

# City of Marco Island

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## Water and Sewer Cost of Service Rate Study

Revenue Sufficiency Analysis &  
Cost Allocation and Rate Design

Responses to Questions

February 29, 2012

**BURTON & ASSOCIATES**

# Questions

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- 1. In the M54 approach, why should condos only be charged at 35% capacity charge compared to SFHs when current impact fees are the same for both classes based on square footage? Also PRMG, using the same M54 methodology used a 1.0 factor for both.
  - *The average usage per unit for multi-family during the highest usage month in FY 2011 was 35% of that of the average usage for a single family home during the same period. This included not only the potable water usage in the multi-family units, but also irrigation usage through irrigation meters and reclaimed water usage if applicable in order to have an “apples to apples” comparison to single family which has substantial irrigation in their usage data.*
  - *A similar factor should be applied to the impact fee per unit to derive an impact fee per equivalent unit for multi-family.*
  - *I can not answer for PRMG.*

## Questions (Cont'd)

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- 2. Should the utility debt service be funded equally by each equivalent residential unit (ERU), with a flow-based ERU calculation for commercial and North Marco Utilities?
  - *Debt service represents the cost of funding system capacity and therefore is most appropriately recovered in the capacity charge component of the fixed monthly charge.*
  - *The recommended rates include debt service in the capacity charge and it is apportioned based upon equivalent residential units (ERUs), with single family and commercial ERUs being determined by AWWA meter equivalency factors by meter size, which are related to the flow rate of the meter.*
  - *Multi-family ERU factors were determined to be .35 for water and .85 for sewer based upon max month demand per unit compared to max month demand per unit for single family.*

## Questions (Cont'd)

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- 3. Should the current water block usage rates and tier structure by lot size (which provides a uniform irrigation cost per square foot for each lot) be maintained?
  - *No. The current approach allows extended usage blocks for larger lots which does not provide a consistent price signal for conservation. Of greatest concern is the extension of usage applicable for lower block rates.*
  - *If additional irrigation is needed for larger lots, policies can be crafted to allow for an irrigation meter with minimal additional costs associated with the meter, but would charge for irrigation at the irrigation rate, which would provide for consistent pricing of irrigation usage across classes.*

## Questions (Cont'd)

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- 4. Should the price of reuse/reclaimed water be set at 50% of the new irrigation rate?
  - *Reclaimed water rates, as long as not in excess of the cost to provide service, are typically determined based on market pricing considerations.*
  - *That being said, setting the reclaimed water rate as a percentage of the irrigation rate could be a consideration.*

## Questions (Cont'd)

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- 5. Should the sewer cap for Single Family Homes (SFH) usage be set at 4,000 gallons, as per calculations provided to Burton (based on information supplied to them from the City)?
  - *We recommend a sewer cap of 6,000 gallons per month for single family residential customers. Reducing the cap to 4,000 gallons per month, would raise the usage rate and would cause increases in low volume users that used 4,000 gallons per month or less.*

## Questions (Cont'd)

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- 6. Should road resurfacing and utility enhancement be reduced by 6-7% by 4/1/12 as per Burton's recommendation?
  - *Yes, or as soon as possible. Our recommendations is to adopt the following plan of surcharge adjustments...*
    - *FY 2012 (effective as soon as possible)*
      - *Road Resurfacing Surcharge from: 4% to 3%*
      - *STRP Surcharge from: 8% to 3%*
    - *FY 2016 (October 1, 2015)*
      - *Road Resurfacing Surcharge from: 3% to 0%*
      - *STRP Surcharge from: 3% to 5%*

# Questions (Cont'd)

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- 7. Should the revenue sufficiency study include the funding of future projects for which no funding has been allocated in the current Capital Plan, and could a number of the projects currently funded be spread-out over additional years?
  - *Yes, all projects that are required should be included in the revenue sufficiency analysis. To the extent that current resources are not available to fund projects, the revenue sufficiency analysis model identifies a borrowing to fund such projects and includes the annual debt service for the new debt in the cash flow analysis.*
  - *To the extent that projects can be spread out or delayed in the capital plan the revenue sufficiency model will recognize such changes and provide for the funding of those projects from current resources or debt as discussed above. This can potentially have the effect of spreading rate impacts out over future years.*



# Budget Based Capacity Charge Question

- Excerpt from the question/discussion – “It makes no sense that a RS that uses 1000gal pays a capacity charge of \$23.07 and a MM condo using 1000 gal pays a capacity charge of \$5.86, but the water per rate RS is \$3.23 vs MM \$3.82. The reason for the swings is that within a class there are big difference in use.”
  - *Class averaging is a well accepted rate making principal. Within the current billing system, all single family customers are considered to be one class and there is not a rate code distinction between a low, medium or high volume user, therefore they are handled as one class. In fact to make such a distinction, max month usage would be the best differentiator. It would be possible, though complex, to set up the billing system to sub-classify single family customers based upon max month usage over a historical period, say the past twelve months, and establish ERU factors for each sub-class based upon the max average month usage per unit of the sub-class to the max month usage in the “benchmark” sub-class, say the sub-class with usage that is closest to the average usage per unit for the entire single family class. Under such a system, single family customers in sub-classes with average max month usage that is less than the benchmark subclass would have fractional ERU factors and those with average max month usage that is more than the benchmark subclass would have multiplier ERU factors.*
  - *A similar approach could be taken with the commercial class as a whole or by meter size.*

# Budget Based Capacity Charge Question (Cont'd)

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  - *This approach is not typically used in Florida, probably because there is much more consistency in usage within the single family class in most other utilities than in Marco Island. Another way of explaining it is that in most other utilities in Florida the bill frequency curve is tighter or more compressed than in Marco island. In most other utilities, 80% to 90% of all bills issued for the single family class have been issued for 10,000 gallons or less. In Marco Island at 10,000 gallons or less only about 35% of bills have been issued for the single family class.*
  - *This approach could be evaluated, but it would require 1) extensive statistical analysis of the billing data, 2) determination as to whether the billing system could be modified to maintain and update the required statistical billing data history and analysis, 3) modification of the billing system to accomplish it if feasible, or 4) implementation of a new billing system if the current billing system can not accomplish it.*

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  - *If this alternative approach to the capacity charge is considered, the usage rates should stay the same as in the proposed rates, that is an inclining block rate for single family and a uniform rate for all other classes.*
  - *Also, this alternative would be best applied to the M54 approach because debt service is the only cost in the capacity charge and the ERU equivalency factor is the only contributor to the differentiation in the capacity charge among classes.*
  - *It would be difficult to achieve the desired objective with this alternative in the MI approach because there are other costs and apportionments that affect the differentiation in the capacity charge by class besides the ERU factor.*

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  - *A problem that would have to be solved would be when usage changes for a customer either because of a change in household composition or sale of the property. In these cases there will be no history of usage under the new circumstance to use to establish the ERU factor. Probably the only solution would be to assign the benchmark sub-class equivalency factor until enough historical usage is compiled to classify the customer based upon its own historical usage under the new circumstance.*
  - *This could only be considered by delaying any action regarding implementation of a new rate structure at this time.*

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  - *Another alternative would be to steepen the inclining block rates of the single family class to give a much more aggressive price single to irrigation usage through the household meter, with the objective being to reduce single family usage, thus tightening up the bill frequency curve which would reduce the disparity among customers within the class.*
  - *This could happen by either reduced usage through the household meter in response to the price signal or installation of irrigation meters. The downside to this approach would be that the reduction in billing units that would likely occur would cause the unit rates to have to be higher. Also, this approach would not reduce any disparities among customers within the commercial class.*