

APPENDIX F.3

WASTEWATER FLOWS

Wade Trim Project Number:	ZZZ2299.08M		
Wade Trim Project Name:	The Reserve at Sweetwater Estuary		
Calculated by:	Zinner	Date :	09/19/08
Checked by:	HD	Date :	10/07/08

Wastewater Flows - Annual Average Daily Flow (AADF)

Type	Units or Rooms	Total Area (sf)	Estimated Capita or Seats	Unit Demand (gpd)	Area Demand (gpd/100 sf)	Total Demand (gpd)
Residential Units ¹	624	n/a	n/a	250	n/a	156,000
Conference Hotel Rooms ²	400	n/a	n/a	100	n/a	40,000
Commercial Space ³	n/a	150,000	n/a	n/a	0.10	150
Restaurants ⁴	n/a	n/a	500	40	n/a	20,000
Golf Country Club (Restaurant) ⁵	1	n/a	300	25	n/a	7,500
Golf Country Club Employees ⁶	n/a	n/a	30	15	n/a	450
Golf Course Maintenance Facility ⁷	1	n/a	n/a	250	n/a	250
Outside Food Operation (Cabana bar) ⁸	3	n/a	30	20	n/a	1,800
Pool/Recreational Facility ⁹	1	n/a	200	10	n/a	2,000
Detached Restrooms for Golf Course, etc. ¹⁰	12	n/a	n/a	250	n/a	3,000
Total AADF (gpd)						231,150

Applying a maximum 3 month multiplier of 1.35 to the AADF gives an approximate design flow of 312,053 gpd, or 0.31 MGD
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References from Table 1 "For System Design ESTIMATED SEWAGE FLOWS" Chapt. 64E-6 F.A.C. (2003)

¹ Average of 2 bedrooms with 751-1200 sq. ft. of building and 3 bedrooms with 1201-2250 sq. ft. of building area

² Hotel & Motels (a) Regular per room

³ Shopping centers without food or laundry per square foot of floor space

⁴ Food Operations (a) Restaurant operating 16 hours or less per day per seat, seats estimated ITE data

⁵ Country club (a) per member or patron - capita estimated without feasibility study performed

⁶ Country club (a) per employee per 8 hour shift

⁷ Service stations per water closet

⁸ Food Operations (e) Bar and cocktail lounge per seat

⁹ Swimming and bathing facilities, public per person

¹⁰ Parks, public picnic (a) with toilets only per person

(5) The site of the installation and the additional required unobstructed land referred to in Rule 64E-6.005(4) is not subject to saturation from sources such as artificial drainage of ground surfaces, driveways, roads or roof drains.

(6) The existing lot elevation at the site of the proposed system installation and any contiguous land referred to in Rule 64E-6.005(4), shall not be subject to frequent flooding. Except for areas affected by section 381.0065(4)(t), Florida Statutes, fill material, if permitted, shall be placed in the area for the system and contiguous unobstructed area to raise the lot elevation above the 2 year flood.

Specific Authority 154.06, 381.0011, 381.006, 381.0065, 489.553, 489.557, FS. Law Implemented 154.01, 381.001, 381.0011, 381.0012, 381.0025, 381.006, 381.0061, 381.0065, 381.00655, 381.0066, 381.0067, 386.041, FS. History—New 12-22-82, Amended 2-5-85, Formerly 10D-6.47, Amended 3-17-92, 4-16-92, 1-3-95, Formerly 10D-6.047, Amended 3-22-00.

64E-6.008 SYSTEM SIZE DETERMINATIONS

(1) Minimum design flows for systems serving any structure, building or group of buildings shall be based on the estimated daily sewage flow as determined from Table I or the following:

(a) The DOH county health department shall accept, for other than residences and food operations, metered water use data in lieu of the estimated sewage flows set forth in Table I. For metered flow consideration, the applicant shall provide authenticated monthly water use data documenting water consumption for the most recent 12 month period for at least six similar establishments. Similar establishments are those like size operations engaged in the same type of business or service, which are located in the same type of geographic environment, and which have approximately the same operating hours. Metered flow values will not be considered to be a reliable indicator of typical water use where one or more of the establishments utilized in the sample has exceeded the monthly flow average for all six establishments by more than 25 percent or where the different establishments demonstrate wide variations in monthly flow totals. When metered flow data is accepted in lieu of estimated flows found in Table I, the highest flow which occurred in any month for any of the six similar establishments shall be used for system sizing purposes. Except for food operations which exceed domestic sewage waste quality parameters as defined in s. 64E-6.002(15), where an existing establishment which has been in continuous operation for the previous 24 months seeks to utilize its own metered flows, the applicant shall provide authenticated monthly water use data documenting water consumption for the most recent 24 month period. The highest monthly metered flow value for an existing establishment shall be used for system sizing purposes.

(b) When onsite systems use multiple strategies to reduce the total estimated sewage flow or the drainfield size, only one reduction method shall be credited.

**TABLE I
For System Design
ESTIMATED SEWAGE FLOWS**

TYPE OF ESTABLISHMENT	GALLONS PER DAY
COMMERCIAL:	
Airports, bus terminals, train stations, port & dock facilities, Bathroom waste only	
(a) per passenger	4
(b) add per employee per 8 hour shift	15
Barber & beauty shops per service chair	75
Bowling alley bathroom waste only per lane	50
Country club	
(a) per resident	100
(5) (b) add per member or patron	25
(6) (c) add per employee per 8 hour shift	15
Doctor and Dentist offices	
(a) per practitioner	250
(b) add per employee per 8 hour shift	15
Factories, exclusive of industrial wastes gallons per employee per 8 hour shift	
(a) No showers provided	15
(b) Showers provided	25
Flea Market open 3 or less days per week	
(a) per non-food service vendor space	15
(b) add per food service establishment using single service articles only per 100 square feet of floor space	50
(c) per limited food service establishment	25
(d) for flea markets open more than 3 days per week, estimated flows	

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shall be doubled

Food operations

④ (a) Restaurant operating 16 hours or less
per day per seat.....40

(b) Restaurant operating more than 16 hours
per day per seat.....60

(c) Restaurant using single service articles only
and operating 16 hours or less per day
per seat.....20

(d) Restaurant using single service articles only
and operating more than 16 hours per day
per seat.....35

(e) Bar and cocktail lounge per seat.....20
add per pool table or video game15

(f) Drive-in restaurant per car space.....50

(g) Carry out only, including caterers
1. per 100 square feet of floor space50
2. add per employee per 8 hour shift15

(h) Institutions per meal5

(i) Food Outlets excluding deli's,
bakery, or meat department
per 100 square feet of floor space10
1. add for deli per 100 square feet of deli
floor space40
2. add for bakery per 100 square feet of bakery
floor space40
3. add for meat department per
100 square feet of meat
department floor space75
4. add per water closet.....200

Hotels & Motels

(a) Regular per room.....100

(b) Resort hotels, camps, cottages
per room200

(c) Add for establishments with self service
laundry facilities per machine750

Mobile Home Park

② (a) per single wide mobile home
space, less than 4 single wide
spaces connected to a shared
onsite system250

(b) per single wide mobile home
space, 4 or more single
wide spaces are connected to a
shared onsite system225

(c) per double wide mobile home space,
less than 4 double wide mobile
home spaces connected to a
shared onsite system300

(d) per double wide mobile home space,
4 or more double wide mobile home
spaces connected to a shared
onsite system275

Office building
per employee per 8 hour shift or15
per 100 square feet of floor space, whichever is greater15

Transient Recreational Vehicle Park

(a) Recreational vehicle space for
overnight stay, without water
and sewer hookup per vehicle space50

(b) Recreational vehicle space for
overnight stay, with water and sewer
hookup per vehicle space75

Service stations per water closet

⑦ (a) Open 16 hours per day or less250

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(b) Open more than 16 hours per day	325
③ Shopping centers without food or laundry per square foot of floor space	0.1
Stadiums, race tracks, ball parks per seat	4
Stores per bath room	200
⑨ Swimming and bathing facilities, public per person	10
Theaters and Auditoriums, per seat	4
Veterinary Clinic	
(a) per practitioner	250
(b) add per employee per 8 hour shift	15
(c) add per kennel, stall or cage	20
Warehouse	
(a) add per employee per 8 hour shift	15
(b) add per loading bay	100
(c) self-storage, per unit (up to 200 units)	1
add 1 gallon for each 2 units or fraction thereof, for over 200 units and shall be in addition to employees, offices or living quarters flow rates.	
INSTITUTIONAL:	
Churches per seat which includes kitchen wastewater flows unless meals prepared on a routine basis	3
If meals served on a regular basis add per meal prepared	5
Hospitals per bed which does not include kitchen wastewater flows	200
add per meal prepared	5
Nursing, rest homes, adult congregate living facilities per bed which does not include kitchen wastewater flows	100
add per meal prepared	5
Parks, public picnic	
⑩ (a) with toilets only per person	4
(b) with bathhouse, showers & toilets per person	10
Public institutions other than schools and hospitals per person which does not include kitchen wastewater flows	100
add per meal prepared	5
Schools per student	
(a) Day-type	10
(b) Add for showers	4
(c) Add for cafeteria	4
(d) Add for day school workers	15
(e) Boarding-type	75
Work/construction camps, semi-permanent per worker	50
RESIDENTIAL:	
Residences	
(a) Single or multiple family per dwelling unit	
1 bedroom with 750 sq. ft. or less of building area	100
① 2 bedrooms with 751-1200 sq. ft. of building area	200
3 bedrooms with 1201-2250 sq. ft. of building area	300
4 bedrooms with 2251-3300 sq. ft. of building area	400
for each additional bedroom or each additional 750 square feet of building area or fraction thereof in a dwelling unit, system sizing shall be increased by 100 gallons per dwelling unit.	
(b) Other per occupant	50

Footnotes to Table I:

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