Beaches Regional	0.176					5	X	X			T. Scott Linkenhoker; Water & Wastewater Dir.	Brevard County Utility Dept.	2725 St. Johns St.
South Central Regional						5	X	X		X	T. Scott Linkenhoker; Water & Wastewater Dir.	Brevard County Utility Dept.	2725 St. Johns St.
Sykes Creek Regional	0.145					5	X	X		X	T. Scott Linkenhoker; Water & Wastewater Dir.	Brevard County Utility Dept.	2725 St. Johns St.
Cape Canaveral				1.159		5					Michael G. Gluskin; Public Works Director	City of Cape Canaveral	P.O. Box 326
Cocoa Beach						5	X	X	Yes		Dennis D. Hart; Supt.-Ops./Admin.	City of Cocoa Beach	P.O. Box 320280
Jerry Sellers		0.160				5		X	Yes	X	Carl Larrabee; Jr.; Acting Utilities/Public Works Dir.	City of Cocoa	600 School St
Snug Harbor Village				0.053								Connecticut General Utilities	7600 U.S. Highway 1
Barefoot Bay				0.080		5	X	X	No	X	Julie Karleskint; PE; Ops. Manager	Florida Cities Water Company	4837 Swift Rd.; Suite 100
Great Outdoors											Lynn R. Hansel; Vice President	The Great Outdoors	4505 W. SR 50
Cape Canaveral Main				0.133		D					Base Administration	Patrick AFB	6550 Air Base Group
David B. Lee	0.700						X	Yes	No	X	Geoffrey S. Mitskevich; Asst. Adm.	City of Melbourne	2891 Harper Rd
Grant Street							X	Yes	No	X	"	"	"
Palm Bay	0.135					5	X	No	No		Richard L. Nipper; Operations Division Manager	Palm Bay Utility Commission	1103 Troutman Blvd
Rockledge	0.160					5	X	X	Yes	X	Jim Elmore; Acting Director	City of Rockledge	P.O. Box 560488
Sun Lake Estates				0.143								Sun Lake Estates HOme Owners Assoc.	P.O. Box 430
Lakes of Melbourne						5					Steven Klein; Construction Supervisor	The Lakes of Melbourne	4000 Hollywood Blvd.
North Water Reclamation						5	X	X	Yes	X	Matt Hixson; Treatment Plant Chief Operator	City of Titusville	P.O. Box 2806
South											"	"	"
S.T.P. #1											Chuck Tatro; Water Resources Program	Environmental Mgmt. Office	Mail Code DE-EMO
S.T.P. #10						5					Chuck Tatro; Water Resources Program	Environmental Mgmt. Office	Mail Code DE-EMO
S.T.P. #4				0.105		5			No		Chuck Tatro; Water Resources Program	Environmental Mgmt. Office	Mail Code DE-EMO
West Melbourne						5	X	No	Yes	X	Brian R. Mascher; Project Manager	City of West Melbourne	2285 Minton Rd
Mid Clay				0.159							Ron Avery	Mid Clay	767 Blanding Blvd.; Suite 106
Fleming Island System						5	X	X	Yes	X	Tom Morris; Assistant to the Executive Director	Clay County Utility Authority	782 Foxridge Center Drive
Fleming Oaks						5					Tom Morris; Assistant to the Executive Director	Clay County Utility Authority	782 Foxridge Center Drive
Meadow Lakes						5					Tom Morris; Assistant to the Executive Director	Clay County Utility Authority	782 Foxridge Center Drive
Miller Street						5					Tom Morris; Assistant to the Executive Director	Clay County Utility Authority	782 Foxridge Center Drive
Ridaught Landing						5					Tom Morris; Assistant to the Executive Director	Clay County Utility Authority	782 Foxridge Center Drive
Camp Blanding											Lt. Col. Raymond O'Conner; State Quartermaster	Florida National Guard	P.O. Box 1008
Green Cove Springs											Richard C. Fellows	South Green Cove Springs WWTF	249 Walnut St
S Green Cove Springs											"	"	"
Orange Park						5			No		Philip Hendrix; Chief Operator	Town of Orange Park	700 Ash Street
Atlantic Beach	X					5			No		Timothy Townsend; Plants Division Director	City of Atlantic Beach	1100 Sandpiper Lane
Buccaneer						5			No		Harry E. McNally; Utility Plant Division Director	City of Altlantic Beach	1100 Sandpiper Ave.
Baldwin											Lula M. Hill; Town Clerk	Town of Baldwin	10 U.S. Highway 90 West
Brierwood Subdivision						5					Edward Bernard; Operations Manager	Beauclerc Utilities Company	8460 Brierwood Road
Villa del Rio; Ortega Arms											Jack C. Demetree	Villa del Rio/Ortega Arms Apts.	3740 Beach Blvd.
Jacksonville Beach						5	X	No	No	X	Donna Kaluzniak; Pollution Control Supervisor	City of Jacksonville Beach	910 10th St. South
Jacksonville Beach						5					Donna Kaluzniak; Pollution Control Supervisor	City of Jacksonville Beach	910 10th St. South
International Airport											John C. Mackroth; Managing Director	Jacksonville Airport Authority	2701 Tallyrand Ave.
Arlington East						5					David J. Kowalski; P.E.; Engineer Manager	City of Jacksonville	37-1 W. 1st St.
Buckman						5			No		David J. Kowalski; P.E.; Engineer Manager	City of Jacksonville	37-1 W. 1st St.
District II						5					David J. Kowalski; P.E.; Engineer Manager	City of Jacksonville	37-1 W. 1st St.
Mandarin						5					David J. Kowalski; P.E.; Engineer Manager	City of Jacksonville	37-1 W. 1st St.
Southwest District											David J. Kowalski; P.E.; Engineer Manager	City of Jacksonville	37-1 W. 1st St.
Neptune Beach						5					John C. Galen; P.E.; Director Public Services	City of Neptune Beach	2010 Forest Avenue
Normandy Village											Dororthy Letien	Normandy Village Utility	P.O. Box 37470
Airport											Alan W. Potter; President	Ortega Utilities	6957 Lillian Rd.
Blanding											"	"	"
Springtree Village				0.202		5					Thomas W. Goodell; President	Shadowrock Utility Inc.	P.O. Box 40276
Beacon Hills											SSU		
Woodmere Subdivison											SSU		
Cecil Field						5					Daniel R. Houston; Lead Operator	US Navy; Cecil Field	P.O. Box 108 USN-NAS Cecil Field
Mayport											"	"	"
Naval Air Station											"	"	"
Holly Oaks subdiv.						5					Phillip Heil; Vice President	United Water Florida	1400 Millcoe Road
Jacksonville Heights						5					Phillip Heil; Vice President	United Water Florida	1400 Millcoe Road
Monterey Subdivison						5					Phillip Heil; Vice President	United Water Florida	1400 Millcoe Road
Ortega Hills Subdivision						5					Phillip Heil; Vice President	United Water Florida	1400 Millcoe Road

Facility Name	CITY, STATE, Zip CODE	PHONE		
Alachua	Alachua; FL; 32615-0009	904-462-1231	Dir	
STP #1 & #2	Gainesville; FL; 32614	904-334-3400	"	
STP #5; Kanapaha	Gainesville; FL; 32614	904-334-3400	5	X
Hawthorne	Hawthorne; FL;32640	904-481-4232	DEP	
Newberry	Newberry ; FL; 32669	904-472-2161	Dir	
Family Diner (Turkey Cr.)	Alachua; FL 32615	904-462-5653	DEP	
U of Fla.; Lake Alice	Gainesville; FL; 32611-7735	904-329-1157	5	X
Waldo	Waldo; FL; 32694	904-468-1001	Dir	
Baker Correctional Inst.	Tallahassee; FL;	SC 277-1330	Don	
Macclenny STP	Macclenny; FL; 32063	904-259-6261	DEP	
NE Florida State Hospital	Macclenny; FL; 32063	904-259-6211	5	X
Aquarina Utility	Melbourne Beach; FL; 32951	407-723-2522	DEP	
John D. Wright Regional (North?	Melbourne; FL 32754	407-633-2093	5	X
Port St. John	Melbourne; FL 32754	407-633-2093	5	X
South Beaches Regional	Melbourne; FL 32754	407-633-2093	5	X
South Central Regional	Melbourne; FL 32754	407-633-2093	5	X
Sykes Creek Regional	Melbourne; FL 32754	407-633-2093	5	X
Cape Canaveral	Cape Canaveral; FL; 32920-032	407-868-1240	5	X
Cocoa Beach	Cocoa Beach; FL; 32931-0280	407-868-3223	5	X
Jerry Sellers	Cocoa; FL; 32922	407-639-7651	5	X
Snug Harbor Village	Micco FL; 32958	617-738-5520	DEP	
Barefoot Bay	Sarasota; FL; 34231	813-925-3088	5	X
Great Outdoors	Titusville; FL; 32780	407-269-5004	D	
Cape Canaveral Main	Patrick AFB; FL 32925	407-494-4041	DEP	
David B. Lee	Melbourne FL; 32904	407-722-6026	5	X
Grant Street	"	"		
Palm Bay	Palm Bay; FL 32905	407-952-3471	5	X
Rockledge	Rockledge; FL; 32956	407-690-3975	5	X
Sun Lake Estates	Sharpes; FL 32959	407-639-0370	D	
Lakes of Melbourne	Melbourne; FL; 32905	407-725-5500	5	X
North Water Reclamation	Titusville; FL; 32781	407-268-6084	5	X
South	"			
S.T.P. #1	Kennedy Space Center; FL; 3289	407-867-4049	5	X
S.T.P. #10	Kennedy Space Center; FL; 3289	407-867-4049	5	X
S.T.P. #4	Kennedy Space Center; FL; 3289	407-867-4049	5	X
West Melbourne	West Melbourne; FL 32904	407-984-0485	5	X
Mid Clay	Orange Park; FL 32073	904-276-2301	D	
Fleming Island System	Orange Park; FL 32065	904-272-5999	5	X
Fleming Oaks	Orange Park; FL 32065	904-272-5999	5	X
Meadow Lakes	Orange Park; FL 32065	904-272-5999	5	X
Miller Street	Orange Park; FL 32065	904-272-5999	5	X
Rideaught Landing	Orange Park; FL 32065	904-272-5999	5	X
Camp Blanding	St. Augustine; FL; 32085	904-356-7108	DEP	
Green Cove Springs	Green Cove Springs; FL; 32043	904-284-5621	DEP	
S Green Cove Springs	"			
Orange Park	Orange Park; FL; 32073	904-264-7411	5	X
Atlantic Beach	Atlantic Beach; FL 32233	904-247-5842	5	X
Buccaneer	Altlantic Beach; FL.; 32233	904-247-5838	5	X
Baldwin	Baldwin; FL; 32234-1832	904-266-4221	Dir	
Brierwood Subdivision	Jacksonville; FL; 32217	904-733-0894	5	X
Villa del Rio; Ortega Arms	Jacksonville; FL; 32207	904-396-7350	DEP	
Jacksonville Beach	Jacksonville Beach; FL; 32250	904-247-6294	5	X
Jacksonville Beach	Jacksonville Beach; FL 32250	904-247-6294	5	X
International Airport	Jacksonville; FL; 32206	904-633-5240	DEP	
Arlington East	Jacksonville; FL; 32206	904-630-4256	5	X
Buckman	Jacksonville; FL 32206	904-630-4256	5	X
District II	Jacksonville; FL 32206	904-630-4256	5	X
Mandarin	Jacksonville; FL 32206	904-630-4256	5	X
Southwest District	Jacksonville; FL 32206	904-630-4256	5	X
Neptune Beach	Neptune Beach FL; 32266	904-270-2423	5	X
Normandy Village	Jacksonville; FL; 32236	904-781-1194	DEP	
Airport	Jacksonville; FL; 32211	904-725-4522	DEP	
Blanding	"	"		
Springtree Village	Jacksonville; FL; 32203	904-731-3060	5	X
Beacon Hills				
Woodmere Subdivison				
Cecil Field	Cecil Field; FL; 32215	904-778-6065	5	X
Mayport	"	"		
Naval Air Station	"	"		
Holly Oaks subdiv.	Jacksonville; FL; 32225	904-725-2865	5	X
Jacksonville Heights	Jacksonville; FL 32225	904-725-2865	5	X
Monterey Subdivison	Jacksonville; FL 32225	904-725-2865	5	X
Ortega Hills Subdivision	Jacksonville; FL 32225	904-725-2865	5	X

County Code	Not SU	Owner or Operator	Facility Name		Location		DEP Permit #	Latitude	Longitude		Population Served		Treatment Level		Disinfection Level		Permitted Treatment Capacity mgd		Permitted Reuse Capacity mgd		Jan.	Feb
31		United Water Florida	Royal Lakes subdivision	#	8509 Western Way; Jax.	5	3116P05360	301250	813240	D	6188	5	3	5	BA	5	3.250	D			2.526	2.499
31		United Water Florida	San Jose Subdivision	#	7128 Balboa Rd.; Jax.	5	3116P01471	301450	813723	D	12761	5	3	5	BA	5	2.250	D			2.433	2.126
31		United Water Florida	San Pablo	#	14738 Marshview Drive	5	3116P01984	301630	812546	D	2513	5	3	5	BA	5	0.499	D			0.368	0.351
35		Bunnell; City of	Bunnell	#	401 Tolman Street	5	3118M07027	292750	811546	D	1970	5	2	5	BA	5	0.300	5			0.293	0.279
35		Dunes Community	Hammock Dunes Phase 1		Hwy. A1A; Palm Coast	D	3118P01900	293504	811111	D	1814	D	2	M	BA	M	0.200	D	0.200			
35		Flagler Beach; City of	Flagler Beach	#	2000 Avenue A; Flagler Beach	5	3118M00029	292820	810833	D	6500	5	2	M	BA	5	1.000	5			0.681	0.676
35		Matanzas Shores Owners Asso	Matanzas Shores WWTP	#	66 San Juan Drive	5	3118P01011	293847	811239	D	1080	5	2	5	BA	5	0.322	5	0.322		0.072	0.083
35		Palm Coast Subdivision	Palm Coast Subdivision		Old Kings Rd.; Flagler Bch.	D	3118P01697	293258	811225	D	16000	D	2	M	BA	M	1.600	R	2.220	R		
61		Indian River County	Central Regional	#	3550 49th Street	5	3031C00183	274045	802530	D	4270	5	3	5	HI	5	1.000	5	1.000		0.404	0.438
61		Indian River County	Laurelwood	#	6th St./21st Ct.; Vero Beach	5	3031C03105	273652	802433	D	400	5	2	5	BA	5	0.100	5			0.070	0.074
61		Indian River County	North Regional	#	5150 77th Street	5	3031C03321	274405	802619	D	3420	5	3	5	HI	5	1.000	5	1.000	O	0.322	0.350
61		Indian River County	Sea Oaks	#	State Road A-1-A; Indian River Shores	5	3031C00008	274431	802300	D	500	5	2	5	HI	5	0.210	5	0.210	O	0.071	0.087
61		Indian River County	South Regional	#	6th Avenue S.W. and 25th Street S.W.	5	3031C03106	273330	802240	D	3670	5	2	5	BA	5	0.450	5	0.450		0.277	0.294
61		Indian River County	Vista Royale Gardens	#	US Highway 1; Vero Beach	5	3031C00007	273615	802240	D	800	D	2	5	BA	5	0.150	5			0.102	0.097
61		Indian River County	Vista Royale Condos.	#	100 Vista Royale Blvd.; Vero Beach	5	3031C05055	273600	802242	D	450	5	3	5	HI	5	0.500	5	0.500		0.293	0.354
61		Indian River County	West Regional	#	8405 8th St.; West Vero Bch.	5	3031C00527	273657	803604	D	6750	5	3	5	HI	5	1.000	5	1.000	O	0.723	0.818
61		Sebastian; City of	Sebastian Highlands	#	810 Bailey Drive; Sebastian	5	3031P03280	274725	802838	D	1390	5	2	5	BA	5	0.142	5	0.142		0.068	0.071
61		Vero Beach; City of	Vero Beach		Ind. Riv. Blvd./17th St.; Vero Beach	D	3031M03103	273740	802235	D	30000	5	3	5	HI	5	4.500	5	4.950	O	3.640	3.540
69		Boll; John	Oak Springs MHP		12 Highland Ave.; Sorrento	D	3035P05052	284723	813152	D	1150	D	2	M	BA	M	0.150	D				
69		Clerbrook RV Resorts	Clerbrook MHP		US 27; 6 mi. N of Clermont	D	3035P00327	283810	814730	D	600	D	2	M	BA	R	0.120	R	0.120	R		
69		Clermont; City of	Clermont	#	400 Twelfth Street	5	3035M04870	283308	814636	D	7200	5	2	5	BA	5	0.990	5	0.950	R	0.786	0.796
69		Eustis; City of	Eustis	#	901 Bates Avenue; Eustis	5	3035M00920	285130	814035	D	13700	5	2	5	IM	5	1.800	5	1.800	R	1.180	1.210
69		Florida Dept. of Corrections	Lake Correctional Inst.		U.S. 27 & Labor Camp Rd.	D	3035S07045	283716	814602	D	571	D					0.180	D	0.180			
69		Groveland; City of	Groveland WWTP	#	1109 Sampey Road; Groveland	5	3035M05860	283410	815040	D	2406	5	2	5	BA	5	0.250	5				0.024
69		Lakewood Devs.	Plantation at Leesburg		US 27; 2 mi. S of SR 48; Leesburg	D	3035P00600	284241	815243	D	960	D	2	M	BA	M	0.200	D	0.200			
69		Leesburg; City of	Leesburg		608 N Canal St.; Leesburg	D	3035M00571	284829	815230	D	11000	D	2	M	IM	R	3.500	R	3.500	R		
69		M.H.C. Corporation (DeAnza)	Mid-Florida Lakes	#	201 Forest Drive; Leesburg	5	3035P10486	285215	814612	D	2296	5	2	5	BA	5	0.180	5			0.119	0.138
69		Mount Dora; City of	Mount Dora		SR 19A; Mt. Dora	D	3035M02211	284824	814025	D	15000	D	2	M	HI	R	1.500	R	1.500	O		
69		Southern States Utilities	Sunshine Parkway		US 27/SR 19; Minneola	D	3035P10451	283837	814752	D	851	[redacted]	2	M	BA	R	0.250	D				
69		Southlake Dev. Group	Southlake Community	#	800 US 27; Clermont	5	3035P05827	282339	814357	D	701	5	2	5	HI	5	0.350	5	0.350			
69		Sunbelt Utilities	Orange Blossom Gardens	O	101 Oak Meadows Lane (US441); Lady Lake	O	3035P00914	285652	815650	D	10000	D	2	M	BA	M	1.000	O	1.120	O		
69		Taveres; City of	Caroline Street		525 Caroline St.; Tavares	D	3035M03317	284819	814354	D	6500	D	2	M	BA	R	0.750	R	0.750			
69		Taveres; City of	Woodlea Road		Woodlea Road; Tavares	D	3035M02342	284730	814500	D	7000	D	2	M	BA	R	1.000	R	1.000			
69		Thousand Trails; Inc.	Thousand Trails		7175 US 27 S; Clermont	D	3035P00460	282230	814020	D	700	D	2	M	BA	R	0.140	R	0.140			
69		Umatilla; City of	Umatilla	#	700 Golden Gem Dr.; Umatilla	5	3035M00463	285458	814101	D	3000	D	2	M	BA	5	0.300	5	0.300	R	0.179	0.195
69		Village Center Comm. Dev. Dist	The Villages of Lake-Sumter	#	801 Sunbelt Road; Lady Lake	5	3035P00914	285652	815650	D	13166	5	3	5	HI	5	1.000	5	1.000		0.761	0.739
69		Water Oaks ftility; Inc.	Water Oaks Estates		US 441/27 Nof Lady Lake	D	3035P00172	285548	815446	D	3045	D	2	M	BA	M	0.200	D	0.200			
69		Wilder Corporation	Sunlake Estates	#	1045 Great Lakes Blvd.; Grand Island; FL 32735	5	3035P00109	285681	814654	D	600	5	2	5	BA	5	0.150	5	0.150		0.018	0.021
69		Wekiva Falls Resort Campgroun	Wekiva Falls Resort		US 27 N of Lady Lake	D	3035P00379	284734	812503		1991		2	M	BA	M	0.100	D				
83		Belleview; City of	#1	#	SE 116th St.; West of US 301; Belleview	5	3042M01876	290306	820310	D	1650	5	2	5	BA	5	0.230	D			0.108	0.122
83		Belleview; City of	#2A	#	5820 SE 116th St.; Belleview	5	3042M02812	290410	820314	D	1650	5	2	5	BA	5	0.350	D	0.350	R	0.216	0.198
83		Parkemore Mgmt. Corp.	Spanish Oaks MHP	#	3150 NE 36th Ave.; Ocala	5	3042P02932	291305	820547	D	459	5	2	M	BA	M	0.100	D	0.100		0.056	0.057
83	N	Colon; Sidney & Assoc.	On Top of the World	*	8700 SW 99th St.; Ocala	D	3042P00037	290525	821610	D	1798	[redacted]	2	N	BA	M	0.250	D	0.250			
83	N	Decca Utilities	Oak Run	*	SR 200/CR 484; Ocala	D	3042P10005	290328	821558	D	1514	[redacted]	2	N	BA	M	0.500	D				
83	N	Dunnellon; City of	Dunnellon	*	Agnew/Edgar Ave.; Dunnellon	D	3042M00008	290246	822641	D	1146	D	2	N	BA	M	0.250	D				
83		Ellenburg Capital Corp.	Rolling Greens MHP		E Cherry Pass; Ocala	D	3042P03314	291005	820200	D	2500	D	2	M	BA	M	0.250	D				
83		Florida Dept. of Corrections	Marion Correctional Inst.		Old US 441/CR 25A; Lowell	D	3042S00978	291831	821034	D	2067	D	2	M	BA	M	0.440	D	0.440			
83		Marion County Utilities	Silver Springs Shores	#	589 Silver Rd.; Ocala	5	3042C06174	290630	820015	D	12810	5	2	5	BA	5	1.200	D	1.200		0.596	0.587
83		Miami Savings Bank	Land Fair		SR 200A; 3 mi. N of Ocala	D	3042C01551	291538	820545	D	1120	D	2	M	BA	M	0.112	D	0.112			
83		Ocala; City of	#1; Pine Avenue	#	1220 NW 4th Ave.; Ocala	5	3042M01125	291214	820857	D	5210	5	3	5	HI	5	1.500	R	1.500	O	1.501	1.460
83		Ocala; City of	#2	#	4200 SE 24th St.; Ocala	5	3042M03535	290950	820515	D	12829	5	2	5	IM	5	6.500	R	6.500		3.566	3.560
83		Southern States Utilities	Citrus Park Subdiv.		SE 40th St./23rd Ave.; Ocala	D	3042P04826	290844	820613	D	450	D	2	M	BA	M	0.100	D	0.100			
83	N	Southern States Utilities	Marion Oaks	*	3260 SW 157th St.; Ocala	D	3042P00017	290006	821044	D	1041	[redacted]	2	N	BA	M	0.200	D				
83		Spruce Creek Dev. Co.	Spruce Creek South		US 27/US 441; Lady Lake	D	3042P05054	285700	815900	D	1250	D	2	M	BA	M	0.125	D	0.125			
83		Steeplechase Util. Inc.	Stonecrest		US 441; 1 mi S of CR42; Summerfield	D	3042P02824	285805	815805	D	1462	D	2	M	BA	M	0.150	D	0.150			
89		Callahan; City of	Callahan		Brandies Ave.; Callahan	D	3145M01840	303411	815000	D	3000	D	2	M	BA	M	0.300	D				
89		Fernandina Bch; City of	Fernandina Beach	#	1007 S. 5th St.; Fernandina Beach	5	3145M01839	303901	812747	D	10000	5	2	5	HI	5	1.700	D			1.735	1.915
89		Hilliard; Town of	Hilliard		5th St./Catherine St.; Hilliard	D	3145M05954	304156	815458	D	1330	D	2	M	BA	M	0.160	D	0.160			
89		Southern States Utilities	Amelia Island		Hwy. A1A; 3 mi. S of SR 105A	D	3145P04522	303438	812715	D	6000	D	2	M	HI	R	0.600	D	0.600			
89		Sun Ray Utilities	Sun Ray		Hwy. A1A; Fernandina Beach	D	3145P01228	303644	812730	D	1875	D	2	M	BA	M	0.187	D	0.187			
95		Apopka; City of	Apopka	#	333 Snowden Road; Apopka	5	3048M01915	283906	813015	D	25075	5	3	5	HI	5	4.000	5	4.000	O	1.667	1.654
95		Gulfstream Harbor Sales; Inc.	Gulfstream Harbor MHP	#	4505 S Goldenrod Rd (SR 15A) Orl	5	3145P00311	282908	811629	D	690	5	2	5	BA	5	0.100	5			0.064	0.073
95		Econ Utility Corp.	Wedgefield Subdivision		Bancroft Blvd & Nettleton St; E of Orl	D	3048P03712	283000	810500	D	768	D	2	S	HI	S	0.200	S	0.200	O		
95		Fairways MHP Village	Fairways MHP Village		14205 E Colonial Dr; Orlando	D	3048P00112	283400	811045	D	1800	S	2	M	HI	R	0.150	D	0.150	O		
95		Ocoee; City of	#2		1800 A.D. Mims Rd.; Ocoee	S	3048M00280	283459	813420	D	10000	D	2	S	BA	R	3.000	S				
95		Orange County	Eastern	#	1621 South Alafaya Trail; Orlando	5	3048C00334	283046	811205	D	80000	5	3	5	HI	S	19.000	5	13.400	R	6.960	7.220
95	N	Orange County	Meadow Woods	*	1707 Rhode I. Woods Circ; Orl.	S	3048P00341	283614	812656	D	10000	D	3	S	HI	S	0.714	S	0.792	O		
95	N	Orange County	South	#	4760 Sand Lake Rd; Orlando	5	3048C01767	282652	812624	D	248000	D	2	5	HI	5	30.500	5	27.600	O	14.221	14.584
95	N	Orange County	Cypress Walk WWTP	#	11900 SR 535; Orlando	5	3048C00335	282335	813045	D	4900	D	3	5	HI	5	1.000	5	0.690	O		
95		Orange County	Northwest	#	701 West McCormick Rd; Apopka	5	3048C02174	283744	813119	D	28240	5	2	5	BA	5	3.500	5	3.500		2.473	2.443
95	N	Orlando FL. Hotel; Ltd.	Howard Johnson's		3835 McCoy Rd; Orlando	S	3048P00189	282710	811854	D	804	[redacted]	2	S	BA	S	0.130	S	0.130			
95	N	Orlando; City of	Lake Nona (Southeastern)	#	7500 Dowden Road; Orlando	5	3048M00553	282509	811649	D	153	5	3	5	HI	5	0.165	5	0.165		0.022	0.028
95	N	Orlando; City of	Water Conserv I	#	11401 Boggy Cr Rd; Orlando	5	3048M00341	282402	811950	D	14957	5	3	5	HI	5	7.500	5	7.500	O	2.150	2.620
95	N	Orlando; City of	Water Conserv II / McLeod Rd	#	5420 L.B. McLeod Road; Orlando	5	3048M00107	283010	812711	D	125000	5	3	5	HI	5	25.000	5	21.000	O	12.520	15.410

Facility Name	Monthly Wastewater Treatment Flow										Mean Flow mgd		DEP Reuse Total		DEP Unreused Flow mgd		Reuse for wetlands & recharge	Unreused flow plus wetlands & recharge	Disposal							
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec									Evap./ Perc. Pond	Overland Flow	Spray Field	Surf. Disch.	Underground Inject.	Reuse	Other	
Royal Lakes subdivision	2.482	2.557	2.590	2.917	2.844	2.908	2.913	2.937	2.813	2.569	2.713		0.000	5	2.713		0.000	2.713				X		X		5
San Jose Subdivision	1.898	1.737	1.740	2.175	2.115	2.118	2.104	2.156	1.977	1.815	2.033		0.000	5	2.033		0.000	2.033				X		X		5
San Pablo	0.320	0.264	0.263	0.307	0.343	0.357	0.352	0.417	0.378	0.432	0.346		0.000	5	0.346		0.000	0.346				X				5
Bunnell	0.249	0.196	0.189	0.192	0.234	0.254	0.280	0.265	0.278	0.260	0.247		0.000	5	0.247		0.000	0.247			X					5
Hammock Dunes Phase 1											0.192	EF	0.145	D	0.047		0.000	0.047						0.145		D
Flagler Beach	0.669	0.661	0.652	0.647	0.640	0.635	0.628	0.621	0.625	0.623	0.647		0.000	5	0.647		0.000	0.647				0.646				5
Matanzas Shores WWTP	0.082	0.066	0.052	0.052	0.057	0.065	0.054	0.069	0.090	0.050	0.066		0.062	5	0.004		0.062	0.066						0.062		5
Palm Coast Subdivision											1.705		1.705	R	0.000		1.000	1.000						1.705		R
Central Regional	0.423	0.412	0.383	0.371	0.346	0.367	0.478	0.499	0.518	0.483	0.427		0.427	5	0.000		0.000	0.000						0.427		5
Laurelwood	0.068	0.066	0.065	0.068	0.059	0.068	0.079	0.072	0.075	0.075	0.070		0.000	5	0.070		0.000	0.070	0.070							5
North Regional	0.322	0.300	0.266	0.295	0.271	0.282	0.344	0.398	0.506	0.452	0.342		0.342	5	0.000		0.000	0.000						0.342		5
Sea Oaks	0.081	0.068	0.045	0.031	0.027	0.031	0.034	0.038	0.058	0.054	0.052		0.052	5	0.000		0.000	0.000						0.052		5
South Regional	0.259	0.248	0.244	0.270	0.265	0.294	0.323	0.382	0.476	0.444	0.315		0.315	5	0.000		0.315	0.315	0.300					0.315		5
Vista Royale Gardens	0.107	0.164	0.127	0.140	0.131	0.140	0.140	0.135	0.133	0.131	0.129		0.000	5	0.129		0.000	0.129							0.129	5
Vista Royale Condos.	0.331	0.347	0.393	0.410	0.263	0.398	0.411	0.401	0.406	0.411	0.368		0.368	5	0.000		0.368	0.368						0.368	0.368	5
West Regional	0.810	0.710	0.607	0.614	0.620	0.545	0.589	0.608	0.712	0.691	0.671		0.671	5	0.000		0.336	0.335						0.671		5
Sebastian Highlands	0.066	0.066	0.067	0.068	0.063	0.069	0.077	0.089	0.096	0.086	0.074		0.074	5	0.000		0.074	0.074	0.074					0.074		5
Vero Beach	3.440	2.920	2.610	2.670	2.530	3.380	3.427				3.129		1.910	5	1.219		0.000	1.219						1.910		5
Oak Springs MHP											0.122	EF	0.000	D	0.122		0.000	0.122								D
Clerbrook MHP											0.050		0.050	R	0.000		0.050	0.050						0.050		R
Clermont	0.802	0.765	0.745	0.736	0.726	0.747	0.740	0.760	0.788	0.813	0.767		0.000	5	0.767		0.000	0.767	0.767		0.650					5
Eustis	1.200	1.100	1.050	1.200	1.120	1.250	1.350	1.430	1.510	1.430	1.253		1.253	5	0.000		0.451	0.451			1.253			1.253		5
Lake Correctional Inst.											0.060	EF	0.060		0.000		0.000	0.000						0.060		D
Groveland WWTP	0.034	0.048									0.035		0.000	5	0.035		0.000	0.035			0.038					5
Plantation at Leesburg											0.101	EF	0.101	D	0.000		0.101	0.101						0.101		D
Leesburg											2.746		2.746	R	0.000		0.000	0.000						2.746		R
Mid-Florida Lakes	0.136	0.124	0.107	0.136	0.094	0.126	0.126	0.128	0.144	0.144	0.127		0.000	5	0.127		0.000	0.127			0.126					5
Mount Dora											0.586		0.586	R	0.000		0.000	0.000						0.586		R
Sunshine Parkway											0.090	K	0.000	D	0.090		0.000	0.090								D
Southlake Community										X	0.074	EF	0.074	5	0.000		0.074	0.074	0.074					0.074		5
Orange Blossom Gardens											1.057	EF	1.057		0.000		0.000	0.000						1.057		D
Caroline Street											0.542		0.542	R	0.000		0.542	0.542						0.542		R
Woodlea Road											0.380		0.380	R	0.000		0.380	0.380						0.380		R
Thousand Trails											0.026		0.026	R	0.000		0.026	0.026						0.026		R
Umatilla	0.162	0.161	0.158	0.170	0.170	0.169	0.179	0.174	0.171	0.165	0.171		0.171	R	0.000		0.000	0.000			0.171			0.171		R
The Villages of Lake-Sumter	0.747	0.701	0.588	0.584	0.580	0.584	0.625	0.712	0.768	0.759	0.679		0.510	5	0.169		0.000	0.169	0.169					0.510		5
Water Oaks Estates											0.322	EF	0.322	5	0.000		0.322	0.322						0.322		D
Sunlake Estates	0.024	0.026	0.017	0.016	0.040	0.028	0.025	0.022	0.025	0.021	0.024		0.024	5	0.000		0.024	0.024	0.022					0.024		5
Wekiva Falls Resort											0.210	EF	0.000	5	0.210		0.000	0.210						0.000		D
#1	0.124	0.115	0.115	0.123			0.061	0.078	0.084	0.090	0.102		0.102	5	0.000		0.000	0.000			0.097			0.102		5
#2A	0.194	0.196		0.179			0.247	0.280	0.276	0.313	0.233		0.211	5	0.022		0.000	0.022			0.236			0.211		5
Spanish Oaks MHP	0.056	0.054	0.043	0.046	0.040	0.043	0.042	0.050	0.059	0.040	0.049		0.049	D	0.000		0.049	0.049	0.048					0.049		5
On Top of the World											0.190	N	0.190	N	0.000		0.190	0.190						0.190		N
Oak Run											0.160	N	0.000	N	0.160		0.000	0.160								N
Dunnellon											0.130	N	0.000	N	0.130		0.000	0.130								N
Rolling Greens MHP											0.264	EF	0.000	D	0.264		0.000	0.264								D
Marion Correctional Inst.											0.272	K	0.272	D	0.000		0.000	0.000						0.272		R
Silver Springs Shores	0.591	0.589	0.564	0.560	0.555	0.577	0.575	0.608	0.617	0.608	0.586		0.586	5	0.000		0.000	0.000			0.586			0.586		5
Land Fair											0.118	EF	0.118	D	0.000		0.118	0.118						0.118		D
#1; Pine Avenue	1.428	1.399	1.315	1.384	1.404	1.510	1.413	1.578	1.452	1.349	1.433		1.215	5	0.218		0.000	0.218	0.218					1.215		5
#2	3.475	3.354	3.338	3.490	3.409	3.689	3.621	3.600	3.628	3.604	3.528		3.528	R	0.000		0.000	0.000			3.153			3.528		5
Citrus Park Subdiv.											0.048	EF	0.048	D	0.000		0.000	0.000						0.048		R
Marion Oaks											0.110	N	0.000	D	0.110		0.000	0.110								N
Spruce Creek South											0.132	EF	0.132	D	0.000		0.132	0.132						0.132		D
Stonecrest											0.155	EF	0.155	D	0.000		0.155	0.155						0.155		D
Callahan											0.181	K	0.000	D	0.181		0.000	0.181								D
Fernandina Beach	1.667	1.603	1.570	1.654	1.702	1.666	1.576	2.189	2.021	1.926	1.769		0.000	D	1.769		0.000	1.769				X				5
Hilliard											0.141	EF	0.141	R	0.000		0.000	0.000						0.141		R
Amelia Island											0.727		0.300	R	0.427		0.000	0.427						0.300		R
Sun Ray											0.198	EF	0.198	D	0.000		0.198	0.198						0.198		D
Apopka	1.670	1.650	1.660	1.848	1.797	1.929	2.008	1.821	2.046	2.028	1.815		1.415	5	0.400		0.000	0.400						1.415		5
Gulfstream Harbor MHP	0.073	0.070	0.062	0.068	0.068	0.069	0.070	0.068	0.074	0.070	0.069		0.000	5	0.069		0.000	0.069	0.069							5
Wedgefield Subdivision											0.165		0.165	S	0.000		0.000	0.000						0.165		S
Fairways MHP Village											0.124		0.124	R	0.000		0.000	0.000						0.124		D
#2											0.800		0.800	S	0.000		0.800	0.800						0.800		D
Eastern	6.970	6.850	6.360	7.730	8.190	9.210	9.410	8.440	9.250	8.530	7.927		7.927	5	0.000		5.120	5.120	0.660	4.460				7.927	3.120	5
Meadow Woods											0.400		0.300	S	0.100		0.000	0.100						0.300		S
South	16.833	15.848	15.319	15.010	15.843	16.824	15.285	15.629	15.098	15.084	16.100		16.100	5	0.000		0.000	0.000						16.100		5
Cypress Walk WWTP											0.487		0.487	5	0.000		0.000	0.000						0.487		5
Northwest	2.509	2.629	2.677	2.799	2.999	3.129	3.176	2.990	3.127	2.934	2.824		2.000	5	0.824		2.000	2.824						2.000	2.824	5
Howard Johnson's											0.085	S	0.065	R	0.020		0.065	0.085						0.065		D
Lake Nona (Southeastern)	0.026	0.034	0.028	0.024	0.027	0.019	0.021	0.028	0.028	0.022	0.026		0.026	5	0.000		0.000	0.000						0.026		5
Water Conserv I	2.190	2.690	1.740	2.560	2.940	3.460	4.300	3.980	3.780	3.160	2.964		1.554	5	1.410		0.000	1.410	2.260					1.554		5
Water Conserv II / McLeod Rd	13.800	13.270	12.840	15.850	16.140	14.280	17.430	15.360	15.740	14.890	14.794		14.794	5	0.000		4.700	4.700						14.794		5

[redacted] [redacted] Facility Name	[redacted] [redacted] Receiving water body for surface discharge		[redacted]ated Upgrade or Expansion		[redacted] [redacted] use br[redacted]wn into [redacted]tegori[redacted] Irrigation Agriculture	Golf	Public Non-golf	Comm / Indust.	Wetlands	Gr Wat Rech	Other	Reuse Total		[redacted] [redacted] Ag[redacted] Irrigati[redacted] Broke[redacted]nto Sub[redacted]es Citrus	Other Edible Crops	Feed/ Fodder	Pasture	Sod Farm	Tree Farm	Whole-sale Nursery	Other	[redacted] Public [redacted]se Brok[redacted] General Reuse System	Pond; Pool; Fount.	Golf Course	Stadium; Park; & Playgr.
Royal Lakes subdivision	St. Johns River	#	Yes	5								0.000	5								0.060				
San Jose Subdivision	St. Johns River	#	Yes	5								0.000	5								0.060				
San Pablo	Pablo Creek	#	Yes	5								0.000	5												
Bunnell	Hawcreek	#	Yes	5								0.000	5												
Hammock Dunes Phase 1		D				0.145						0.145	D												
Flagler Beach	Intercoastal Waterway	#	Yes	5								0.000	5								X				
Matanzas Shores WWTP		#	No	5						0.062		0.062	5												
Palm Coast Subdivision					0.705					1.000		1.705	R												
Central Regional		#	Yes	5		0.427						0.427	5											0.427	
Laurelwood		#	Close in '97	5								0.000	5												
North Regional		#	Yes	5		0.342						0.342	5											0.342	
Sea Oaks		#	X	5			0.058					0.052	5												
South Regional		#	Yes	5						0.315		0.315	5												
Vista Royale Gardens		#	No	5								0.000	5												
Vista Royale Condos.		#	No	5					0.368			0.368	5												
West Regional		#	Yes	5		0.336			0.336			0.671	5											0.336	
Sebastian Highlands		#	No	5						0.074		0.074	5												
Vero Beach							1.910					1.910	5												
Oak Springs MHP												0.000	D												
Clerbrook MHP										0.050		0.050	D												
Clermont		#	Yes	5								0.000	5												
Eustis		#	Yes	5	1.250					0.451		1.253	5				1.150		0.100						
Lake Correctional Inst.					0.060							0.060	D												
Groveland WWTP		#	Yes	5								0.000	5												
Plantation at Leesburg										0.101		0.101	D												
Leesburg					2.746							2.746	R			2.746									
Mid-Florida Lakes		#	No	5								0.000	5												
Mount Dora							0.586					0.586	R												
Sunshine Parkway												0.000	D												
Southlake Community		#	2mgd by 201	5						0.074		0.074	5												
Orange Blossom Gardens						1.057						1.057	D												
Caroline Street										0.542		0.542	R												
Woodlea Road										0.380		0.380	R												
Thousand Trails										0.026		0.026	R												
Umatilla					0.171							0.171	R												
The Villages of Lake-Sumter		#	Yes	5		0.510						0.510	5											0.510	
Water Oaks Estates										0.322		0.322	5												
Sunlake Estates		#	Yes	5						0.024		0.024	5												
Wekiva Falls Resort												0.000													
#1		#	Yes	5	0.102							0.102	5												
#2A		#	Yes	5	0.211							0.211	5												
Spanish Oaks MHP		#	No	5						0.049		0.049	D												
On Top of the World										0.190		0.190	D												
Oak Run												0.000	N												
Dunnellon	Withlacoochee R.	N										0.000	N												
Rolling Greens MHP												0.000	D												
Marion Correctional Inst.					0.272							0.272	D												
Silver Springs Shores		#	Yes	5	0.586							0.586	5			0.527									
Land Fair										0.118		0.118	D												
#1; Pine Avenue		#	No	5	0.516	0.690					0.009	1.215	5											1.215	
#2		#	Yes	5	3.528							3.528	R			3.076			0.077						
Citrus Park Subdiv.					0.048							0.048	D												
Marion Oaks												0.000	D												
Spruce Creek South										0.132		0.132	D												
Stonecrest										0.155		0.155	D												
Callahan	Alligator Cr./Nassau R.	D										0.000	D												
Fernandina Beach	Amelia River	#	No	5								0.000	D												
Hilliard					0.202							0.141	R												
Amelia Island						0.300						0.300	R												
Sun Ray										0.198		0.198	D												
Apopka		#	Yes	5	0.301	0.639	0.145				0.330	1.415	5							0.301				0.639	0.029
Gulfstream Harbor MHP		#	No	5								0.000	5												
Wedgefield Subdivision						0.165						0.165	S												
Fairways MHP Village						0.124						0.124	R												
#2										0.800		0.800	S												
Eastern	Econlockhatchee River	#	Yes	5			0.091	3.120	4.460	0.660		7.927	5												
Meadow Woods						0.300						0.300	S												
South		#	Yes	5	14.500	1.000	0.500	0.100				16.100	5	14.000						0.500				1.000	
Cypress Walk WWTP		#	No	5		0.487						0.487	5											0.487	
Northwest		#	Yes	5						2.000		2.000	5												
Howard Johnson's										0.065		0.065	R												
Lake Nona (Southeastern)		#	No	5		0.026						0.026	5											0.026	
Water Conserv I		#	Yes	5	0.004	0.610	0.600	0.340				1.554	5						0.004			0.600		0.610	
Water Conserv II / McLeod Rd		#		5	10.500	2.000	0.200			4.700		14.794	5	10.500										2.000	

[redacted]

Facility Name	into Subcategories: Lawn & Landscape	Cemetery	Other	Ground Water Recharge Cats.: Drain or Ponds	RIBS		Information in paper or GIS files: Large Individual Reuse Sites	Reuse Charge Rates	Ordinance or Incentive Program	Map of Reuse Lines and Sites	WASTEWATER TREATMENT AND REUSE SURVEY MAILING LIST: CONTACT NAME AND TITLE	AFFILIATION	ADDRESS
Royal Lakes subdivision						5					Phillip Heil; Vice President	United Water Florida	1400 Millcoe Road
San Jose Subdivision						5					Phillip Heil; Vice President	United Water Florida	1400 Millcoe Road
San Pablo						5					Phillip Heil; Vice President	United Water Florida	1400 Millcoe Road
Bunnell						5					Roger R. Edwards; Public Utilities Director	City of Bunnell	P.O. Box 756
Hammock Dunes Phase 1											Gary W. Walters	Dunes Community	10300 NW 11th Manor
Flagler Beach						5	X		No	X	Roger Stephens; Superintendent	City of Flagler Beach	PO Box 70
Matanzas Shores WWTP				0.062		5					George A. Jarosz; Jr.; Manager of Wastewater Collection	Matanzas Shores Owners Association	1 Corporate Dr.
Palm Coast Subdivision				1.000							Tim Sheahan; Senior Project Mnager	Palm Coast Utility	2 Utility Dr.
Central Regional						5	X	0	No		Robert O. Wisemen; P.E.; Environmental Engineer	Indian River County Utility Department	1840 25th Street
Laurelwood						5					Robert O. Wisemen; P.E.; Environmental Engineer	Indian River County Utility Department	1840 25th Street
North Regional						5	X	0	No		Robert O. Wisemen; P.E.; Environmental Engineer	Indian River County Utility Department	1840 25th Street
Sea Oaks	0.058					5	X	0	No		Robert O. Wisemen; P.E.; Environmental Engineer	Indian River County Utility Department	1840 25th Street
South Regional				0.315		5					Robert O. Wisemen; P.E.; Environmental Engineer	Indian River County Utility Department	1840 25th Street
Vista Royale Gardens						5					Robert O. Wisemen; P.E.; Environmental Engineer	Indian River County Utility Department	1840 25th St.
Vista Royale Condos.						5					Robert O. Wisemen; P.E.; Environmental Engineer	Indian River County Utility Department	1840 25th St.
West Regional						5	X	0			Robert O. Wisemen; P.E.; Environmental Engineer	Indian River County Utility Department	1840 25th Street
Sebastian Highlands				0.074		5					Richard B. Votapka; PE.; Dir. of Utilities	City of Sebastian	1225 Main St.
Vero Beach	1.910										Hillman Goff, Dir. of Water & Sewer Dept.	City of Vero Beach	P.O. Box 1389
Oak Springs MHP											John Boll	Oak Springs MHP	19500 Hall Rd.
Clerbrook MHP				0.050							Manager	Clerbrook RV Resorts	20005 U.S. Highway 27
Clermont						5					Wayne Saunders; City Manager	City of Clermont	P.O. Box 120219
Eustis				0.451		5	X	X	Yes	X	Chin Khor; P.E.; Director of Public Services	City of Eustis	P.O. Drawer 68
Lake Correctional Inst.											David Scott; Prison Facilities Chief	Florida Dept. of Corrections	2601 Blair Stone Rd.
Groveland WWTP						5					Fred Money; WWTP Operator	City of Groveland	1109 Sampey Road
Plantation at Leesburg				0.101		D					Manager; Plantation at Leesburg	Lakewood Dev. Co.	25201 U.S. Highway 27 South
Leesburg											Charles Bowman; Dir. of Wastewater Util.	City of Leesburg	223 S. 5th St.
Mid-Florida Lakes						5					Chuck Mack; Water Plant and Sewage Plant Operator	M.H.C. Corporation	201 Forest Dr.
Mount Dora											Robert Stroupe; Dir. of Utilities	City of Mt. Dora	P.O. Box 176
Sunshine Parkway											SSU		
Southlake Community				0.074		5					Robert L. Chapman; III; President	Southlake Utilities	800 U.S. Highway 27
Orange Blossom Gardens											John Wise; Treasurer	Sunbelt Utilities; Ornage Blossom Gardens	1200 Avenida Central
Caroline Street				0.542							Charlene Foster; Director of Utilities	City of Tavares	P.O. Box 1068
Woodlea Road				0.380							Charlene Foster; Director of Utilities	City of Tavares	P.O. Box 1068
Thousand Trails				0.026							Manager	Thousand Trails; Inc.	7571 U.S. Highway 27 South
Umatilla											Brian Johnson; Dir. of Public Works	City of Umatilla	P.O. Box 2286
The Villages of Lake-Sumter						5	X	X	No	X	Ron Trygar; Lead Operator	Village Center Comm. Dev. Dist.	PO Box 430
Water Oaks Estates				0.322								Water oaks Utility; Inc.	106 Evergreen Lane
Sunlake Estates				0.024		5					Mary S. Burnham; Manager	Wilder Corporation; Sunlake Estates	1045 Great Lakes Blvd.
Wekiva Falls Resort												Wekiva Falls Resrt Campground	Wekiva Falls Road
#1	X					5			No		Donna McMurdy; Staff Assistant to Dennis Monroe	City of Belleview	5343 S.E. Abshier St.
#2A	X					5			No		Donna McMurdy; Staff Assistant to Dennis Monroe	City of Belleview	5343 S.E. Abshier Blvd.
Spanish Oaks MHP				0.049		5					Joseph D. Holcomb; Park Manager	Brandywine Mgt. Services Corp.	3150 N.E. 36th Ave.
On Top of the World				0.190							Steve Colon & Associates	On Top Of the World	8700 S.W. 99th St.
Oak Run											Manager	Decca Utility-Oak Run	8865 S.E. 104th Lane
Dunnellon											Michael Chaney; Dir. of Public Works	City of Dunnellon	12014 S. Williams St.
Rolling Greens MHP											Rolling Greens MHP Sewage	Ellenburg Capital Corp.	5550 S.W. Madadam; Suite 200
Marion Correctional Inst.											David Scott; Prison Facilities Chief	Florida Dept. of Corrections	2601 Blair Stone Rd.
Silver Springs Shores						5			No		Peggy L. Haga; Utilities Operation Supervisor	Marion County Utilities	P.O. Box 7160
Land Fair				0.118							Land Fair STP	Miami Savings BAnk	927 Clint Moore Rd.
#1; Pine Avenue						5	X	No	No		William A. Stokes; Chief of Operations	City of Ocala	P.O. Box 1270
#2						5	X	No	No	X	Charles Howard; Chief of Operations	City of Ocala	"
Citrus Park Subdiv.											SSU		
Marion Oaks											SSU		
Spruce Creek South				0.132								Spruce Creek Dev. Co.	17585 S.E. 102nd Ave.
Stonecrest				0.155							Stonecreast Seeage Treatment	Steeplechase Utilities	11048 S.E. 176th Place
Callahan											Charlie Thompson; Town Clerk	Town of Callahan	P.O. Box 162
Fernandina Beach						5					Nathan H. Boyd; Chief Operator	City of Fernandina Beach	P.O. Box 668
Hilliard											Betty Wingate; Town Clerk	Town of Hilliard	P.O. Box 249
Amelia Island											SSU		
Sun Ray				0.198							Robert B. Todd; V.P.	Sun Ray Utility	P.O. Box 1708
Apopka	0.116					5	X	X	Yes	X	Bob Elmquist; Water Resources Specialist	City of Apopka	P.O. Box 1229
Gulfstream Harbor MHP						5					Jackson L. Newberry; Certified Operator	Dale Whittington	4505 S. Goldenrod Rd.
Wedgefield Subdivision											Wayne Hunneman	Econ Utilities	20751 Stae Road 520
Fairways MHP Village											Manager	Fairways Mobile Home Park	14205 E. Colonial Dr.
#2				0.800							James W. Shira; P.E.; City Engineer	City of Ocoee	150 N. Lakeshore Dr.
Eastern	0.091			0.660		5	X		Yes	X	Bert Hale; WW Dept. Manager	Orange County Public Utiltities;	P.O Box 1393
Meadow Woods											Bert Hale; WW Dept. Manager	Orange County Public Utiltities;	P.O Box 1393
South	0.500					5	X	X	X	X	Bert Hale; WW Dept. Manager	Orange County Public Utiltities;	P.O Box 1393
Cypress Walk WWTP						5	X		Yes	X	Bert Hale; WW Dept. Manager	Orange County Public Utiltities;	P.O Box 1393
Northwest				2.000		5					Bert Hale; WW Dept. Manager	Orange County Public Utiltities;	P.O Box 1393
Howard Johnson's				0.065							Manager	Howard Johnson's	3835 McCoy Rd.
Lake Nona (Southeastern)						5	X	No	No	X	Mark Shoup; Plant Manager	City of Orlando	7500 Dowden Road
Water Conserv I						5	X	No	No	X	Mark Shoup; Plant Manager	City of Orlando;	11401 Boggy Creek Road
Water Conserv II / McLeod Rd	0.200				4.700	5	X	No	Yes	X	Johnnie Davis; Plant Manager	City of Orlando	5420 L.B. McLeod Road

Facility Name	CITY; STATE; ZIP CODE	PHONE	Returned	1995 survey
Royal Lakes subdivision	Jacksonville; FL 32225	904-725-2865	5	X
San Jose Subdivision	Jacksonville; FL 32225	904-725-2865	5	X
San Pablo	Jacksonville; FL 32225	904-725-2865	5	X
Bunnell	Bunnell; FL; 32110	904-437-7511	5	X
Hammock Dunes Phase 1	Coral Springs; FL; 33065	305-753-0380	DEP	
Flagler Beach	Flagler Beach; FL 32136	904-439-2334	5	X
Matanzas Shores WWTP	Palm Coast; FL; 32151	904-446-6118	5	X
Palm Coast Subdivision	Palm Coast; FL	904-446-6127	*	
Central Regional	Vero Beach; FL 32960	407-770-5323	5	X
Laurelwood	Vero Beach; FL 32960	407-770-5323	5	X
North Regional	Vero Beach; FL 32960	407-770-5323	5	X
Sea Oaks	Vero Beach; FL 32960	407-770-5323	5	X
South Regional	Vero Beach; FL; 32960	407-770-5323	5	X
Vista Royale Gardens	Vero Beach; FL 32960	407-770-5323	5	X
Vista Royale Condos.	Vero Beach; FL 32960	407-770-5323	5	X
West Regional	Vero Beach; FL 32960	407-770-5323	5	X
Sebastian Highlands	Sebastian; FL 32958	407-589-5490	5	X
Vero Beach	Vero Beach; FL; 32961-1389	407-562-1212	5	X
Oak Springs MHP	Mt. Clemens; MI; 48044	904-383-5973	DEP	
Clerbrook MHP	Clermont; FL; 34711	????????	DEP	
Clermont	Clermont; FL; 34712-0219	904-394-4081	5	X
Eustis	Eustis; FL; 32727-0068	904-483-5430	5	X
Lake Correctional Inst.	Tallahassee; FL;	SC 277-1330		
Groveland WWTP	Groveland; FL;32736	904-429-3233	5	X
Plantation at Leesburg	Leesburg; FL; 34748	904-326-4170	DEP	
Leesburg	Leesburg; FL; 32748	904-728-9850	Don	
Mid-Florida Lakes	Leesburg; FL; 32788	904-589-8300	5	X
Mount Dora	Mt. Dora; FL; 32757	904-383-2141	D	
Sunshine Parkway				
Southlake Community	Clermont; FL; 34711	904-394-8898	5	X
Orange Blossom Gardens	Lady Lake; FL	904-753-1765	D	
Caroline Street	Taveres; FL; 32778-1068	904-742-6220	Dir	
Woodlea Road	Taveres; FL; 32778-1068	904-742-6220		
Thousand Trails	Clermont; FL;	????????	DEP	
Umatilla	Umatilla; FL;32784-2266	904-669-3125	Dir	X
The Villages of Lake-Sumter	Lady Lake; FL; 32158-0430	904-750-3296	5	X
Water Oaks Estates	Lady Lake; FL 32159	904-753-3000		
Sunlake Estates	Grand Island; FL 32735	904-669-5438	5	X
Wekiva Falls Resort	Sorrento; FL 32776	904-383-8055	D	
#1	Belleview; FL; 34420	904-245-0124	5	X
#2A	Belleview; FL 34420	904-245-0124	5	X
Spanish Oaks MHP	Ocala; FL 34479	904-622-7241	5	X
On Top of the World	Ocala; FL; 32674	813-544-2502	DEP	
Oak Run	Ocala; FL; 32674	??????????	DEP	
Dunnellon	Dunnellon; FL; 34432	904-489-2423	Dir	
Rolling Greens MHP	Portland; OR; 97201	503-274-2200		
Marion Correctional Inst.	Tallahassee; FL;	SC 277-1330		
Silver Springs Shores	Ocala; FL; 34472	904-687-1856	5	X
Land Fair	Boca Raton; FL; 33487	?????????		
#1; Pine Avenue	Ocala; FL; 34478-1270	904-629-8427	5	X
#2	*	904-694-2077	5	X
Citrus Park Subdiv.				
Marion Oaks				
Spruce Creek South	Summerfield; FL; 32691	904-347-3700	DEP	
Stonecrest	Summerfield; FL; 32695	904-245-2770	DEP	
Callahan	Callahan; FL; 32011-0162	904-879-3801	Dir	
Fernandina Beach	Fernandina Beach; FL; 32035-06	904-277-7365	5	X
Hilliard	Hilliard; FL; 32046	904-845-3555	Dir	
Amelia Island				
Sun Ray	Fernandina Beach; 32034	904-261-0828	DEP	
Apopka	Apopka; FL; 32704-1229	407-889-1731	5	X
Gulfstream Harbor MHP	Orlando; FL; 32822	407-282-6340	5	X
Wedgefield Subdivision	Orlando; FL 32833	407-568-6787	*	
Fairways MHP Village	Orlando; FL; 32807	407-273-2360	DEP	
#2	Ocoee; FL.; 34761	407-656-2322	Don	
Eastern	Orlando; FL 32802-1393	407-836-7249	5	X
Meadow Woods	Orlando; FL 32802-1393	407-836-7249		
South	Orlando; FL 32802-1393	407-836-7249	5	X
Cypress Walk WWTP	Orlando; FL 32802-1393	407-836-7249	5	X
Northwest	Orlando; FL 32802-1393	407-836-7249	5	X
Howard Johnson's	Orlando; FL; 32812	407-859-2711	DEP	
Lake Nona (Southeastern)	Orlando; FL 32827	407-855-4449	5	X
Water Conserv I	Orlando; FL; 32824	407-855-4449	5	X
Water Conserv II / McLeod Rd	Orlando; FL 32811	407-246-2151	5	X

County Code	Not GIS	Owner or Operator	Facility Name	Location		DEP Permit #	Latitude	Longitude		Population Served		Treatment Level			Disinfection Level		Permitted Treatment Capacity mgd		Permitted Reuse Capacity mgd		Jan.	Feb
95		Park Manor Water Wks.	Park Manor	#	1527 Park Manor Dr; Orlando	5	3048P02218	283359	811331	D	1300	S	3	5	BA	5	0.350	5			0.229	0.271
95		Reeco Properties	Rock Springs MHP	#	13 E. Tanglewood Drive; Apopka	5	3048P01863	284241	813100	D	1800	5	2	5		5	0.150	5			0.113	0.107
95	N	Reedy Creek Impr. Dist.	Reedy Creek	#	Bear Island Rd.; Lk. Buena Vista	5	3048P00009	282230	813530	D	136500	5	3	5	HI	5	15.000	5	15.000		7.034	7.960
95		Southern States Utilities	University Shores #1		2600 Jarrell Rd; Orlando	D	3048P02944	283445	811618	D	2750	D	3	D	BA	M	0.275	D				
95		Southern States Utilities	University Shores #2		2600 Jarrell Rd; Orlando	D	3048P00417	283445	811616	D	5495	S	2	D	BA	M	1.000	D	0.870	O		
95	N	Starlight Ranch MHP	Starlight Ranch MHP		6000 E Pershing Ave. Orlando	D	3048P01624	282919	811800	D	1200	D	2	M	BA	M	0.120	D				
95		Univ. of Central Fla.	Univ. of Central Fla.	#	Main Campus; Alafaya Trail; Orlando	5	3048S00470	283500	811300	D	20000	D	2	5	X	5	0.500	5	0.500	O	0.319	0.408
95		Winter Garden; City of	Winter Garden	#	101 E Crest Ave Winter Garden	5	3048M01387	283435	813555	D	11851	5	3	5	BA	5	2.000	5			1.140	1.050
95		Winter Park; City of	Winter Park		Belfort Dr & Bongart Rd; Winter Pk	D	3048M02580	283623	811857	D	4636	[redacted]	2	M	HI	R	0.750	D	0.750	O		
95		Zellwood Station Coop.	Zellwood Station Coop.	#	2126 Spillman Drive; Zellwood	5	3048P01438	284302	813508	D	1470	5	2	5	BA	5	0.300	5			0.109	0.105
97	N	Kissimmee; City of																				
97	N	Orange-Osceola Utilities Inc.	Buena Ventura Lakes		2515 Boggy Creek Rd.; Kissimmee	O											1.800	O	1.930	O		
97	N	Poinciana Utilities																				
97	N	St. Cloud; City of	Lakeshore	#	2800 Lakeshore Blvd.; St. Cloud	5					13000	5	3	5	HI	5	2.200		2.200	O	1.260	1.640
107		Crescent City; City of	Crescent City		Lake St./Cypress St.; Crescent City	D	3048M01816	292532	813028	D	1100	D	2	M	BA	M	0.250	D				
107		Palatka; City of	Palatka	#	Lumby Road; Palatka	5	3048M01836	293755	813832	D	10700	5	2	5	BA	5	3.000	D			2.060	2.360
109		Hastings; Town of	Hastings WWTF	#	900 North Main Street; Hastings	5	3155M00523	294330	813030	D	1000	D	2	5	BA	5	0.120	5			0.129	0.111
109		Intercoastal Utilities; Inc.	Sawgrass WWTP	#	10042 Sawgrass Drive South	5	3155P03136	301040	812238	D	6000	5	2	5	HI	5	0.750	5	1.000	R	0.592	0.538
109		Jax. Methodist Home	Wesley Manor Ret. Village		SR 13; Jacksonville	D	3155P00406	300650	813622	D	630	D	2	M	BA	M	0.100	D				
109		North Beach Utilities	North Beach		2300 Coastal Hwy.; St. Augustine	D	3155P00421	295700	811900	D	747	[redacted]	2	M	BA	R	0.150	R	0.150	R		
109		St. Augustine; City of	#1		S Riberia St.; St. Augustine	D	3155M00939	295235	811845	D	15700	D	2	M	BA	M	5.000	D				
109		St. Augustine; City of	#2		Fish I. Rd.; St. Augustine	D	3155M00811	295150	811729	D	15000	D	2	M	BA	M	1.500	D				
109		St. Johns County	Anastasia Island WWTF	#	860 West 16th Street	5	3155C00415	295117	811659	D	6659	5	3	5	HI	5	4.000	5	4.000		1.072	1.198
109		St. Johns County	SR 16 WWTF	#	3000 Industrial Drive	5	3155C03076	295430	812500	D	136	5	3	5	HI	5	0.500	5	0.500		0.090	0.103
109		St. Johns County	Mainland; SR 207 WWTF	#	Golf Ridge Drive	5	3155C01925	294841	812239	D	329	5	3	5	HI	5	0.250	5	0.125	R	0.041	0.040
109		St. Johns County	St. Augustine Shores WWTF	#	493 Domenico Circle	5	3155P00256	294756	811851	D	2434	5	3	5	HI	5	0.500	5	0.220	R	0.293	0.429
109		St. Johns Service Co.	Innlet Beach		Palmera Dr. E.; Innlet Beach	D	3155P00186	301248	812308	D	5000	D	2	M	HI	R	0.500	R	0.500	R		
109		St. Johns Service Co.	Marsh Landing/Ponte Vedra Lks.		Gun Club Rd.; St. Augustine	D	3155P00491	301430	812355	D	2457	D	2	M	HI	R	0.500	R	0.500	R		
109		St. Johns Service Co.	Players Club South		TPC parking; Sawgrass	D	3155P00634	301104	812343	D	5000	D	2	M	HI	R	0.900	R	0.500	R		
109		United Water Florida	Ponte Vedra	#	200 Ponce de Leon Blvd.	5	3155P05998	301424	812321		3091	5	3	5	BA	5	0.500	5	0.400	R	0.288	0.283
109		United Water Florida	St. Johns North	#	1000 East of Big Leige Avenue	5	3155P00510	300531	813625		2062	5	3	5	BA	5	0.100	5	0.100	R	0.087	0.094
109		General Development	Julington Creek		SR 13/Davis Pond Blvd.; Fruit Cove	D	3155P00498	300619	813740	D	1000	D	2	M	BA	M	0.200	D				
117		Alafaya Utilities; Inc.	Alafaya PUD		1057 McKinnon Rd; Oviedo	D	3059P00434	283824	811116	D	12000	D	3	R	HI	R	2.400	D	2.048	O		
117		Altamonte Springs; City of	Altamonte Springs		Keller Rd; Altamonte Sprs	D	3059M01771	284000	812100	D	125000	D	3	R	HI	R	12.500	D	10.000	O		
117		Casselberry; City of	Casselberry		700 N Winter Park; Casselberry	D	3059M02641	284114	811852	D	3167	D	2	5	HI	5	0.643	5	0.643	O	0.498	0.516
117		Longwood Utilities; Inc.	Shadow Hills	#	910 Longwood Hills Rd; Longwood	5	3059P10659	284254	812143	D	1600	5	2	5	BA	5	0.500	5			0.430	0.410
117		Orlando; City of	Iron Bridge Regional	#	601 Iron Bridge Circle; Oviedo	5	3059M00284	283720	811310	D	270000	5	3	5	BA	5	40.000	5	20.000	R	23.090	21.560
117		Palm Valley Association	Palm Valley MHP		3751 Alafaya Tr; Oviedo	D	3059P02830	283720	811145	D	1409	D	2	M	BA	M	0.126	D	0.126			
117		Sanford; City of	Sanford	#	1201 W Seminole Blvd; Sanford	5	3059M01119	284826	811645	D	34000	S	3	5		5	7.300	S	6.300	O	4.106	4.579
117		*Sanlando Utilities*	*Des Pinar/Woodlands*	#	125 Western Fork Ave; Longwood	5	3059P01774	284215	812229	D	4680	5	2	5	BA	5	0.500	5	0.500		0.440	0.440
117		Sanlando Utilities	Wekiva Hunt Club	#	105 Ledbury Drive; Longwood	5	3059P03243	284142	812558	D	22989	5	2	5	BA	5	2.900	5	2.900		2.210	2.090
117		Seminole County	Greenwood Lakes	#	701 Greenway Blvd. Lake Mary	5	3059P02840	284400	812049	D	24000	5	3	5	HI	5	3.500	5	3.500	O	1.855	1.870
117		Seminole County	Northwest Regional	#	501 Yankee Lake Road; Sanford	5	3059C02183	284950	812344	D	5000	5	3	5	HI	5	2.500	5	2.500			
117		Southern States Utilities	Chuluota		4th & C Ave; Chuluota	D	3059P01117	283846	810730	D	1000	D	2	M	BA	D	0.100	D	0.100			
117		Utilities Inc.	Lincoln Heights		20th St; off Arpt. Blvd; Sanford	S	3059P01116	284736	811811	D	865	S	2	S	BA	S	0.120	D	0.120			
117		Utilities Inc.	Weathersfield		200 Weathersfield Ave; Altamonte Spr	S	3059P02763	283930	812230	D	3206	D	2	S	BA	S	0.360	S	0.360			
117		Winter Springs; City of	Winter Springs East	#	1560 Winter Spr Blvd; Winter Springs	5	3059M10286	284035	811438	D	12500	5	3	5	HI	5	2.012	5	2.012	O	1.022	0.990
117		Winter Springs; City of	Winter Springs West	#	1000 W SR 434; Winter Springs	5	3059M03248	284231	811912	D	11500	5	3	5	HI	5	1.546	5	1.610	O	0.917	0.950
127		Daytona Beach; City of	Bethune Point	#	1 Shady Place; Daytona Beach	5	3064M00707	291205	810031	D	38700	5	3	5	HI	5	12.000	5			6.000	6.000
127		Daytona Beach; City of	Regional	#	3651 LPGA Blvd.	5	3064M02142	291031	810641	D	51300	5	X	5	HI	5	10.000	5	2.216	O	6.000	8.000
127		Deland; City of	Brandy Trails		465 E Lake Mamei Rd; Deland	P	3064M00165	290502	811930	D	3150	D	2	P	BA	P	0.630	P	-0.630	O		
127		Deland; City of	Regional		1032S Amelia Ave; Deland	S	3064M06162	290034	811756	D	16000	D	3	S	HI	S	4.000	S	4.000	O		
127		Edgewater; City of	Edgewater	#	West Ocean Avenue; Edgewater	5	3064M01435	285826	805455	D	16700	5	3	5	HI	5	2.250	5	2.250	R	1.202	1.167
127		Holly Hill; City of	Holly Hill	#	465 LPGA Blvd.	5	3064M00704	291426	810240	D	11900	5	3	5	LO	5	1.200	5	1.200		0.800	0.800
127		Indian River Utilities	Hacienda del Rio		US 1; S of Edgewater	D	3064P00526	285527	805222	D	600	D	2	M	BA	M	0.116	D	0.116			
127		N. Peninsula Util. Corp.	Seabridge Subdiv.		SR A1A N of Ormond Beach	D	3064P01005	292300	810500	D	545	D	2	M	BA	M	0.181	D	0.181			
127		New Smyrna Beach Util. Comm	NSBUB	#	20 N Causeway SR 44 N Smyrna Bch	5	3064M01531	290150	805503	D	19000	5	2	5	HI	5	4.000	5	0.500	R	2.390	2.930
127		Ormond Beach; City of	Breakaway Trails		N of SR 40; E of I-95; Ormond Bch	D	3064M00590	291500	810704	D	3000	D	2	M	HI	R	0.300	R	3.000	O		
127		Ormond Beach; City of	Ormond Beach	#	550 North Orchard Street; Ormond Beach	5	3064M01788	291720	810426	D	42000	5	3	5	HI	5	6.000	5	4.300	O	3.640	3.720
127		Port Orange; City of	R. Dwayne Huffman	#	817 Oak St; Port Orange	5	3064M01776	290812	805949	D	40000	5	3	5	HI	5	12.000	5	12.000	O	4.152	5.115
127		Southern States Utilities	Deltona Lakes		Fisher & Providence Drs; Deltona	D	3064P00443	285227	811507	D	11858	D	2	M	BA	M	0.900	D	0.900	O		
127		Tymber Creek; Inc.	Tymber Creek Subdiv.		Service road off Sand Spr; Ormond Bch	D	3064P01226	291554	810738	D	414	D	2	M	BA	M	0.131	D				
127		Volusia County	Deltona North		Wolf Pack Run; Deltona	D	3064C03331	285510	811510	D	2958	[redacted]	2	M	BA	5	0.500	5	0.500	O	0.371	0.346
127		Volusia County	Four Townes		Iris Dr; Orange City	D	3064C03097	285545	811710	D	1843	[redacted]	2	M	BA	5	0.600	5	0.600		0.242	0.198
127		Volusia County	Southwest Regional		US 17/92 & Enterprise Rd; Debarry	D	3064C05479	285430	811933	D	5000	D	3	P	HI	5	0.499	5	0.499		0.300	0.300
127		Volusia County	Spruce Creek		Taylor Rd & Lindy Lp; Daytona Bch	D	3064C00036	290443	810318	D	3500	D	2	M	BA	5	0.350	5			0.154	0.182
		213	Number of Facilities		Total Quantities		Total pop of WWTFs with known flows				#######						494.479					
							Grand total pop.				3286095						532.185					
							AVE PER CAPITA FLOW				101.43											

Facility Name	Monthly Wastewater Treatment Flow										Mean Flow mgd		DEP Reuse Total		DEP Unreused Flow mgd	DEP reuse for wetlands & recharge	Unreused flow plus wetlands & recharge	Disposal						
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec								Evap./ Perc. Pond	Over-land Flow	Spray Field	Surf. Disch.	Under-ground Inject.	Reuse	Other
Park Manor	0.281	0.290	0.271	0.303	0.303	0.357	0.317	0.260	0.283	0.248	0.284		0.000	5	0.284	0.000	0.284				0.284			5
Rock Springs MHP	0.098	0.089	0.098	0.114	0.122	0.133	0.148	0.134	0.126	0.135	0.118		0.000	K	0.118	0.000	0.118	0.106		0.012				5
Reedy Creek	8.095	8.329	8.124	9.283	9.447	9.454	8.566	8.435	8.334	8.042	8.425		8.350	5	0.075	6.650	6.725						8.350	6.652 5
University Shores #1											0.174	K	0.000	D	0.174	0.000	0.174							D
University Shores #2											0.409	K	0.409	D	0.000	0.000	0.000						0.409	D
Starlight Ranch MHP											0.127	EF	0.000	D	0.127	0.000	0.127							D
Univ. of Central Fla.	0.376	0.340	0.276	0.347	0.340	0.382	0.516	0.448	0.367	0.341	0.372		0.372	5	0.000	0.000	0.000						0.372	5
Winter Garden	1.090	1.050	1.120	1.560	1.550	1.830	1.680	1.450	1.400	1.470	1.366		0.000	5	1.366	0.000	1.366	1.370			1.550			5
Winter Park											0.490	R	0.395	R	0.095	0.000	0.095						0.395	R
Zellwood Station Coop.	0.112	0.104	0.092	0.088	0.089	0.088	0.070	0.096	0.117	0.131	0.100		0.000	5	0.100	0.000	0.100	0.090						0.010 5
											0.000													
Buena Ventura Lakes											0.000													
											0.000													
Lakeshore	1.550	1.420	1.410	2.030	1.800	2.030	2.330	1.760	2.300	1.700	1.769		0.200	5	1.569	0.000	1.569			1.200			0.200	5
Crescent City											0.116	EF	0.000	D	0.116	0.000	0.116							D
Palatka	2.250	2.130	2.230	3.710	2.810	2.990	2.890	3.630	3.200	3.300	2.797		0.000	5	2.797	0.000	2.797				X			5
Hastings WWTF	0.079	0.073	0.077	0.086	0.069	0.093	0.109	0.075	0.092	0.089	0.090		0.000	5	0.090	0.000	0.090				X			5
Sawgrass WWTP	0.522	0.506	0.529	0.564	0.604	0.693	0.648	0.739	0.790	0.644	0.614		0.614	5	0.000	0.000	0.000						0.614	5
Wesley Manor Ret. Village											0.067	EF	0.000	D	0.067	0.000	0.067							D
North Beach											0.079	R	0.079	R	0.000	0.000	0.000						0.079	R
#1											*1.659*	EF	*0.000*	D	*1.659*	*0.000*	*1.659*							D
#2											1.586	EF	0.000	D	1.586	0.000	1.586							D
Anastasia Island WWTF	1.174	1.078	1.069	1.332	1.514	1.181	0.975	0.978	0.996	0.923	1.124		0.600	5	0.524	0.000	0.524				0.400		0.600	5
SR 16 WWTF	0.101	0.111	0.093	0.107	0.110	0.112	0.100	0.110	0.080	0.079	0.100		0.100	5	0.000	0.100	0.100				X		0.100	X 5
Mainland; SR 207 WWTF	0.041	0.039	0.039	0.054	0.036	0.040	0.038	0.041	0.058	0.045	0.043		0.031	5	0.012	0.000	0.012						0.031	X 5
St. Augustine Shores WWTF	0.416	0.399	0.372	0.379	0.375	0.451	0.449	0.506	0.508	0.461	0.420		0.220	5	0.200	0.000	0.200						0.220	X 5
Inniet Beach											0.282		0.282	R	0.000	0.000	0.000						0.282	R
Marsh Landing/Ponte Vedra Lks.											0.372		0.372	R	0.000	0.000	0.000						0.372	R
Players Club South											0.364		0.364	R	0.000	0.000	0.000						0.364	R
Ponte Vedra	0.281	0.276	0.293	0.391	0.337	0.469	0.363	0.351	0.332	0.359	0.335		0.000	5	0.335	0.000	0.335	X						5
St. Johns North	0.108	0.107	0.103	0.117	0.125	0.105	0.110	0.115	0.103	0.089	0.105		0.000	5	0.105	0.000	0.105	X						5
Julington Creek											*0.106*	EF	*0.000*	D	*0.106*	*0.000*	*0.106*							D
Alafaya PUD											0.623		0.448	R	0.175	0.000	0.175						0.448	R
Altamonte Springs											6.300		2.560	R	3.740	0.000	3.740						2.560	R
Casselberry	0.526	0.482	0.482	0.513	0.609	0.720	0.601	0.611	0.689	0.616	0.572		0.635	5	-0.063	0.470	0.407						0.635	5
Shadow Hills	0.402	0.410	0.412	0.437	0.452	0.480	0.441	0.431	0.453	0.451	0.434		0.000	5	0.434	0.000	0.434	0.434						5
Iron Bridge Regional	23.440	22.090	23.520	27.900	28.350	34.760	33.860	29.020	29.620	28.750	27.163		17.470	5	9.693	17.470	27.163				14.760		17.470	12.420 5
Palm Valley MHP											0.113		0.113	D	0.000	0.113	0.113						0.113	D
Sanford	5.104	4.555	3.919	4.762	5.548	7.303	5.621	5.524	6.500	6.200	5.310		5.310	5	0.000	0.000	0.000			2.000	1.000		5.310	5
Des Pinar/Woodlands	0.430	0.420	0.410	0.460	0.490	0.510	0.490	0.470	0.580	0.570	0.476		0.476	5	0.000	0.476	0.476	0.476					0.476	5
Wekiva Hunt Club	2.050	2.040	2.120	2.330	2.300	2.440	2.250	2.180	2.450	2.510	2.248		0.000	5	2.248	0.000	2.248				2.250			5
Greenwood Lakes	1.911	1.932	1.846	1.948	1.991	2.106	2.070	2.016	2.127	2.134	1.984		0.614	5	1.370	0.000	1.370	1.366					0.614	5
Northwest Regional											0.400		0.400	5	0.000	0.000	0.000						0.400	5
Chuluta											0.106	EF	0.106	D	0.000	0.106	0.106						0.106	D
Lincoln Heights											0.080		0.000	S	0.080	0.000	0.080							S
Weatherafield											0.105		0.000	S	0.105	0.000	0.105							S
Winter Springs East	0.864	0.812	0.838	0.852	0.943	1.052	1.055	0.984	1.026	1.023	0.955		0.884	5	0.071	0.426	0.497	0.259		0.167			0.884	5
Winter Springs West	0.862	0.852	0.890	1.237	1.155	1.215	1.302	1.116	1.247	1.159	1.075		0.982	5	0.093	0.787	0.880	0.593		0.194			0.982	5
Bethune Point	7.000	7.000	6.000	6.000	7.000	7.000	6.000	6.000	6.000	6.000	6.333		0.000	5	6.333	0.000	6.333				6.333			5
Regional	7.000	7.000	6.000	6.000	7.000	7.000	6.000	6.000	6.000	6.000	6.500		5.000	5	1.500	0.000	1.500				1.500		5.000	5
Brandy Trails											0.120		0.120	P	0.000	0.000	0.000						0.120	P
Regional											2.660		0.266	R	2.394	0.000	2.394						0.266	R
Edgewater	1.180	1.225	1.310	1.250	1.364	1.330	1.369	1.570	1.677	1.456	1.342		0.475	5	0.867	0.000	0.867				0.867		0.475	5
Holly Hill	0.800	0.800	0.900	0.800	0.800	0.900	0.700	0.700	0.700	0.700	0.783		0.500	5	0.283	0.000	0.283				1.000		0.500	5
Hacienda del Rio											0.063	EF	0.032	D	0.032	0.032	0.063						0.032	D
Seabridge Subdiv.											0.058	EF	0.058	D	0.000	0.058	0.058						0.058	D
NSBUB	3.070	2.390	2.450	2.580	3.240	3.040	2.360	3.100	3.460	3.070	2.840		1.100	5	1.740	0.000	1.740						1.100	5
Breakaway Trails											0.106		0.106	R	0.000	0.000	0.000						0.106	R
Ormond Beach	3.480	3.000	2.970	3.350	3.640	4.050	3.670	3.700	4.400	4.000	3.635		0.290	5	3.345	0.000	3.345				3.345		0.290	5
R. Dwayne Huffman	5.870	4.997	4.377	5.002	5.200	5.233	4.786	4.750	6.012	4.989	5.040		1.000	5	4.040	0.000	4.040						1.000	4.000 5
Deltona Lakes											0.887		0.887	R	0.000	0.000	0.000						0.887	R
Tymber Creek Subdiv.											0.044	EF	0.044	D	0.000	0.044	0.044						0.044	D
Deltona North	0.340	0.330	0.290	0.180	0.185	0.324	0.323	0.324	0.384	0.355	0.313	5	0.313	R	0.000	0.313	0.313	0.313					0.313	
Four Townes	0.199	0.171	0.155	0.165	0.176	0.174	0.176	0.228	0.264	0.190	0.195	5	0.195	D	0.000	0.195	0.195	0.195					0.195	5
Southwest Regional	0.284	0.269	0.320	0.340	0.298	0.316	0.290	0.265	0.298	0.335	0.301		0.301	P	0.000	0.301	0.301	0.301					0.301	
Spruce Creek	0.162	0.160	0.153	0.158	0.273	0.178	0.149	0.147	0.194	0.163	0.173		*0.000*	D	0.173	*0.000*	0.173	0.173					*0.000*	5
Number of Facilities					Total of known flows for WWTFs with known popu						304.598		142.994		14.374									
								Estimated grand total flo			332.501													
									AVE % OF CAP		0.616													

Facility Name	Receiving water body for surface discharge		Anticipated Upgrade or Expansion		Reuse broken down into major categories: Irrigation: Agri-culture	Irrigation: Golf	Irrigation: Public Non-golf	Comm./ Indust.	Wet-lands	Gr Wat Rech	Other	Reuse Total		Agricultural Irrigation Reuse Broken Down Into Subcategories: Citrus	Other Edible Crops	Feed/ Fodder	Pasture	Sod Farm	Tree Farm	Whole-sale Nursery	Other	Public Area Reuse Broken down: General Reuse System	Pond; Pool; Fount.	Golf Course	Stadium; Park; & Playgr.
Park Manor	Unnamed ditch to Little Ec	#	Yes	5								0.000	5												
Rock Springs MHP		#	No	5								0.000	K						0.012						
Reedy Creek		#	Yes	5		1.200	0.500			6.650		8.350	5											1.200	
University Shores #1	Little Econ. Riv.	D										0.000	D												
University Shores #2							0.409					0.409	D												
Starlight Ranch MHP												0.000	D												
Univ. of Central Fla.		#	Yes	5		0.120	0.252					0.372	5											0.120	0.252
Winter Garden	Unnamed tributary to Lak	#	Yes	5								0.000	5												
Winter Park						0.170	0.225					0.395	R												
Zellwood Station Coop.		#	Yes	5								0.000	5												
Buena Ventura Lakes																									
Lakeshore		#	Yes	5								0.200	5								0.100				0.100
Crecsent City	St. Johns River	D										0.000	D												
Palatka	St. Johns River	#	No	5								0.000	5												
Hastings WWTF	Deep Creek	#	Yes	5								0.000	5												
Sawgrass WWTP		#	Yes	5		0.614						0.614	5											0.614	
Wesley Manor Ret. Village	Julington Creek											0.000	D												
North Beach						0.079						0.079	R												
#1	Matanzas River											0.000	D												
#2	Matanzas River											0.000	D												
Anastasia Island WWTF	Matanzas River	#	No	5		0.600						0.600	5							X				0.600	
SR 16 WWTF	Moultrie Creek	#	Yes	5					0.100			0.100	5							X					
Mainland; SR 207 WWTF		#	Yes	5		0.031						0.031	5							X				0.125	
St. Augustine Shores WWTF	Moses Creek	#	No	5		0.220						0.220	5							X				0.360	
Innlet Beach						0.282						0.282	R												
Marsh Landing/Ponte Vedra Lks.						0.372						0.372	R												
Players Club South						0.364						0.364	R												
Ponte Vedra		#	No	5								0.000	5												
St. Johns North		#	Yes	5								0.000	5												
Julington Creek												*0.000*	*D*												
Alafaya PUD						0.448						0.448	R												
Altamonte Springs							1.320	1.240				2.560	R												
Cassellberry			1.4 mgd 1996			0.165				0.470		0.635	5								Check 1995 survey for 1996 expanded				
Shadow Hills		#	No	5								0.000	5												
Iron Bridge Regional	Little Econ. River	#		5					17.470			17.470	5												
Palm Valley MHP										0.113		0.113	D												
Sanford		#	X	5	3.740	1.000	0.952	0.020				5.310	5	1.170	0.400	0.040	2.000			0.130		0.600		1.000	0.292
Des Pinar/Woodlands		#	No	5						0.476		0.476	5												
Wekiva Hunt Club	Sweetwater Creek	#	Yes	5								0.000	5												
Greenwood Lakes		#	No	5			0.614					0.614	5									0.114			
Northwest Regional		#	Yes	5			0.400		X			0.400	5												
Chulota										0.106		0.106	D												
Lincoln Heights	Canal/St Johns	S										0.000	S												
Weathersfield	Little Wekiva Riv	S										0.000	S												
Winter Springs East		#	Yes	5		0.370	0.088			0.426		0.884	5											0.370	0.036
Winter Springs West		#	Yes	5		0.093	0.102			0.787		0.982	5											0.093	0.102
Bethune Point	Halifax River	#	No	5								0.000	5												
Regional	Halifax River	#	Yes	5		3.500	1.500					5.000	5									0.100		3.500	0.500
Brandy Trails					0.120							0.120	P							0.120					
Regional	St Johns Riv	S				0.266						0.266	R												
Edgewater	Indian River	#	Yes	5			0.475					0.475	5									0.475			
Holly Hill	Halifax River	#	No	5		0.300	0.200					0.500	5											0.300	0.200
Hacienda del Rio										0.032		0.032	D												
Seabridge Subdiv.										0.058		0.058	D												
NSBUB	North Indian River	#	Yes	5		0.600	0.500					1.100	5											0.600	0.100
Breakaway Trails							*0.106*					*0.106*	R												
Ormond Beach	Halifax River	#	Yes	5		0.290						0.290	5											0.290	
R. Dwayne Huffman	Halifax River	#	Yes	5		0.495		0.010			0.495	1.000	5						0.100		1.000				
Deltona Lakes						0.887						0.887	R												
Tymber Creek Subdiv.										0.044		0.044	D												
Deltona North										0.313		0.313	5												
Four Townes										0.195		0.195	5												
Southwest Regional						0.000	0.000			0.301		0.301	5												
Spruce Creek												0.000	5												
Number of Facilities	77				25.000	53.000	38.000	10.000	7.000	48.000	10.000	142.647													

Facility Name	Info Subcategories: Lawn & Landscape	Cemetery	Other	Ground Water Recharge Cats: Drain or Ponds	RIBS		Information in paper or GIS files: Large Individual Reuse Sites	Reuse Charge Rates	Ordinance or Incentive Program	Map of Reuse Lines and Sites	WASTEWATER TREATMENT AND REUSE SURVEY MAILING LIST CONTACT NAME AND TITLE	AFFILIATION	ADDRESS
Park Manor						5					Robert Powers; Chief Operator	Park Manor Water Works	1527 Park Manor Dr.
Rock Springs MHP						5					Gary Cottle; Manager	Reeco Properties; Ltd.	17 S. Magnolia Ave.
Reedy Creek	0.500				6.650	5	X	X	Yes	X	Ted W. McKim; Manager	Reedy Creek Energy Services; Inc.	P.O. Box 10000
University Shores #1											Chris Arcand?	Southern States Utilities;	1000 Color Place
University Shores #2											"	Southern States Utilities;	1000 Color Place
Starlight Ranch MHP											Manger	Starlight Ranch Mobile Home Park	6000 E. Pershing Ave.
Univ. of Central Fla.						5		X	*No*		*Les Crandall; Supervisor of Utilities*	*University of Central Florida*	*P.O. Box 25000*
Winter Garden						5					Mike Lundskow; Chief Operator	City of Winter Garden	101 E. Crest Avenue
Winter Park											James Robards; Sr.; Manager-Utility Div.	City of Winter Park	401 Park Ave. S.
Zellwood Station Coop.						5					W.A. Restall; Operations Manager	Zellwood Station Coop.; Inc.	2126 Spillman DR.
											Bryan Wheeler	City of Kissimmee	P.O. Box 421608
Buena Ventura Lakes											Mike Johnson; General Manager	Orange-Osceola Utilities; Inc.	2515 Boggy Creek Road
											Doug Young	Poinciana Utilities	14 Doverplum Center
Lakeshore						5	X	No	Yes	X	Richard Tindall; Superintendent	City of St. Cloud	2800 Lakeshore Blvd.;
Crecsent City											Carl Tankersley; Administrator	City of Crescent City	115 N. Summit St.
Palatka						5					Carlton "Platt" Drew; Superintendent	City of Palatka	Rt. 3; Box 129
Hastings WWTF						5					Ronald Pirkle; Director of Utilities	Town of Hastings	P.O. Box 427
Sawgrass WWTP						5	X	No	No	X	M. L. Forrester; Associate Managing Director	Sawgrass Wastewater Treatment	1300 Gulf Life Drive; Suite 600
Wesley Manor Ret. Villege											Manager	Jacksonville Methodist Home	25 S.R. 13
North Beach											Frank Usina	North Beach Utilities	2300 Coastal Highway
#1											Jack Cubbage; Dir. of Public Works	City of St. Augustine	P.O. Box 210
#2											Jack Cubbage; Dir. of Public Works	City of St. Augustine	P.O. Box 210
Anastasia Island WWTF						5	X	X	No		Gerald E. "Bubba" Solano; Jr.; Supervisor WWTF	St. Johns County	PO Box 3006
SR 16 WWTF						5	X	No	No		Gerald E. "Bubba" Solano; Jr.; Supervisor WWTF	St. Johns County	PO Box 3006
Mainland; SR 207 WWTF						5	X	No	No		Gerald E. "Bubba" Solano; Jr.; Supervisor WWTF	St. Johns County	PO Box 3006
St. Augustine Shores WWTF						5	X	X	No		Gerald E. "Bubba" Solano; Jr.; Supervisor WWTF	St. Johns County	PO Box 3006
Innlet Beach											G.W. Whitmire	St. Johns Service Company	P.O. Box 52506
Marsh Landing/Ponte Vedra Lks.											"	"	"
Players Club South											"	"	"
Ponte Vedra						5					*Phillip Heil; Vice President*	*United Water Florida*	*1400 Millcoe Road*
St. Johns North						5					Phillip Heil; Vice President	United Water Florida	1400 Millcoe Road
Julington Creek											Leighton Hew	General Development Corp	2601 S Bayshore Dr
Alafaya PUD											Manager	Alafaya Utilities; Inc.	110 Alafaya Woods Blvd.
Altamonte Springs											Glenn Forrest; P.E.; City Engineer	City of Altamonte Springs	225 Newberryport Ave.
Casselberry	euse.			0.470		5	X	X	Yes	X		City of Casselberry	95 Triplet Lake Dr.
Shadow Hills						5					Robert L. Cross; Community Superintendent	Longwood Utilities; Inc.	1000 Savage Court; Suite 105
Iron Bridge Regional						5			No		Charles Miller; Technical Sup. Manager	City of Orlando	601 Iron Bridge Circle
Palm Valley MHP				0.113								Palm Valley Association	3751 Alafaya Tr
Sanford		0.060				5		X	Yes	X	Bill Marcous; Project Coordinator	City of Sanford	PO Box 1788
Des Piner/Woodlands				0.476		5					Jerry Salsano; Utilities Engineer	Sanlando Utilities	125 Western Fork
Wekiva Hunt Club						5					Jerry Salsano; Utilities Engineer	Sanlando Utilities	105 Ledbury Drive
Greenwood Lakes	0.500					5	X	X	No	X	Hugh P. Sipes; Utilities Engineer	Seminole County	3000A Southgate Drive
Northwest Regional	0.400		0.400			5	X	X	No	X	Hugh P. Sipes; Utilities Engineer	Seminole County	3000A Southgate Drive
Chulota				0.106								SSU	
Lincoln Heights											Donald Rasmussen	Utilities Incorporated	200 Weathersfield Ave.
Weathersfield											Donald Rasmussen	Utilities Incorporated	200 Weathersfield Ave.
Winter Springs East	0.052			0.426		5	X	No	Yes	X	Kipton Lockcoff; Utility Director	City of Winter Springs	110 N. Flamingo Ave.
Winter Springs West				0.787		5	X	No	Yes	X	Kipton Lockcuff; Utility Director	City of Winter Springs	110 N. Flamingo Ave
Bethune Point						5	X	X	Yes	X	Richard Debinsky; P.E.; Water & Wastewater Eng.	City of Daytona Beach	PO Box 2451
Regional	0.900					5	X	X	Yes	X	Richard Debinsky; P.E.; Water & Wastewater Eng.	City of Daytona Beach	PO Box 2451
Brandy Trails											Larry Barnet; Director of Utilities	City of Deland;	P.O. Box 499;
Regional											Lerry Barnet; Director of Utilities	City of Deland	P.O. Box 499
Edgewater						5		X	Yes	X	Kyle W. Fegley; P.E.; City Engineer	City of Edgewater	PO Box 100
Holly Hill						5			No		Milton L. Hallman; Public Works Director	City of Holly Hill	1065 Ridgewood Avenue
Hacienda del Rio				0.032							Manager	N. Peninsula Utilities Corp.	P.O. Box 2803
Seabridge Subdiv.				0.058									
NSBUB	0.100		0.300			5	X	X	Yes	X	Tom May; Water & Poll.Control Mgr.	New Smyna Beach Utilities Comm.	PO Box 100
Breakaway Trails											Francis E. Soloducha; P.E.; Utilities Manager	City of Ormond Beach	501 North Orchard Street
Ormond Beach						5	X	X	Yes	X	Francis E. Soloducha; P.E.; Utilities Manager	City of Ormond Beach	501 North Orchard Street
R. Dwayne Huffman						5	X	X	Yes	X	Ed Gardulski; Assistant Public Utilities Director	City of Port Orange	1000 City Center Circle
Deltona Lakes											Manager	Tymber Creek Utilities	1951 State Road 40
Tymber Creek Subdiv.				0.044									
Deltona North				0.313		5					Al Roe; Volusia County Utilities	Volusia County	123 W. Indiana Ave.
Four Townes				0.195		5					Charles Davies; Wastewater Supervisor	Volusia County	123 W. Indiana Ave.
Southwest Regional				0.301		5	X			X	Charles Davies; Wastewater Supervisor	Volusia County	123 W. Indiana Ave.
Spruce Creek						5					Charles Davies; Wastewater Supervisor	Volusia County	123 W. Indiana Ave.
Number of Facilities													

Facility Name	CITY, STATE, ZIP CODE	PHONE		Returned 1995 survey
Park Manor	Orlando; FL; 32825	407-277-1204	5	X
Rock Springs MHP	Apopka; FL 32712	407-886-0775	5	X
Reedy Creek	Lake Buena Vista; FL; 32830-10	407-824-7447	5	X
University Shores #1	Apopka; FL; 32703	407-880-0058	*	
University Shores #2	Apopka; FL; 32703	407-880-0058		
Starlight Ranch MHP	Orlando; FL; 32822	407-272-3130	DEP	
Univ. of Central Fla.	Orlando; FL; 32816	407-823-0987	5	X
Winter Garden	Winter Garden; FL; 34787	407-656-3601	5	X
Winter Park	Winter Park; FL; 32789-4386	407-623-3335	*	
Zellwood Station Coop.	Zellwood; FL; 32798	407-886-0000	5	X
	Kissimmee; FL; 34742-1608		*	
Buena Ventura Lakes	Kissimmee; FL			
	Kissimmee; FL34759		*	
Lakeshore	St. Cloud; FL; 34769	407-957-7340	5	X
Crecsent City	Crescent City; FL; 3212	904-698-2525	DEP	
Palatka	Palatka; FL; 32177	904-329-0146	5	X
Hastings WWTF	Hastings; FL; 32045	904-692-1520	5	X
Sawgrass WWTP	Jacksonville; FL; 32207	904-399-8802	5	X
Wesley Manor Ret. Village	Jacksonville; FL; 32259	904-262-7351	DEP	
North Beach	St. Augustine; FL; 32084	904-824-1806	DEP	
#1	At. Augustine; FL; 32084		Dir	
#2	At. Augustine; FL; 32084			
Anastasia Island WWTF	St. Augustine; FL; 32085	904-471-1258	5	X
SR 16 WWTF	St. Augustine; FL; 32085	904-471-1258	5	X
Mainland; SR 207 WWTF	St. Augustine; FL; 32085	904-471-1258	5	X
St. Augustine Shores WWTF	St. Augustine; FL; 32085	904-471-1258	5	X
Innlet Beach	Jacksonville; FL; 32207	904-725-6589	DEP	
Marsh Landing/Ponte Vedra Lks.	"	"		
Players Club South	"	"		
Ponte Vedra	Jacksonville; FL 32225	904-725-2865	5	X
St. Johns North	Jacksonville; FL 32225	904-725-2865	5	X
Julington Creek	Miami; FL 33133	305-355-1357	D	
Alafaya PUD	Ovievdo; FL; 32765	407-365-8717	DEP	
Altamonte Springs	Altamonte Springs; FL; 32701-3	407-830-3857	*	
Casselberry	Casselberry; FL; 3270-3399	407-263-3900	5	X
Shadow Hills	Longwood; FL 32750		5	X
Iron Bridge Regional	Oviedo; FL 32765	407-246-2213	5	X
Palm Valley MHP	Oviedo		*	
Sanford	Sanford; FL 32772	407-330-5649	5	X
Des Pinar/Woodlands	Longwood; FL 32750	407-788-3600	5	X
Wekiva Hunt Club	Longwood; FL 32779	407-788-3600	5	X
Greenwood Lakes	Sanford; FL 32773-5407	407-323-9615	5	X
Northwest Regional	Sanford; FL 32773-5407	407-323-9615	5	X
Chulota			*	
Lincoln Heights	Altamonte Springs; FL. 32714			
Weathersfield	Altamonte Springs; FL. 32714		*	
Winter Springs East	Winter Springs; FL 32708	407-327-2669	5	X
Winter Springs West	Winter Springs; FL 32708	407-327-2669	5	X
Bethune Point	Daytona Beach; FL 32115-2451	904-258-3174	5	X
Regional	Daytona Beach; FL 32115-2451	904-258-3174	5	X
Brandy Trails	Deland; FL 32721-0449		*	
Regional	Deland; FL 32721-0449		*	
Edgewater	Edgewater; FL 32132-0100	904-424-2479	5	X
Holly Hill	Holly Hill; FL 32117	904-947-4163	5	X
Hacienda del Rio	Ormond Beach; FL; 32175	904-677-7405	DEP	
Seabridge Subdiv.		904-423-7151	*	
NSBUB	New Smyrna Beach; FL 32170	904-423-7151	5	X
Breakaway Trails	Ormond Beach; FL 32175	904-676-3436		
Ormond Beach	Ormond Beach; FL 32175	904-676-3436	5	X
R. Dwayne Huffman	Port Orange; FL 32119-9619	904-756-5378	5	X
Deltona Lakes	Ormond Beach; FL; 32174	904-677-5702	DEP	
Tymber Creek Subdiv.			*	
Deltona North	Deland; FL; 32720	904-822-6465	5	X
Four Townes	Deland; FL; 32720	904-822-6465	5	X
Southwest Regional	Deland; FL; 32720	904-822-6465	5	X
Spruce Creek	Deland; FL; 32720	904-822-6465	5	X
Number of Facilities				

Appendix B

APPENDIX B

SJRWMD PUBLIC SUPPLY WATER USE INFORMATION SURVEY GUIDELINES TO VERIFYING INFORMATION IN TABLES AND MAPS 1996

GUIDELINES TO VERIFYING INFORMATION IN TABLES AND MAPS

Division of Needs and Sources
SJRWMD

INTRODUCTION

The SJRWMD is in the process of consolidating and updating all the of the public supply well information into one master database. To ensure that the master database will be as complete and current as possible, the District is asking public supply operators to determine if District well and water use information is consistent with their own records. The **Guidelines to Verifying information in Tables and Maps** are designed to assist utility operators in verifying the District's current public supply well data.

Every utility in the District will be given a **three section** package of tables. These sections are described below in **Part I. Verifying Well Information** and **Part II. Description of Column Headings in Tables 7 and 8.** **A PUBLIC SUPPLY WELLS Verification Map(s)** depicting information from one or more permits associated with each utility will also be distributed. Specifics of the map are described below in **Part III. Verifying Map Data.** Utilities should call the District if any these sections are missing.

We request that the utilities review the information and make changes or additions where necessary to the tables and maps. Our staff will be calling each utility to answer any questions they may have concerning the tables. Where possible, they will schedule a visit to review the information personally and to verify the location of production wells using a Global Positioning System (GPS). If a utility is not scheduled for a personal visit, they are asked to return the updated tables and maps within three weeks of receiving this letter to:

Cynthia Moore
Water Use Data Manager
St. Johns River Water Management District
P.O. Box 1429
Palatka, FL 32150-1429

PART I. VERIFYING WELL INFORMATION

Section 1. General Utility Information

Tables 1 through 5 request information on water treatment plants, projected water use, and future system capacity. This information is not normally stored in a District database, but is necessary for regional water supply planning optimization modeling.

In Table 4, enter the most recent projection of average annual withdrawals, in million gallons per day(mgd), as well as the average residential service area population, for the years 2010, 2015, and 2020. Please provide documentation describing how these projections were derived, as the District will be called upon to justify them.

Alternatively, projections can be made for the utility as a whole, rather than on a permit by permit basis. Simply fill the information into Table 4, and indicate clearly that it pertains to the entire utility.

Enter information regarding proposed water treatment plants in Table 5.

Section 2. General Permit Information

Contains information obtained directly from consumptive use permits concerning water use allocation and population base. Verify the information in Table 6 and make changes where necessary. Also, provide additional information on your service area population; including the average annual and seasonal peak populations, and the month in which the seasonal peak occurs(peak month).

Tables 7 and 8 contain information concerning the location and capacity of existing production wells and wells that were proposed in either the CUP document or in the previous Needs and Sources Assessment. Table 7 reports well information, compiled in the District's CUP database, just as it appears on each CUP document. Table 8 reports well information from other District databases and may be empty for utilities not located within a specific groundwater model boundary defined by the District for which additional information has already been obtained.

In some cases the information contained in different District databases are not consistent. For instance, the number and/or location of wells may differ among databases so that the information on the same permit appears one way in Table 7 and another way in Table 8.

The District's goal is to arrive at a *single list* which accurately reflects the number, location, and characteristics of existing and proposed production wells. We ask that utilities use Table 8 as the base upon which to build this list. All wells should be *correctly identified* with both the utility's well identifier (Util Well Id) and the CUP well identifier (CUP Well Id). Corrections should be made where needed to the information contained in Table 8.

Section 3. Additional Information

Any wells on record which are not listed in Table 8 should be recorded in Table 9. Table 10 is for any proposed wells which are not reported Table 8. Identify the location of the proposed well(s) in latitude-longitude, and enter the projected construction year(CONST YEAR). Utilities unable to determine the location of a proposed well in longitude-latitude, can mark the location and well number *clearly* on the service boundary map and the District will determine its location.

PART II. DESCRIPTION OF COLUMN HEADINGS IN TABLES 7 & 8

MAP INDEX #	Identification number assigned to each well to associated information in tables with a well location on the map
PERMIT	Consumptive Use Permit identification number
CUP WELL ID	Well identifier assigned by the District to each permitted well. CUP well ID should be consistent with District well tag ID
GROUP	Any name given which distinguishes a group of wells: sometimes referred to as a welllfield or maybe a grid identification
PLANT	Primary water treatment plant/location associated with the well
UTILWELL ID	Well identifier assigned to each well by the utility
CAS DIA	Outside diameter of the largest permanent water bearing casing. If telescope well, list all casing diametes in order of depth.
CAS DPTH	Casing depth of the well in feet
TOT DPTH	Total depth of the well in feet
AOP RATE	Average rate, in gallons per minute (gpm), at which the well pumps when in operation
OPHRMNTH	Average amount of hours per month the pump is operated for all uses

PART II. DESCRIPTION OF COLUMN HEADINGS IN TABLES 7 & 8 (con't.)

WELL STATUS Use status of the well; categorized as:

- existing
- abandoned
- capped
- plugged
- off-line
- proposed

CONST YEAR Date the well was or is proposed to be constructed/drilled

LONG Longitude (DMS) location of the well

LAT Latitude (DMS) location of the well

USE TYPE The purpose for which the well is used the majority of the pumpage time.
Please choose from the following usages:

- production
- monitor
- backup: secondary
  emergency
- fire essential services
- injection: artificial storage and recovery (ASR)
  reverse osmosis discharge (RO)
  treated effluent discharge

PART III. VERIFYING MAP DATA

Well location

A **PUBLIC SUPPLY WELLS Verification Map(s)** will be distributed to each utility to assist them in verifying production well location. On the Map, well locations from the CUP database(Table 7) are shown in **green** and well locations from the Wellhead Protection and/or Needs and Sources database(Table 8) are shown in **black**. The District can make modifications to the data directly from changes made to the map. However, in cases where more accurate information is necessary, District staff will verify well location using a global positioning system (GPS). Also, if a utility is uncertain about the location of a well(s), they should inform the District, as we may be able to determine the location of the well using GPS.

Water Treatment Plant Location

Presently, the District does not have record of the location of water treatment plants in our databases. Please indicate the approximate location of existing and projected water treatment plants on the **PUBLIC SUPPLY WELLS Verification Map(s)**, labeling them clearly. Also, make sure that information on the capacity and construction year of these plants are included in **Table 5**.

Service Area Boundaries

The **PUBLIC SUPPLY WELLS Verification Map(s)** should delineate the service area boundaries for each utility. Utilities should verify that their service area boundaries are accurately specified on the map. Utilities whose service area boundaries do not appear on the map should provide the District with either a hard copy or digitized map. The hard copy map should be large enough to clearly delineate the utility boundaries and should contain precise ground reference points such as intersections of major roads. If you have a digital map contact Wesley Harrell at (904) 329-4834 to get more information regarding format options. If at all possible, identify proposed expansions to the service area boundary area and the estimated year of expansion.

ection 1. General Utility Information

nter requested information on water treatment plants: name of plant, wellfield/grid/group/system is primarily associated with, its capacity in mgd and year in operation

able 1: Water Treatment Plant Information

ermit #	Water Treatment Plant Name	Wellfield/Grid/ Group Name	WTP Capacity (mgd)	Date in Operation	ASR Facility (Y/N)	Can treat saline ground water (Y/N)

Section 1. General Utility Information

Table 2: Saline Ground Water Treatment

Plant Name: _____
Treatment Type: _____
Treatment Capacity (mgd): _____
Is Finished water mixed with a blend? Y/N

Year of Permit	Amount (in mgd): Raw water treated	Finished water
1		
2		
3		
4		
5		
6		
7		

Plant Name: _____
Treatment Type: _____
Treatment Capacity (mgd): _____
Is Finished water mixed with a blend? Y/N

Year of Permit	Amount (in mgd): raw water treated	Finished water
1		
2		
3		
4		
5		
6		
7		

Table 3: ASR Associated Plants

Plant Name: _____
Type of water stored: Raw or Treated
Maximum safe storage capacity (mgd): _____
Peak storage rate (mgd): _____
Peak recovery rate (mgd): _____

Year of Permit	Estimated Storage (mgd)	Estimated Recovery (mgd)	Months of Peak: Storage	Recovery
1				
2				
3				
4				
5				
6				
7				

Plant Name: _____
Type of water stored: Raw or Treated
Maximum safe storage capacity (mgd): _____
Peak storage rate (mgd): _____
Peak recovery rate (mgd): _____

Year of Permit	Estimated Storage (mgd)	Estimated Recovery (mgd)	Months of Peak: Storage	Recovery
1				
2				
3				
4				
5				
6				
7				

Section 1. General Utility Information

Table 4: Projected Water Use and Service Area Population

Permit #	Average Annual	2010	2015	2020
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			

Permit #	Average Annual	2010	2015	2020
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			
	Water Use (mgd)			
	Service Area Population			

Section 1. General Utility Information

Table 5: Future Supply Capacity

Permit #	Water Treatment Plant Name	Wellfield/Grid/ Group Name	WTP Capacity (mgd)	Date in Operation	ASR Facility (Y/N)	Can treat saline ground water (Y/N)

[redacted]lic S[redacted]y

Water use information

ection 3. Additional Information

ible 9 & 10. current & proposed wells

ta Source

unty

vner

12-Jan-96

PERMIT X#	GROUP	PLANT	CUP WELL ID	UTIL WELL ID	CAS DIA	CAS DEPTH	TOT DEPTH	AOP RATE	OPHR DAY	WELL STATUS	CONST YEAR	LONG	LAT	USE TYPE

55

Section 2. General Permit Information

PUBLIC SUPPLY WATER USE DATA VERIFICATION FORM

ST JOHNS RIVER WATER MANAGEMENT DISTRICT

Date of verification:

Verified by:

Signature

County Name: _____

Owner Name: _____

Utility Name: _____

Plant Name: _____

Permit Number: _____

Expiration Date: _____

Major Use: _____

DEP #: _____

Please verify the following information for accuracy and completeness. Make corrections as needed on the form.

Annual Withdrawal:

1. Total annual permitted withdrawal in million gallons per year (mgy) by withdrawal source (ground or surface). Enter the surface water body for surface withdrawals
2. Maximum daily withdrawal, without distinguishing source, in million gallons per day (mgd).

Water Use Type

Percent of total permitted withdrawal allocated for:

1. Household type use
2. Commercial/industrial type use
3. All other use

Service Area Population

1. Average annual resident population
2. Seasonal Peak population
3. Month in which seasonal peak occurs

Table 6: General Well Information

Year of Permit	ANNUAL WITHDRAWAL			Maximum	WATER USE TYPE			SERVICE AREA POPULATION		
	Ground Water (mgy)	Surface Water (mgy)	Surface Water Body	Daily (mgd)	Percent Household	Percent Commercial	Percent All Other	Average Annual	Seasonal Peak	Peak Month
1										
2										
3										
4										
5										
6										
7										

Appendix C

APPENDIX C

PROPOSED
TRANSMITTAL LETTER AND
WATER SUPPLY SYSTEMS FACILITIES
QUESTIONNAIRE
PREPARED BY
LAW ENGINEERING
MAY 1996

June 22, 1996

«Prefix» «FirstName» «LastName»
«Title»
«OrganizationName»
«Address_1»
«City», «St» «PostalCode»

Subject: Water Supply Systems Facilities Questionnaire
Investigation of Alternative Water Supply Strategies
St. Johns River Water Management District

Dear «Prefix» «LastName»:

On behalf of the St. Johns River Water Management District (SJRWMD), Law Engineering and Environmental Services, Inc. (LAW) is investigating the feasibility of interconnecting water supply systems facilities. The following questionnaire requests additional information from the water supply facilities of Orange, Seminole, Volusia, Lake, and Brevard Counties for the development of potential interconnection projects.

Please complete or review as much of the questionnaire as possible. As previously disscussed, we will call to log the collected information. Do not hesitate to call with questions regarding the clarity of the information being requested. We do not want the questionnaire to be burdensome. It was our goal to have this additional information complement the SJRWMD's previous information request.

Thank you for your cooperation,

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

C. Edwin Copeland, Jr., P.E.
Project Manager

cc: Barbara A. Vergara

WATER SUPPLY SYSTEMS FACILITIES QUESTIONNAIRE

Prepared For

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Prepared By

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

In Association With

HSW ENGINEERING, INC.

June 1996

WATER SUPPLY SYSTEMS FACILITIES QUESTIONNAIRE

INSTRUCTIONS

The purpose of the attached questionnaire is to provide the St. Johns River Water Management District (SJRWMD) with critical water supply planning information regarding the potential interconnection of water suppliers in and around the potential water resource caution area.

These instructions provide information on how to answer the questionnaire. If you should have any questions regarding the completion of this form, please feel free to call Ed Copeland or Lisa Owsianiak of Law Engineering and Environmental Services, Inc., at 813/289-0750 for further information.

For all questions related to overall systems operation and maintenance costs, please provide the fiscal year for the cost. Please feel free to duplicate pages and utilize attachments.

We recognize that some of the requested information may have been sent to the SJRWMD in previous submittals. We are accessing the SJRWMD data base for information, and we will use the information with this request to supplement the existing data. We have attempted to eliminate or minimize any duplicate requests and apologize for any inconvenience of this request.

In addition, we do not want the response to be a difficult task. If copying existing reports or sections of reports, that provide an appropriate response, facilitates the completion of the questionnaire, please feel free to attach that information. If you would prefer to verbalize your response in a meeting or telephone conversation, we would be pleased to accommodate you.

I. GENERAL INFORMATION

This part of the questionnaire is intended to provide general information on the facility. If the utility is comprised of more than one independent system and planning information has been developed for each system, please complete a separate Part I for each independent system.

A. Owner - enter municipality, other government agency or corporation authorized to provide public water supply.

B. System(s) Name - enter the name of the system covered by the submittal of Part I.

C. Please indicate the type of facility, its Water Use Permit number, its DEP Permit number, and its appropriate DEP facility identification number (PWS #). Complete a separate questionnaire or parts for each independent system or type of facility.

II. FACILITY INFORMATION

A. Schematic of Raw Water Collection/Transmission Main Pipe Network (Minimum pipe size - 8 inches in diameter) if applicable:

1. Please provide map or drawing.

2. Indicate the scale of the map or drawing.

3. Identify the base used for the map or drawing (for example, U.S.G.S. 7 1/2 minute Quadrangles, Aerials/Sectors from Florida Township and Range System).

4. Digitized: Is the map or drawing available in digital format? If so what is the format.

5. Is the map or drawing available in GIS format? If so what is the format?

B. Schematic of Water Transmission Main Pipe Network (Minimum pipe size - 12 inches in diameter):

1. Please provide map or drawing.

2. Indicate the scale of the map or drawing.

3. Identify the base used for the map or drawing (for example, U.S.G.S. 7 1/2 minute Quadrangles, Aerials/Sectors from Florida Township and Range System).

4. Digitized: Is the map or drawing available in digital format? If so what is the format.

5. Is the map or drawing available in GIS format? If so what is the format?

C. Water Treatment Facility Information:

1. Please provide the permitted capacity, appropriate DEP facility identification number (PWS #), and DEP permit number for the facility. Also please provide the hydraulic capacity of the facility. Capacities should be given in mgd.

2. Give a general (brief) description of treatment process and the type of disinfection.

D. Existing Interconnection(s) with Other Systems:

1. Provide name and location of interconnect.

2. Indicate the facilities interconnected.

3. Please provide schematic.

4. Please provide the permitted capacity for the interconnection. Also please provide the hydraulic capacity of the interconnection. Capacities should be given in mgd. If capacity is not known, provide connection and/or metering size.

E. Proposed Interconnection(s) with Other Systems:

1. Provide name and location of proposed interconnect.

2. Indicate the facilities that will be potentially interconnected.

3. Please provide schematic.

4. Please provide the proposed capacity for the interconnection. Also please provide the hydraulic or design capacity of the

interconnection. Capacities should be given in mgd. If capacity is not known, provide connection and/or metering size.

III. FISCAL INFORMATION

A. Financial

1. Please provide a copy of the current rates and fees schedule.

2. Please provide the system overall operation and maintenance cost per 1000 gallons. Also indicate what components are included in this O & M cost.

B. Planning

If a master plan for the utility has been developed, please provide a copy of the recommendation or selected plan. If the recommendation does not contain the cost associated with the recommended plan, and the cost information is available in other sections, please provide a copy of the appropriate sections. Please consider 2010 as the planning period.

C. Recent Construction

Please list the public water supply system components and their associated costs for those that have been constructed within the past three years. Please provide information related but not limited to the following list of components.

- Land Acquisition
- Well Construction
- Well Pumps
- Surface Water Supply
- Aquifer Storage and Recovery Systems
- Water Treatment Components
- Disinfection Systems
- Storage Facilities
- Pumping Facilities
- Metering and Backflow Prevention
- Transmission Mains
- Operation and Maintenance Costs

IV. CONTACT

Please provide the name of and information for the individual to be contacted for any follow-up questions.

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
WATER SUPPLY SYSTEMS FACILITIES QUESTIONNAIRE

PART I
GENERAL INFORMATION

A. Owner: _____

_____

B. System(s) Name: _____

_____

_____

C. System Type

Water Supply/Treatment _____
Water Use Permit # _____
DEP PWS # _____
DEP Permit # _____

PART II
FACILITY INFORMATION

A. Schematic of Raw Water Collection/Transmission Main Pipe Network (please provide map or drawing)

1. Map or drawing provided: Yes __ No __
2. Scale: _____
3. Base: USGS Quad: _____
   Aerial: _____
   Other: _____
   _____
4. Digitized: _____
5. GIS Format: _____
   _____

B. Schematic of Water Transmission Main Pipe Network (please provide map or drawing)

1. Map or drawing provided: Yes __ No __
2. Scale: _____
3. Base: USGS Quad: _____
   Aerial: _____
   Other: _____
   _____
4. Digitized: _____
5. GIS Format: _____
   _____

C. Treatment Facility Information

1. Water Treatment Facility Capacity:
   Permitted _____ mgd DEP PWS # _____
   Hydraulic _____ mgd DEP Permit # _____

2. General Type of Treatment and Disinfection:
_____
_____
_____

D. Existing Interconnection(s) with Other Systems (please provide schematic)

1. Connection Name/Location:
_____
_____

2. Connection between _____ and _____.

3. Schematic Provided: Yes __ No _

4. Capacity:
Permitted _____ mgd Hydraulic _____ mgd

E. Proposed Interconnection(s) with Other Systems (please provide schematic)

1. Connection Name/Location:

2. Connection between _____ and _____.

3. Schematic Provided: Yes __ No _

4. Capacity:
Permitted _____ mgd Hydraulic _____ mgd

PART III
FISCAL AND PLANNING INFORMATION

A. Financial

1. Current Rates and Fees - Please attach Rate and Fee Schedule

2. Current System Overall O&M Cost

_____
_____
_____
_____
_____
_____

B. Planning

1. Master Plan Yes_____ No_____

2. Planning Period _____

3. Financial Data Provided Yes_____ No_____

4. Estimated Capital Costs _____
_____
_____
_____
_____

C. Recent Construction (past 1-3 years)

Public water supply system components and associated costs:

_____
_____
_____
_____

PART IV
CONTACT

Contact Name: _____
Title: _____
Address: _____
_____
_____

Phone: ( ) _____
Fax: ( ) _____

Date: _____

Please return completed questionnaire and attachments to:

C. Edwin Copeland, Jr.

Law Engineering and Environmental Services, Inc.
4919 W. Laurel Street
Tampa, Florida 33607

Thank You for your Assistance

Appendix D

APPENDIX D

PROPOSED
TRANSMITTAL LETTER AND
WASTEWATER SYSTEMS FACILITIES
QUESTIONNAIRE
PREPARED BY
LAW ENGINEERING
MAY 1996

June 24, 1996

«Prefix» «FirstName» «LastName»
«Title»
«OrganizationName»
«Address_1»
«City», «State» «PostalCode»

Subject: Wastewater Systems Facilities Questionnaire
Investigation of Alternative Water Supply Strategies
St. Johns River Water Management District

Dear «Prefix» «LastName»:

On behalf of the St. Johns River Water Management District (SJRWMD), Law Engineering and Environmental Services, Inc. (LAW) is investigating the feasibility of interconnecting wastewater supply facilities. The following questionnaire requests additional information from the wastewater facilities and also reuse systems of Orange, Seminole, Volusia, Lake, and Brevard Counties for the development of potential interconnection projects.

Please complete or review as much of the questionnaire as possible. As previously disscussed, we will call to log the collected information. Do not hesitate to call with questions regarding the clarity of the information being requested. We do not want the questionnaire to be burdensome. It was our goal to have this additional information complement the SJRWMD's previous information request.

Thank you for your cooperation,

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

C. Edwin Copeland, Jr., P.E.
Project Manager

cc: Barbara Vergara

WASTEWATER SYSTEMS FACILITIES QUESTIONNAIRE

Prepared For

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Prepared By

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

In Association With

HSW ENGINEERING, INC.

June 1996

WASTEWATER SYSTEMS FACILITIES QUESTIONNAIRE

INSTRUCTIONS

The purpose of the attached questionnaire is to provide the St. Johns River Water Management District (SJRWMD) with critical water supply planning information regarding the potential interconnection of water suppliers and reuse systems in and around the potential water resource caution area.

These instructions provide information on how to answer the questionnaire. If you should have any questions regarding the completion of this form, please feel free to call Ed Copeland or Lisa Owsianiak of Law Engineering and Environmental Services, Inc., at 813/289-0750 for further information.

For all questions related to overall systems operation and maintenance costs, please provide the fiscal year for the cost. Please feel free to duplicate pages and utilize attachments.

We recognize that some of the requested information may have been sent to the SJRWMD in previous submittals. We are accessing the SJRWMD data base for information, and we will use the information with this request to supplement the existing data. A copy of SJRWMD's Waste Water Treatment Use Inventory spreadsheet has been attached to the cover letter for your review and comment. We have attempted to eliminate or minimize any duplicate requests and apologize for any inconvenience of this request.

In addition, we do not want the response to be a difficult task. If copying existing reports or sections of reports, that provide an appropriate response, facilitates the completion of the questionnaire, please feel free to attach that information. If you would prefer to verbalize your response in a meeting or telephone conversation, we would be pleased to accommodate you.

I. GENERAL INFORMATION

This part of the questionnaire is intended to provide general information on the facility. If the utility is comprised of more than one independent system and planning information has been developed for each system, please complete a separate Part I for each independent system.

A. Owner - enter municipality, other government agency or corporation authorized to provide wastewater treatment, and/or reuse water supply.

B. System(s) Name - enter the name of the system covered by the submittal of Part I.

C. Please indicate the facility's DEP Permit number, and its appropriate DEP facility identification number (GMS #). Complete a separate questionnaire or parts for each independent system or type of facility.

II. FACILITY INFORMATION

A. Schematic of Reuse System Pipe Network (Minimum pipe size - 12 inches in diameter):

1. Please provide map or drawing.

2. Indicate the scale of the map or drawing.

3. Identify the base used for the map or drawing (for example, U.S.G.S. 7 1/2 minute Quadrangles, Aerials/Sectors from Florida Township and Range System).

4. Digitized: Is the map or drawing available in digital format? If so what is the format.

5. Is the map or drawing available in GIS format? If so what is the format?

B. Wastewater Treatment Facility Information:

1. Please provide the permitted capacity, appropriate DEP facility identification number (GMS #), and DEP permit number for the facility. Also please provide the hydraulic capacity of the facility. Capacities should be given in mgd.

2. Give a general (brief) description of treatment process and the type of disinfection.

C. Existing Interconnection(s) with Other Systems:

1. Provide name and location of interconnect.

2. Indicate the facilities interconnected.

3. Please provide schematic.

4. Please provide the permitted capacity for the interconnection. Also please provide the hydraulic or actual capacity of the interconnection. Capacities should be given in mgd. If capacity is not known, provide connection and/or metering size.

D. Proposed Interconnection(s) with Other Systems:

1. Provide name and location of proposed interconnect.

2. Indicate the facilities that will be potentially interconnected.

3. Please provide schematic.

4. Please provide the proposed capacity for the interconnection. Also please provide the hydraulic or design capacity of the interconnection. Capacities should be given in mgd. If capacity is not known, provide connection and/or metering size.

III. FISCAL INFORMATION

A. Financial

1. Please provide a copy of the current rates and fees schedule.

2. Please provide the system overall operation and maintenance cost per 1000 gallons. Also indicate what components are included in this O & M cost.

B. Reuse System Contractual Information

1. Please list existing commitments and/or contracts. Also please indicate the remaining uncommitted reuse capacity.

2. Please list any future commitments for reuse water.

C. Planning

If a master plan for the utility has been developed, please provide a copy of the recommendation or selected plan. If the recommendation does not contain the cost associated with the recommended plan, and the cost information is available in other sections, please provide a copy of the appropriate sections. Please consider 2010 as the planning period.

D. Recent Construction

Please list the wastewater reuse system components and their associated costs for those that have been constructed within the past three years. Please provide information related but not limited to the following list of components.

- Land Acquisition
- Force Mains
- Pumping Facilities
- Filtration (Automatic Back Wash)
- Filtration (Deep Bed Dual Media)
- High Level Disinfection
- Pumping Facilities (Reuse)
- Transmission Mains (Reuse)
- Operation and Maintenance Costs

IV. CONTACT

Please provide the name of and information for the individual to be contacted for any follow-up questions.

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
WASTEWATER SYSTEMS FACILITIES QUESTIONNAIRE

PART I
GENERAL INFORMATION

A. Owner: _____
_____

B. System(s) Name: _____
_____
_____

C. System Type

Wastewater _____
DEP GMS # _____
DEP Permit # _____
Reuse _____
DEP Permit # _____

PART II
FACILITY INFORMATION

A. Schematic of Reuse Piping Network (please provide map or drawing)

1. Map or drawing provided: Yes __ No __

2. Scale: _____

3. Base: USGS Quad: _____
   Aerial: _____
   Other: _____
   _____

4. Digitized: _____

5. GIS Format: _____
   _____
   _____

B. Treatment Facility Information

1. Wastewater Treatment Facility Capacity:
   Permitted _____ mgd DEP GMS # _____
   Hydraulic _____ mgd DEP Permit # _____

2. General Type of Treatment and Disinfection:
   _____
   _____
   _____
   _____

C. Existing Interconnection(s) with Other Systems (please provide schematic)

1. Connection Name/Location:
   _____
   _____

2. Connection between _____ and _____.

3. Schematic Provided: Yes __ No __

4. Capacity:

Permitted _____ mgd Hydraulic _____ mgd

D. Proposed Interconnection(s) with Other Systems (please provide schematic)

1. Connection Name/Location:

2. Connection between _____ and _____.

3. Schematic Provided: Yes __ No __

4. Capacity:
Permitted _____ mgd Hydraulic _____ mgd

PART III
FISCAL AND PLANNING INFORMATION

A. Financial

1. Current Rates and Fees - Please attach Rate and Fee Schedule

2. Current System Overall O&M Cost

_____
_____
_____
_____
_____

B. Reuse Systems Contractual Information

1. Existing Commitments or Contracts:

_____
_____
_____
_____
_____

2. Future Commitments:

_____
_____
_____
_____
_____
_____

C. Planning

1. Master Plan Yes_____ No_____

2. Planning Period _____

3. Financial Data Provided Yes_____ No_____

4. Estimated Capital Costs_____
_____
_____

D. Recent Construction (past 1-3 years)

Wastewater and reuse system components and associated costs:

PART IV
CONTACT

Contact Name: _____
Title: _____
Address: _____
_____
_____

Phone: ( ) _____
Fax: ( ) _____

Date: _____

Please return completed questionnaire and attachments to:

C. Edwin Copeland, Jr.

Law Engineering and Environmental Services, Inc.
4919 W. Laurel Street
Tampa, Florida 33607

Thank You for your Assistance

Appendix E

APPENDIX E

FEBRUARY 29, 1996
LETTER STATING ECONOMIC ANALYSIS CRITERIA

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Henry Dean, Executive Director
John R. Wehle, Assistant Executive Director
Charles T. Myers III, Deputy Assistant Executive Director

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TDD 904-730-7900

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TDD 407-727-5368

OPERATIONS:
2133 N. Wickham Road
Melbourne, Florida 32935-8109
407-254-1762
TDD 407-253-1203

MAR - 4 1996

February 29, 1996

Mr. C. Edwin Copeland, P.E.
Law Engineering and Environmental Services
4919 Laurel Street
Tampa, Florida 33607

Re: SJRWMD Contract No. 95W166A, Alternative Water Supply Strategies Investigation, economic analysis criteria

Dear Mr. Copeland:

Thank you for your participation in the February 16, 1996, project team meeting. Based on the discussions held at that meeting the following economic analysis criteria are to be used in association with the referenced contract. Using these criteria, capital costs, annual operation and maintenance costs, and total annualized costs should be developed.

- Construction cost index - Construction and subsequent capital cost should be expressed in current (1996) dollars.

- Land cost- Land costs from the following table should be used plus a land acquisition factor of 25 percent of the estimated land cost. This 25 percent includes the cost of engineering, administrative, and legal services, etc. associated with the land acquisition process.

	Parcels for Individual Wells, Booster Stations, Small WTPs, etc. 2 - 50 acres (ac) ($/ac)	Parcels for Wellfields, Major WTPs, etc. 100 - 500 ac ($/ac)	Parcels for Reservoirs, Mitigation areas, etc. 250-3000 ac ($/ac)	Pipeline Corridors			
				Adjacent to Public ROW		New Areas	
				Easement ($/sq ft)	ROW ($/sq ft)	Easement ($/sq ft)	ROW ($/sq ft)
Urban	$100,000	-	-	$4.00	$6.00	$3.00	$5.00
Suburban	$20,000	$10,000	-	$1.50	$3.00	$1.00	$2.00
Rural	$5,000	$3,000	$3,000	$0.75	$1.00	$0.50	$0.75

- Non-construction capital cost allowance - An allowance of 45 percent should be used with the following breakdown of percent by category.

Category	Percent
engineering and permitting	15 percent
administration	10 percent
contingency	20 percent

William Segal, CHAIRMAN MAITLAND
Dan Roach, VICE CHAIRMAN FERNANDINA BEACH
James T. Swann, TREASURER COCOA
Otis Mason, SECRETARY ST. AUGUSTINE
athy Chinoy JACKSONVILLE
Griffin A. Greene VERO BEACH
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Reid Hughes DAYTONA BEACH

- Time value of money - A time value of money of 7 percent should be used.
- Cost escalation - None - all cost comparisons and economic optimization should be developed in current(1996) dollars.
- Economic life of facilities - The following economic service life guidelines for water resources system components should be used.

Component Type	Service Life
Land	permanent
Water conveyance structures (including pipelines, collection and distribution systems, interceptors, force mains, drop shafts, tunnels, spillways, etc.)	50 years
Other structures (including buildings, concrete tankage, pumping station structures, and site improvements, etc.)	40 years
Process and auxiliary equipment (including treatment equipment such as clarifier mechanisms and filters, steel process tankage, chemical storage facilities, standby electrical generating equipment, pumps and motors, instrumentation and control facilities, mechanical equipment such as compressors, aeration systems, chlorinators, other eletctical equipment in regular service, etc.)	20 years
Wells	40 years
Reverse osmosis membranes	5 years

Please contact me if you have questions concerning this matter.

Sincerely,

Barbara A. Vergara, P.G., Director
Division of Needs and Sources

BAV

cc: JoAnn Jackson, P.E.
Ron Wycoff, P.E.
Donald Hearn, Ph.D.
Kirk Hatfield, Ph.D
Carol Demas
Hal Wilkening, P.E.
Doug Munch, P.G.
Don Brandes, Ph.D.
Cynthia Moore
Patrick Burger

Appendix F

APPENDIX F

APRIL 5, 1996
LETTER SUPPLEMENTING ECONOMIC ANALYSIS CRITERIA

ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT

Henry Dean, Executive Director
John R. Wehle, Assistant Executive Director
Charles T. Myers III, Deputy Assistant Executive Director

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407-254-1762
TDD 407-253-1203

April 5, 1996

Mr. C. Edwin Copeland, Jr., P.E.
Law Engineering and Environmental Services, Inc.
491 West Laurel Street
Tampa, Florida 33607

Re: SJRWMD Contract No. 95W166C, Alternative Water Supply Strategies Investigation, economic analysis criteria

Dear Mr. Copeland:

The following definitions supplement the economic analysis criteria cited in my February 29, 1996, letter to you. This array of cost parameters should be developed for each alternative water supply option.

1. **construction cost** - The total amount expected to be paid to a qualified contractor to build the required facilities.
2. **non-construction capital cost** - An allowance for engineering design, permitting, administration and construction contingency associated with the constructed facilities. In this project non-construction capital cost will equal 45 percent of the estimated construction cost.
3. **land cost** - The market value of the land required to implement the water supply option.
4. **land acquisition cost** - The estimated cost of acquiring the required land. In this project land acquisition cost will equal 25 percent of the land market value.
5. **total capital cost** - Construction cost plus non-construction capital cost plus land cost plus land acquisition cost (the sum of items 1 through 4).
6. **operation and maintenance (O&M) cost** - The estimated annual cost of operating and maintaining the water supply option when operating at design capacity. The average daily flow (production or transport) associated with the annual O&M cost should also be reported.
7. **equivalent annual cost** - Total annual life cycle cost of water supply option based on service life and time value of money criteria established in the economic analysis criteria letter dated February 29, 1996.
8. **unit cost** - That portion of the annual O&M cost that varies with production (or transport) rate. For example, energy and chemical costs are components of the unit cost, whereas routine maintenance and base level labor are not. The unit cost should be expressed in terms of dollars per 1,000 gallons.

William Segal, CHAIRMAN MAITLAND
Dan Roach, VICE CHAIRMAN FERNANDINA BEACH
James T. Swann, TREASURER COCOA
Otis Mason, SECRETARY ST. AUGUSTINE
Kathy Chinoy JACKSONVILLE
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Reid Hughes DAYTONA BEACH

Each of these cost categories were addressed in the economic analysis criteria letter with the exception of the unit cost. This cost parameter will allow representation of a variable production rate from a given option in the decision model which is being prepared by the University of Florida.

Sincerely,

Barbara A. Vergara, P.G., Director
Division of Needs and Sources

BAV
cc: Hal Wilkening, P.E.
Patrick Burger
Alan Weaver

Appendix G

APPENDIX G

JUNE 5, 1996
LETTER SUPPLEMENTING WATER SUPPLY FACILITIES SERVICE LIFE

RECEIVED
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ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Henry Dean, Executive Director
John R. Wehle, Assistant Executive Director
Charles T. Myers III, Deputy Assistant Executive Director

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June 5, 1996

Mr. C. Edwin Copeland, Jr., P.E.
Law Engineering and Environmental Services, Inc.
4919West Laurel Street
Tampa, Florida 33607

Re: SJRWMD Contract No. 95W166C, Alternative Water Supply Strategies Investigation, economic analysis criteria

Dear Mr. Copeland:

As a result of issues raised by Jerry Salsano, Sanlando Utilities Corp., at a recent Public Water Supply Advisory Group meeting, revisions to the water supply facilities service life criteria appear to be necessary for the purpose of consistency with Public Service Commission (PSC) requirements. Attached is a table comparing the current service life criteria, PSC service life criteria, and proposed revised service life criteria. Please use the proposed revised service life criteria in place of the current criteria which is set forth in my February 29, 1996, letter to you.

Please contact me if you have questions concerning this matter.

Sincerely,

Barbara A. Vergara, P.G., Director
Division of Needs and Sources

BAV
Attachment
cc: Public Water Supply Advisory Group
Donald Hearn, Ph.D.
Kirk Hatfield, Ph.D.
Carol Demas
Hal Wilkening, P.E.
Don Brandes, Ph.D.
Patrick Burger

William Segal, CHAIRMAN MAITLAND
Dan Roach, VICE CHAIRMAN FERNANDINA BEACH
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Water Supply Facilities Service Life Criteria Comparison

Component Type	Current Service Life Criteria (established by project team)	PSC - Service Life Criteria (from Sanlando Utilities annual report)	Proposed Revised Service Life Criteria
Land	permanent	na	permanent
Water Conveyance Structures (pipelines, collection and distribution systems)	50 years	35 to 43 years	40 years
Other Structures (buildings, tankage, site improvements etc.)	40 years	33 years	35 years
Wells	40 years	30 years	30 years
Process and Auxiliary Equipment (treatment equipment, pumps motors, mechanical equipment etc.)	20 years	20 to 22 years	20 years
Reverse Osmosis Membranes	5 years	na	5 years