

CITY OF PALM BAY UTILITIES DEPARTMENT

Developer's Information Guide

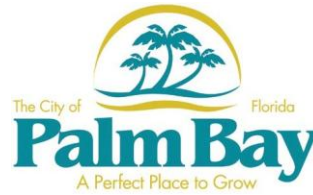


2011

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This document is intended to provide general information to Developers, Owners, Consulting Engineers, and Contractors regarding procedures for approval of water, wastewater, and reclaim infrastructure placed in the City of Palm Bay Utilities Service Area. This guide should be used in conjunction with the Utilities Department [Policies, Procedures, and Standards Handbook](#) and the [Palm Bay Code of Ordinances](#).

This guide is not meant to be all inclusive and can be changed without notice. Please be aware that all of our policies, procedures, standards, and fees will be administered according to the most current revisions.

We hope that all of the information included in this guide is beneficial. Please call 321-952-3410 with any comments, questions, or concerns.



Revision: 03/15/10
Original: 10/01/08

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 DEVELOPER'S INFORMATION GUIDE
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Revision: 11/28/11
 Original: 10/01/08





Section 1: The City of Palm Bay Utilities Department

The City of Palm Bay, Utilities Department was formed to plan for and establish management of water, wastewater, and reclaim facilities and of transmission, collection, and distribution systems within the City of Palm Bay Utilities Service Area in order to accomplish the following goals:

- ❖ To plan for and better accommodate water, wastewater and reclaim users
- ❖ To encourage orderly growth within the utility service area
- ❖ To determine user procedures and service policies
- ❖ To provide a mechanism allowing service commitments for major capacity requests
- ❖ To establish a reserve capacity fee for unused services
- ❖ To establish minimum technical specifications and standards for approval of water, wastewater and reclaim facilities and of transmission, collection, and distribution systems to be constructed within the Utilities Service Area
- ❖ To establish a minimum requirement for submittal of As-Built record drawings

The City of Palm Bay Utilities Department currently has three water treatment plants; a reverse osmosis plant and a lime softening plant located at the Troutman Facility and a reverse osmosis plant located at the South Regional Facility. These plants distribute potable water throughout the City's Utilities Service Area. Our potable water meets or exceeds all EPA and State regulations. Updated water quality reports are available on the [Utilities webpage](#) for viewing or contact the Utilities Department at 321-952-3410.





Photo of the Troutman Treatment Facility located at 1105 Troutman Blvd

The City of Palm Bay Utilities Department has one wastewater treatment plant: the Troutman Wastewater Treatment Facility. This plant along with the Troutman Water Reclamation Facility collects all of the wastewater produced in the City's Utilities Service Area through gravity sewer lines, pump stations, and force mains.

The Troutman Water Reclamation Facility treats a portion of the wastewater stream to remove harmful organisms and substances such as bacteria, viruses, and heavy metals. This treated water called reclaim water is commonly used to irrigate golf courses, residential landscapes, corporate grounds, agricultural fields, municipal properties, and sports fields. It may also be used for industrial heating and cooling, for car washes, and to replenish wetlands during times of drought. The City's reclaim water facility services water to Sandy Pines, Harris Corporation, Intersil, Knecht Park, and irrigation for several roadway and city property landscapes. There is also a proposed water reclamation facility scheduled to be built at the South Regional Complex in the near future.



Photo of the new South Regional Treatment Facility located at 250 Osmosis Drive SE

The treatment plants and distribution/collection systems are designed to serve the Utilities Service Area, which along with the City of Palm Bay is continually growing and expanding. Due to this development, the City of Palm Bay is constantly preparing and planning for the future. The new water treatment plant, the South Regional Water Treatment Facility, was designed with these specific goals in mind. The plant was operational in October of 2006 and is a state-of-the-art reverse osmosis system that provides clean, reliable potable water to the service area and has the capability for expansion to accommodate for the future growth of the City.





Section 2: Construction of Water and Sewer Main Line Extensions

The construction of all water and sewer main line extensions in the Utilities Service Area must be coordinated through the Utilities Project Coordinator, who can be reached at (321) 952-3410. The Utilities Project Coordinator and Utilities Engineer are available to answer questions or concerns regarding main line extensions. Please refer to Sections 5 and 6 of this document and Section 2 of the City of Palm Bay Utilities Department, [Policies, Procedures, and Standards Handbook](#) for information on all applicable fees and agreements that pertain to main line extensions within the City. The City of Palm Bay Utilities Department, Policies, Procedures, and Standards Handbook is available on CD at the Utilities Administrative Building located at the South Regional Complex or on the [Utilities webpage](#) of the City of Palm Bay website.

All new development of water and sewer infrastructure in the Utilities Service Area is at the developer/owner's expense. Information on maintenance and acceptance requirements of the infrastructure can be found in the [City of Palm Bay Code of Ordinances, Ch. 182.08](#).

For more information on water and sewer availability in your area please contact the [Utilities Customer Service Department](#) at (321) 952-3420 or 1-800-952-3420.





Section 3: Site Development Plans

A site development plan is a drawing of the site/property limits showing existing and proposed improvements for any land development activity within the City. All utilities work for the project is included in the site development plan.

Site Development Plan Review

Site Development Plan reviews are coordinated through the [City of Palm Bay Growth Management Department](#). Growth Management oversees the submittals and reviews from the City departments including the Utilities Department to help streamline and simplify the site development plan approval process.

Review Procedures for the Utilities Work for Land Development Activities

All proposed utilities work must be approved by the Utilities Department **prior to** site development plan approval by the Growth Management Department. Also, a Utilities Agreement between the owner of the property and the Utilities Department must be signed and all applicable fees that pertain to the utilities portion of the project must be paid to the Utilities Department **prior to** site development plan approval by the Growth Management Department. Please see Sections 5 and 6 of this document and the City of Palm Bay Utilities Department, [Policies, Procedures and Standards Handbook](#) for more information regarding utilities requirements, standards, and fees.

For more information on the site development plan process please refer to the [Development Review Team](#) website.





Section 4: Inspections and Permitting

Project Inspection

A Utilities Department Inspector will be assigned to **all** utilities projects within the City.

- ❖ The Utilities Department Inspector is not authorized to revoke, alter or waive any requirements of the specifications, but is authorized, and expected to call to the attention of the Engineer and/or the Developer any failure of work or materials to conform to the drawings and specifications.
- ❖ The Inspector shall have the authority to reject materials or suspend the work until questions or issues can be resolved to the Utilities Department's satisfaction.
- ❖ The Inspector shall in no case act as a foreman, give advice, or perform other duties for the Engineer and/or Developer nor interfere with the management of the work.
- ❖ Inspectors may inspect such items as restraints, materials on site, and clearances between conflicting lines. Scheduled inspections are also required for directional bore operations, setting of wet wells, pump station start-ups with manufacturer's representative present, and any time a connection is to be made to the Utilities Department system.

Permitting

There are several different agencies that may require permits regarding the installation of water and sewer infrastructure within the City. These agencies include:

- ❖ FDEP
 - [Drinking Water Program](#) (Central District Office Phone: 407-897-4100)
 - [Wastewater Program](#) (Central District Office Phone: 407-894-4)
- ❖ Water Control Districts
 - [St. Johns River Water Management District](#) (Palm Bay Office: 321-984-4940)
 - [Melbourne-Tillman Water Control District](#) (Phone: 321-723-7233)
- ❖ [US Army Corp of Engineers](#) – navigable waterways (i.e. Indian River, St. Johns River) (North Florida Area Office Phone: 321-984-7097)





Right-of-Way Permitting

All water and sewer portions of projects that may impact a public right-of-way must be permitted through the appropriate agencies that own, operate, and maintain that particular right-of-way. These agencies include:

- ❖ [The City of Palm Bay Public Works Department](#) – City Right-of-Way
(Right-of-Way Use Permitting Phone: 321-952-3403)
- ❖ [Brevard County](#) – County Right-of-Way (Land Development Phone: 321-633-2178)
- ❖ [FDOT](#) – State Right-of-Way (Central Region, Brevard Oper. Phone: 321-690-3250)
- ❖ [Florida East Coast Railway/FDG](#) – Railroad Right-of-Way
(Office Phone: 904-565-4128)

The permit application package will vary depending on the agencies involved. Please allow for adequate time to receive permits. The permitting process can be lengthy depending on the agency. Please contact the above agencies for more information regarding their permitting process.





Section 5: Plan Review and Inspection Fees

- ❖ The City charges a base fee of \$747.85 for all Utilities projects.
- ❖ If the Utilities project **includes** water and/or sewer ERCs, then a fee of \$69.44 will be charged per water and sewer ERC.
- ❖ If the Utilities project **includes** water and/or wastewater mains, then a fee will be charged for water and wastewater mains at a rate of \$1.07 per linear foot.
- ❖ If a lift station is part of a project involving wastewater mains, then a fee of \$1,602.52 per lift station will be charged.
- ❖ Plan Review and Inspection fees will not be applied to single family homes built on individual lots.
- ❖ The Plan Review and Inspection fees are paid at the time of execution of the Utilities Agreement.
- ❖ These fees are effective October 1, 2011 and will be adjusted annually. Approved per Resolution 2007-43.

Example Project:

Residential Subdivision Project: A residential subdivision with 334 water ERCs and 334 sewer ERCs. Below are the calculated plan review and inspection fees for this project:

Type of Fee	Fee Amount	Quantity	Amount
Base Inspection Fee	\$ 747.85	1	\$ 747.85
Water ERC Fee	\$ 69.44	334	\$ 23,192.96
Sewer ERC Fee	\$ 69.44	334	\$ 23,192.96
Total			\$ 47,133.77





Section 6: Water, Sewer, and Reclaimed Water Connection Charges

The following fees **may** apply when connecting to the City's water, sewer, and reclaimed systems:

1. Water Capital (plant capacity) Charge
2. Water Main Line Extension Charge
3. Water Meter Installation Charge
4. Sewer Capital (plant capacity) Charge
5. Sewer Main Line Extension Charge
6. Reclaimed Water Capital (plant capacity) Charge
7. Reclaimed Water Meter Installation Charge
8. Recording Fee
9. Annual Guaranteed Revenue/Reserve Capacity Charge
10. Deposit

1. Water Capital (plant capacity) Charge (See Appendix A for Application Form)

The Water Capital (plant capacity) Charge will be adjusted annually according to the Engineering News Record (ENR) Construction Cost Index for the Atlantic Coast Region and will be set at the prevailing rate established pursuant to resolution.

Per ERC		Ord #
Water	\$2,446.00	2007-54
Water with Reclaimed	\$1,858.91	2007-54

These rates are effective October 1, 2009 and will be adjusted annually.

The Water Capital (plant capacity) Charge is calculated using one of the following four methods (The City reserves the right to determine the method of calculation):

- ❖ The Equivalent Residential Connection (ERC) "Factor" Chart Method
- ❖ The Fixture Calculation Method
- ❖ Special Considerations for Industrial Use
- ❖ Existing Facility/Previous Records





These methods are explained in detail in Section 2 of the [Utilities Policies, Procedures, and Standards Handbook](#).

The first two methods listed will yield an ERC value that will then be multiplied by the water gallons per day factor (275 gpd) to find the average daily flow. The last two methods that are listed obtain the average daily flow values from the manufacturer's information or from past records of the existing facility. The average daily flow value will then be used to calculate the Water Capital (plant capacity) Charge.

2. Water Main Line Extension Charge

This charge is calculated based on the amount of front footage each specific property occupies upon its respective roadway. The Water Main Line Extension Charge will be adjusted annually according to the Engineering News Record (ENR) Construction Cost Index for the Atlantic Coast Region and will be set at the prevailing rate established pursuant to resolution.

Per Linear Foot		Ord #
Water	\$35.42	2004-78

This rate is effective October 1, 2009 and will be adjusted annually.

3. Water Meter Installation Charge

Each applicant shall be charged for the meter, backflow prevention device, meter service box and for installation of the water meter. Rates for meter installations for all meter sizes will be set at the prevailing rate established pursuant to resolution.

Meter Size	Cost	Notes
*5/8 X 3/4"	\$510.96	
5/8 X 3/4" w/double check	\$629.34	(residential only)
*1"	\$553.45	
*1 1/2"	\$674.87	
*2"	\$794.26	
*Greater than 2"	Cost Plus Overhead	
*Owner provided backflow requirements may apply.		

These rates are effective October 1, 2009 and will be adjusted annually.





4. Sewer Capital (plant capacity) Charge (See Appendix A for Application Form)

The Sewer Capital (plant capacity) Charge will be adjusted annually according to the Engineering News Record (ENR) Construction Cost Index for the Atlantic Coast Region and will be set at the prevailing rate established pursuant to resolution.

Per ERC		Ord #
Wastewater	\$3,422.49	2007-54
Wastewater with Reclaimed	\$2,840.17	2007-54

These rates are effective October 1, 2009 and will be adjusted annually.

The Sewer Capital (plant capacity) Charge is calculated using one of the following four methods (The City reserves the right to determine the method of calculation):

- ❖ The Equivalent Residential Connection (ERC) “Factor” Chart Method
- ❖ The Fixture Calculation Method
- ❖ Special Considerations for Industrial Use
- ❖ Existing Facility/Previous Records

These methods are explained in detail in Section 2 of the [Utilities Policies, Procedures, and Standards Handbook](#).

The first two methods listed will yield an ERC value that will then be multiplied by the wastewater gallons per day factor (210 gpd) to find the average daily flow. The last two methods that are listed obtain the average daily flow values from the manufacturer's information or from the past records of the existing facility. The average daily flow value will then be used to calculate the Sewer Capital (plant capacity) Charge.





5. Sewer Main Line Extension Charge

This charge is calculated based on the amount of front footage each specific property occupies upon its respective roadway. The Sewer Main Line Extension Charge will be adjusted annually according to the Engineering News Record (ENR) Construction Cost Index for the Atlantic Coast Region and will be set at the prevailing rate established pursuant to resolution.

Per Linear Foot		Ord #
Wastewater	\$55.83	2004-78

This rate is effective October 1, 2009 and will be adjusted annually.

6. Reclaimed Water Capital (plant capacity) Charge (See Appendix A for Application Form)

Per ERC		Ord #
Reclaimed	\$1066.99	2007-54

This rate is effective October 1, 2009 and will be adjusted annually.

The Reclaimed Water Capital (plant capacity) Charge is calculated using one of the following two methods (The City reserves the right to determine the method of calculation):

- ❖ Actual Irrigation Requirements
- ❖ Square Foot Application Method

These methods are explained in detail in Section 2 of the [Utilities Policies, Procedures, and Standards Handbook](#).

These methods will yield a total system demand in gallons/minute. The gallons/minute value will then be used to calculate the reclaim water capital (plant capacity) charge.

7. Reclaimed Water Meter Installation Charge

The requirements are dependent on customer class and meter size and shall be set at the prevailing rate established pursuant to resolution.





8. Recording Fee

This fee covers the cost of execution of the Utilities Agreement and Exhibits.

9. Annual Guaranteed Revenue/Reserve Capacity Charge

This fee will be paid in arrears, on an annual basis, commencing twelve months from the execution date of the Utilities Agreement and continuing until the connection is made and the reserved facilities are utilized. This charge is subject to change from time to time as approved by the City Council. Approved per Ordinance 05-32.

10. Deposit

The amount of initial deposit for each customer class and meter size shall be set at the prevailing rate established pursuant to resolution.

For more information about Water, Wastewater, and Reclaimed Connection Charges and current rates, please contact the [Utilities Customer Service Department](#) at (321) 952-3420 or 1-800-952-3420.





Section 7: Service Acceptance

Once the construction phase of the project is completed, the development enters the Project Closeout stage. At this critical point in the project, the City requires that specific legal documentation is complete, As-Built Drawings are complete, any required permits have been closed out, and all required inspections of the utilities' portion of the project are completed satisfactorily. The following documents are required for most water/wastewater extension projects:

- ❖ Affidavit of Title
- ❖ Bill of Sale
- ❖ Contractor Affidavit & Final Waiver of Lien
- ❖ Two Year Maintenance Agreement
- ❖ As-Built Drawings (See Section 10 of this document for Department requirements)
- ❖ Easement Plats
- ❖ Easement Documents
- ❖ Other documents may be required depending on project

Once the Utilities Department has received all required documents and the construction of the utilities' portion of the project has been completed satisfactorily, the Department will recommend a certificate of completion be issued by Growth Management for the project.





Section 8: Grease, Oil, and Sediment Interceptors

The City of Palm Bay Utilities Department requires that certain establishments located within the Utilities Service Area have a grease, oil, and/or sediment interceptor based on the criteria located within Section 5 of the Utilities Department [Policies, Procedures, and Standards Handbook](#). All wastewater from these establishments must flow through the approved interceptors prior to entering the wastewater collection system. Maintenance requirements for the interceptors can be found in the Utilities Department Policies, Procedures, and Standards Handbook.





Section 9: Backflow Prevention

The City of Palm Bay Utilities Department has general requirements for design, installation, and maintenance of backflow prevention assemblies within the Utilities Service Area. A complete back flow prevention standard can be found in Section 8 of the Utilities [Policies, Procedures, and Standards Handbook](#) and in the Cross Connection Control Manual. All assemblies shall be installed per manufacturer's instructions and shall conform to the drawing details found in Section 10 of the Policies, Procedures, and Standards Handbook.

A backflow prevention assembly is any approved assembly used to prevent backflow into a potable water system. The type of assembly used shall be based on the degree of hazard either existing or potential. The types are:

- ❖ Reduced Pressure Zone (RPZ) Assembly – High Hazard
- ❖ Double Check Valve Detector (DCVD) Assembly
- ❖ Double Check Valve (DCV) Assembly – Low Hazard

The following are facilities that are required to have containment Backflow Prevention Assemblies at the property line or point of service.

<u>Type of Facility</u>	<u>Min. Type of Protection</u>
All commercial, industrial, multi-family, and irrigation	RPZ
Fire Lines and Fire Protection Systems	DCVD
Single Family	DCV
Single Family with alternative water source ¹	RPZ or DCV ²
Single Family with Reclaim Water Lines (for irrigation)	DCVD

1. Examples of alternative water sources include, but are not limited to, wells, pools, and water front properties.
2. A Reduced Pressure Zone Assembly is required at the service connection when the auxiliary water supply is or may be contaminated to a degree that would constitute a high health hazard. A Double Check Valve Assembly is required at the service connection when the auxiliary water supply is being operated under a public health permit but is not acceptable to the water purveyor as a source. Ref. AWWA M14 Manual 3rd Edition





All fire service lines shall have an approved double check valve detector assembly installed in line and above ground just prior to the connection point with the potable water system at the City right-of-way line but on the applicant's property. Fire systems which incorporate chemical additives or alternate sources shall have an approved reduced pressure principle detector assembly installed in line and above ground just prior to the connection point with the potable water system.

The consumer at any premises where backflow prevention assemblies are installed is required to have certified inspections and operational tests made at initial hook-up to the utilities system and at least once per year as scheduled by the Utilities Department. Consumers will be notified by mail or bill stuffer thirty (30) days in advance of scheduled testing date. In those instances where the Utilities Department deems the hazard to be exceptional, additional certified inspections may be required at more frequent intervals. These inspections and tests shall be at the expense of the consumer and shall be performed by a certified tester pre-approved by the Utilities Department. A list of certified testers will be provided by the Utilities Department upon request. **Testing of the backflow assembly by a certified tester at initial hook-up to the City's utilities system is required. The Growth Management Department will not issue a Certificate of Completion for the job site without copies of all test reports, repair summaries or other correspondence relating to the backflow assembly.**

The consumer shall conform to scheduled testing. If deficiencies are noted during the test, such assembly shall be repaired, overhauled, or replaced at the expense of the consumer. Records of such test, repairs and overhauls shall be furnished to the Utilities Department by the consumer within seven days or a retest may be required. Copies of all test reports, repair summaries or other correspondence relating to this cross-connection control program shall be kept by the Utilities Department for a period of not less than ten (10) years (Reference [Chapter 62-550.720 \(3\) F.A.C.](#)).





Section 10: Utilities GIS Standards

The City of Palm Bay Utilities Department EGIS Division has several requirements for drawing submittals both hardcopy and electronic copy.

All drawings submitted shall be 24-inch x 36-inch or other standard size acceptable to the Utilities Department.

The Developer shall have laid out the work at the location and to the lines and grades shown on the plans. Survey notes indicating the information and measurements used in establishing locations and grades controls etc. shall be kept in notebooks and furnished to the Engineer upon completion of the work. Also required are reproducible originals and one (1) original, signed and sealed, reproducible As-Built Record Drawing (file to be provided with actual georeference coordinates), one (1) electronic copy of the As-Built Record Drawing in AutoCAD format, and four (4) sets of bound Drawings of the Water, Sewer, Roadway, and Drainage Work. The copies of the As-Built Drawings shall be signed and sealed by a Florida registered Professional Engineer (PE) or Professional Land Surveyor (PLS).

GIS Data Format Standards

- ❖ Layer Package (.lyr)
- ❖ File Geodatabase (.gdb)
- ❖ Microsoft Access '03 (.mdb)
- ❖ Shape file (include .prj)
- ❖ AutoCAD (.dxf/.dwg)
- ❖ TIF image (include .tfw)
- ❖ Mr. Sid Image (include .sdw)

GIS Metadata Standards

- ❖ Horizontal Coordinates Required: NGVD 1929 or NAVD 1988
- ❖ Geographic Coordinates Required: NGVD 1929 or NAVD 1988
- ❖ Data source origin of the information, i.e. GPS, DOQ, DRG or other
- ❖ Data Source (Name/ Address of agency or firm)
 - Date data last updated
 - Abstract of data





- ❖ Contact Name
- ❖ Position
- ❖ Phone
- ❖ Fax
- ❖ E-mail
- ❖ Collection Method (GPS/ Survey/ Digitizing, etc)
- ❖ Data Collection Date
- ❖ Description of Data
- ❖ Purpose of Data (intentions with which the data set was developed)
- ❖ Time period the data is relevant
- ❖ Constraints on accessing and using the data

If modified from an original source, a description of the modifications and software used to perform the modifications including version and the original data source must be listed along with a list of attributes and data types.

Data Transfer Procedures

- ❖ For files under 100MB compressed FTP is acceptable
- ❖ For files over 100MB CD-Rom or DVD-Rom as appropriate
- ❖ For files over 700MB, memory sticks or portable hard drives may be used to transfer data and returned if requested.

Data Quality Standards

- ❖ Points, lines, and polygons must have a single unique identifier.
- ❖ Digital data will be topologically clean and free of errors.
- ❖ The data must be topologically correct and not have overshoots, slivers, open polygons, unlabeled polygons, more than one label per polygon, unresolved node errors, or unresolved line segment intersections.
- ❖ Data attributes should be populated correctly. Provide descriptions for fields with coded values.





Appendix A:

1. Capacity Application Form: Water and/or Wastewater
2. Capacity Application Form: Reclaim Water





Number of Water ERC's: _____ / 275 GPD/ERC = _____ ERC's
Projected Flow, GPD

Number of Wastewater ERC's: _____ / 210 GPD/ERC = _____ ERC's
Projected Flow, GPD

C. Specific Industrial Use:

Note: The projected Flow will be determined by the user and/or manufacturer and approved by the Utilities Department.

Type(s) of Use _____

Projected Flow _____ GPD (AAD)

Number of Water ERC's: _____ / 275 GPD/ERC = _____ ERC's
Projected Flow, GPD

Number of Wastewater ERC's: _____ / 210 GPD/ERC = _____ ERC's
Projected Flow, GPD

5. Existing Facility/Previous Records: The Utilities Department at its discretion may consider the past records of an existing operational facility for determining proposed flow requirements for a new development, provided the applicant submits sufficient information to allow PBUC to determine anticipated flow. This information shall include, but not be limited to twelve months previous water bills and a complete listing of the differences in the existing and proposed facility such as size, hours and operation, type of used, number of employees, all operating characteristics, etc.

6. General: Additional Potable Water Flow Anticipated, But Not Requested (Estimated)

_____.

Anticipated Construction Schedule: Start _____.

Completion _____.

Phasing (If Applicable) _____.

7. The Property Owner hereby requests water and/or wastewater service in the amount of ERC's shown above for the property or properties described above, and agrees to be bound fully by the provisions of all applicable City of Palm Bay Ordinances. The City reserves the right to determine the method of calculation.

Date: _____

For the Property Owner:

(SIGNATURE)

(Name and Title)



ERC DETERMINATION SCHEDULE

<u>Establishment</u>	<u>Unit</u>	<u>Factor</u>
<u>Residential</u>		
Single Family Home	Per Unit	1.000
Duplex (1 or 2 bedrooms)	Per Unit	0.833
Duplex (3 or more bedrooms)	Per Unit	1.000
Multi-Family (1 or 2 bedrooms)	Per Unit	0.833
Multi-Family (3 or more bedrooms)	Per Unit	1.000
Mobile Home (1 or 2 bedrooms)	Per Unit	0.667
Mobile Home (3 or more bedrooms)	Per Unit	0.833
<u>Commercial</u>		
Auditorium/Meeting Rooms	Per Seat	0.019
Barber/Beauty Shop	Per Opr. Sta.	0.340
Bowling Alley	Per Alley	0.450
Add for Cocktail Lounge	Per Seat	0.075
Skating Rink	Per Skater	0.300
Food Service		
Restaurant/Cafeteria	Per Seat	0.113
Restaurant (24 hours)	Per Seat	0.189
Restaurant ("Fast Food")	Per Seat	0.057
Bar/Cocktail Lounge	Per Seat	0.075
Hotel, Motel (not including food service, banquet/meeting rooms & guest laundry)	Per Room	1.000
Laundry		
Self-Service	Per Machine	1.510
Motel (see Hotel)		
Office Building (not including food service & retail space)	Per 100 Sq. Ft.	0.038
Service Station	Per Bay	1.132
Add	Per Wash Bay	3.663
Add	Per Toilet	1.132



ERC DETERMINATION SCHEDULE (Continued)

<u>Establishment</u>	<u>Unit</u>	<u>Factor</u>
<u>Commercial</u>		
Theater	Per Seat	0.012
Dinner Theater	Per Seat	0.075
Trailer park (overnight)	Per Space	0.377
Dentist Office	Per Dentist	0.943
	Per Wet Chair	0.755
Doctor Office	Per Doctor	0.943
Church	Per Seat	0.011
Schools (Middle & High)	Per Student	0.075
Schools (Elementary, Day Care & Nursery)	Per Student	0.028
School (Boarding)	Per Student	0.472
Retail Store w/Self Service Gas Pumps	Per Restroom	1.500
Automotive Repair & Maintenance Stores	Per Bay	0.500
Hospital (Medical)	Per Bed	0.730
Add	Per Employee	0.055
Hospital (Mental)	Per Bed	0.480
Add	Per Employee	0.055
Prison	Per Inmate	0.480
Add	Per Employee	0.055
Nursing Home	Per Resident	0.370
Add	Per Employee	0.055

NOTE

Reference Florida Administrative Code Chapter 64E-6.008 for those facilities not listed. Convert these gallons per day to ERC using 275 gpm for water and 210 gpm for sanitary sewer.



FIXTURE UNIT CALCULATION TABLE

Instructions:

1. Indicate number of fixtures proposed, by type.
2. Multiply by Fixture Unit Values
3. Add values to obtain total number of fixture units.

<u>Fixture Type</u>	<u>Fixture</u> <u>Number</u>	<u>Unit</u> <u>(Each)</u>	<u>Value</u>
1. Automatic Clothes Washer, commercial	_____	X 3 =	_____
2. Automatic Clothes Washer, residential	_____	X 2 =	_____
3. Bathroom Group 1.6 gpf water closet or less	_____	X 5 =	_____
4. Bathroom Group 1.6 gpf water closet or greater	_____	X 6 =	_____
5. Bathtub with or without overhead shower or whirlpool attachments	_____	X 2 =	_____
6. Bidet	_____	X 1 =	_____
7. Combination Sink and Tray	_____	X 2 =	_____
8. Dental lavatory	_____	X 1 =	_____
9. Dental unit or cuspidor	_____	X 1 =	_____
10. Dishwashing machine domestic	_____	X 2 =	_____
11. Drinking Fountain	_____	X 0.5 =	_____
12. Emergency Floor Drains	_____	X 0 =	_____
13. Floor Drains	_____	X 2 =	_____
14. Kitchen sink, domestic	_____	X 2 =	_____
15. Kitchen sink, domestic with food waste grinder and/or dishwasher	_____	X 2 =	_____
16. Laundry tray (1 or 2 compartments)	_____	X 2 =	_____
17. Lavatory	_____	X 1 =	_____



FIXTURE UNIT CALCULATION TABLE (continued)

18. Shower	_____	X	2	=	_____
19. Sink	_____	X	2	=	_____
20. Urinal	_____	X	4	=	_____
21. Urinal, 1 gallon per flush or less	_____	X	2	=	_____
22. Washing Machine (residential)	_____	X	2	=	_____
23. Washing Machine (commercial)	_____	X	3	=	_____
24. Wash sink (circular or multiple) Each set of faucets	_____	X	2	=	_____
25. Water Closet, Private Installation	_____	X	4	=	_____
26. Water Closet, Public Installation	_____	X	6	=	_____

Total Number of Fixture Units _____



CAPACITY APPLICATION FORM
CITY OF PALM BAY, UTILITIES DEPARTMENT
RECLAIM WATER

Official Use Only
Date Received:
Date Accepted:

1. Applicant:
Name _____
Address _____
City _____ State _____ Zip Code _____
Telephone _____ / _____
2. Owner/Authorized Representative (If different from applicant):
Name _____
Address _____
City _____ State _____ Zip Code _____
Telephone _____ / _____
3. Project:
Project Name _____
Legal Description _____
Type of Project _____
Hours of Operation _____
4. Method(s) of Flow Derivation (check appropriate line(s))
 Actual Irrigation Requirements
 Square Foot Application Method

Note: Submit Sufficient Information to Substantiate Projected Flow (GPM).

A. Actual Irrigation Requirements

Main Feed Line Size: _____

Sprinkler Head Flow Required: _____

Number of Heads Per Zone: _____

Number of Zones: _____

Total Cycle Times for Entire System: _____

Total Operation Times for Entire System: _____

Average Gallons Per Minute (GPM): _____ (This is filled in by the Utilities Representative based on the above required information.)

B. Square Foot Application Method:

Note: For the purpose of computations a rate of 1-1/2 in. per week will apply for the irrigable area (equal to 0.94 gallons per week per square foot)

Irrigation Area (Lot Size minus Developed Area): _____ ft²



Total Gallons Per Week (GPW): _____ x 0.94 GPW/ft² = _____ GPW
(Irrigation Area (ft²))

Average Gallons Per Minute (GPM): _____ GPW x 1 Week/____Days Operated x 1 Day/____Hours
Operated x 1 Hour/60 Minutes = _____ Average GPM

7. The Property Owner hereby requests reclaim service in the amount of GPM shown above for the property or properties described above, and agrees to be bound fully by the provisions of all applicable City of Palm Bay Ordinances. The City reserves the right to determine the method of calculation.

Date: _____

For the Property Owner:

(SIGNATURE)

(Name and Title)