

# Irrigation Meter Ordinance **Draft**

## Portsmouth City Council

City of Portsmouth  
December 7, 2015

Brian Goetz, Deputy Director of Public Works  
David Hyder, Burton and Associates



# Proposed Irrigation Meter Ordinance

Chapter 11 Section 11.216:B of the City's Ordinance currently allows single-family residential water customers on the City's water and sewer system to have separate irrigation meters which are only billed for water usage:

- Sewer user charges shall be based upon water use whenever possible. ~~No allowance shall be made for watering lawns, watering gardens or washing cars, except for single residential customers who have installed at their cost a second meter, meeting the specifications determined by the Water Department to measure water use which is reasonably calculated not to be discharged into the sewer system. Where such second meters have been installed, a separate account will be established and no sewer charges will be applied to this usage.~~ (Proposed - 2015)

# Irrigation Meter Benchmarking – **Draft** Community Policies For Irrigation Meters

| New Hampshire | Residential | Commercial |
|---------------|-------------|------------|
| Dover         | Yes         | Yes        |
| Rochester     | Yes         | Yes        |
| Somersworth   | Yes         | Yes        |
| Exeter        | Yes         | No         |
| Concord       | Yes         | Yes        |
| Manchester    | Yes         | Yes        |
| Newmarket     | Yes         | Yes        |
| Derry         | Yes         | Yes        |
| Wolfeboro     | Yes         | Yes        |
| Conway        | Yes         | Yes        |
| Keene         | Yes         | Yes        |
| Durham        | Yes         | Yes        |

| Maine                   | Residential | Commercial |
|-------------------------|-------------|------------|
| Portland Water District | Yes         | Yes        |
| York Sewer District     | Yes         | No         |

| Massachusetts | Residential | Commercial |
|---------------|-------------|------------|
| Haverhill     | Yes         | Yes        |
| Newburyport   | No          | No         |
| Boston *      | Yes         | Yes        |

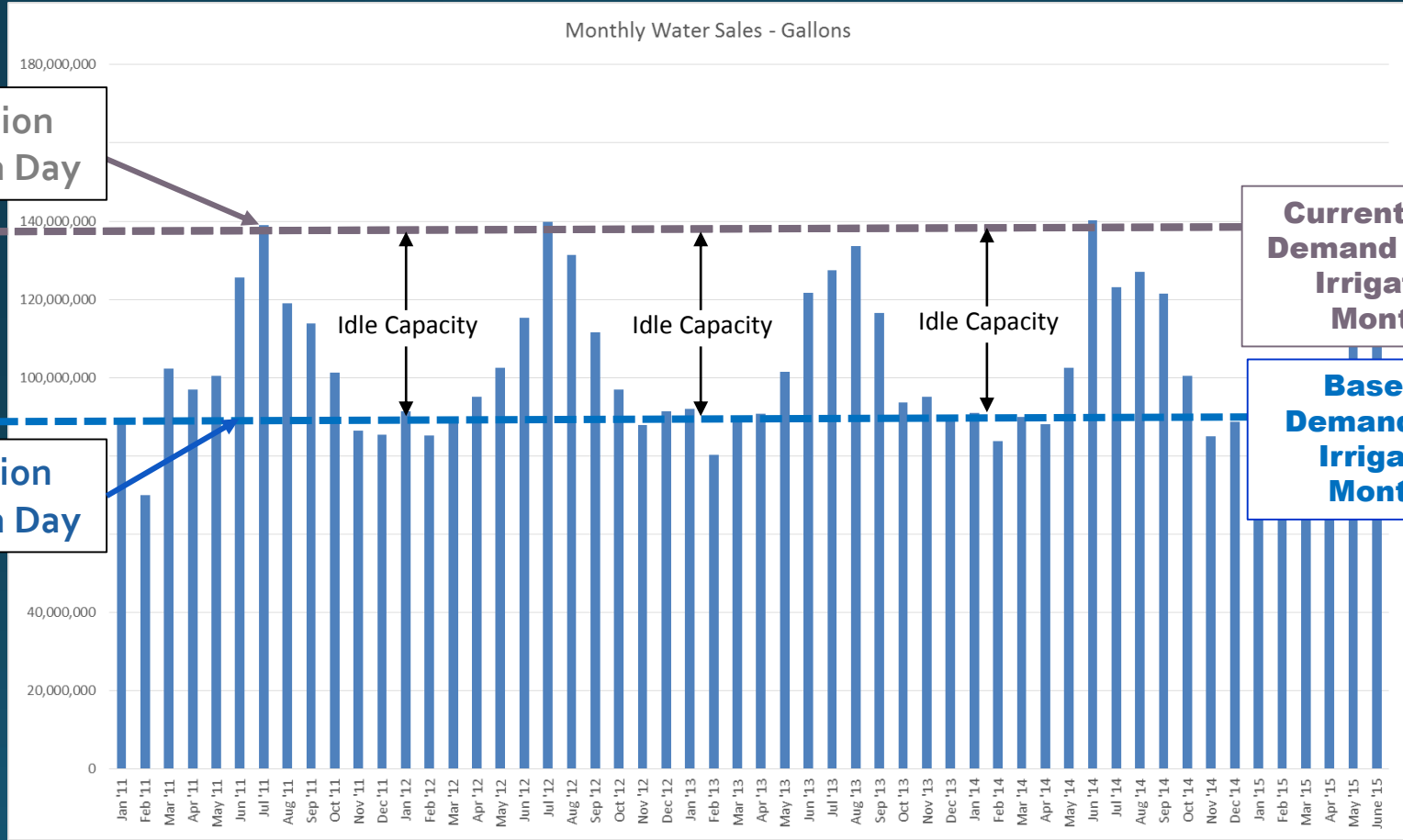
\* In-ground Irrigation systems only.  
No sillcocks or spigots.

## Irrigation Meter Options

1. Adopt 3<sup>rd</sup> Reading of Ordinance - Eliminating all irrigation meters (including existing)
2. Grandfather existing irrigation meters and disallow any future irrigation meters (Amendment to Ordinance)
3. Expand irrigation meters to all City customers (Amendment to Ordinance)
4. No Action – Let Ordinance proposal expire

# Draft

# Current Irrigation Demand: Last Five Years



4.6 Million Gallons a Day

3.0 Million Gallons a Day

Current Peak Demand During Irrigation Months

Baseline Demand (Non Irrigation Months)

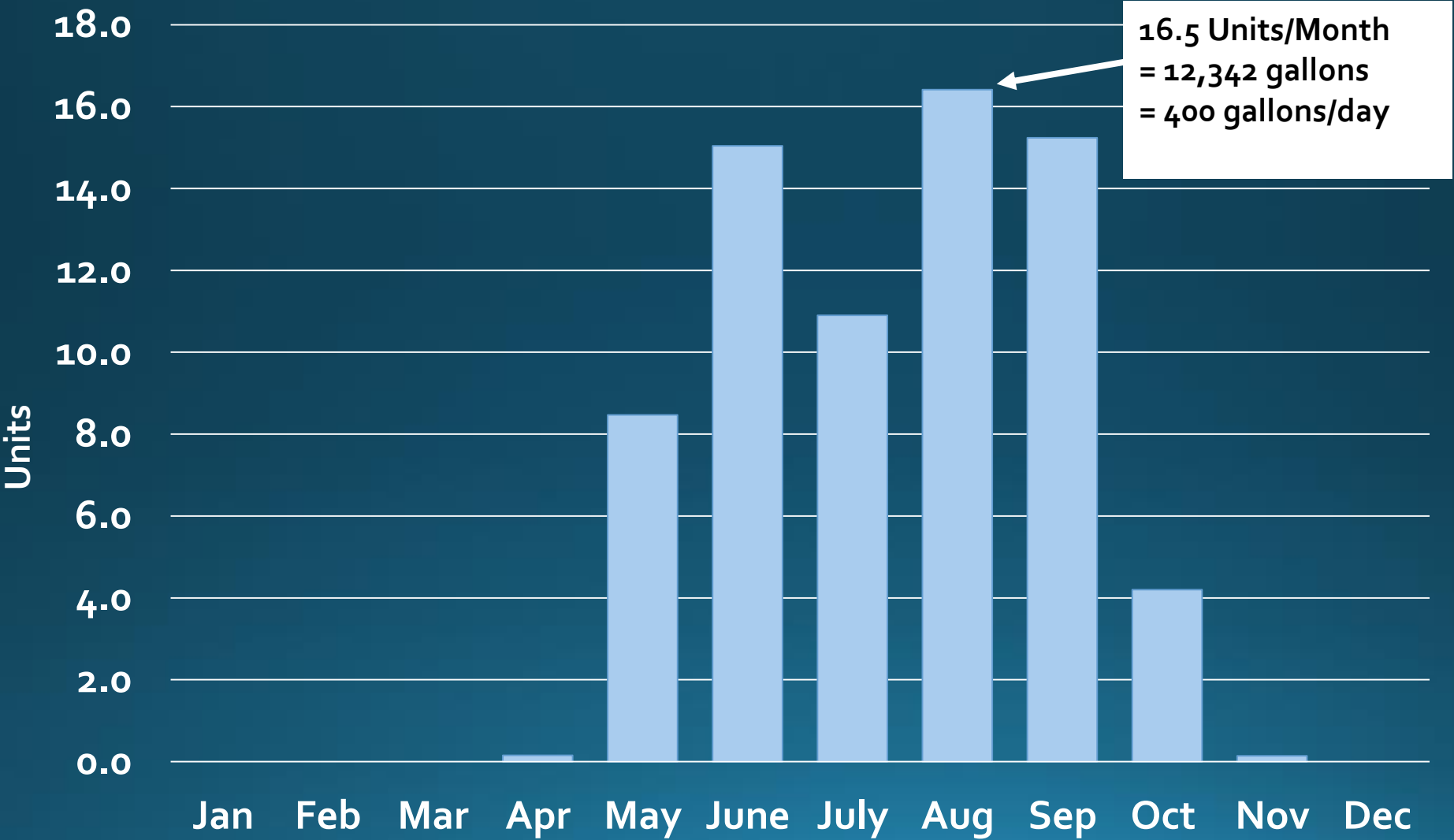
Idle Capacity

Idle Capacity

Idle Capacity

# Portsmouth - Residential Irrigation Meters Average Monthly Consumption (Units)

based on 2014 and 2015 billing data

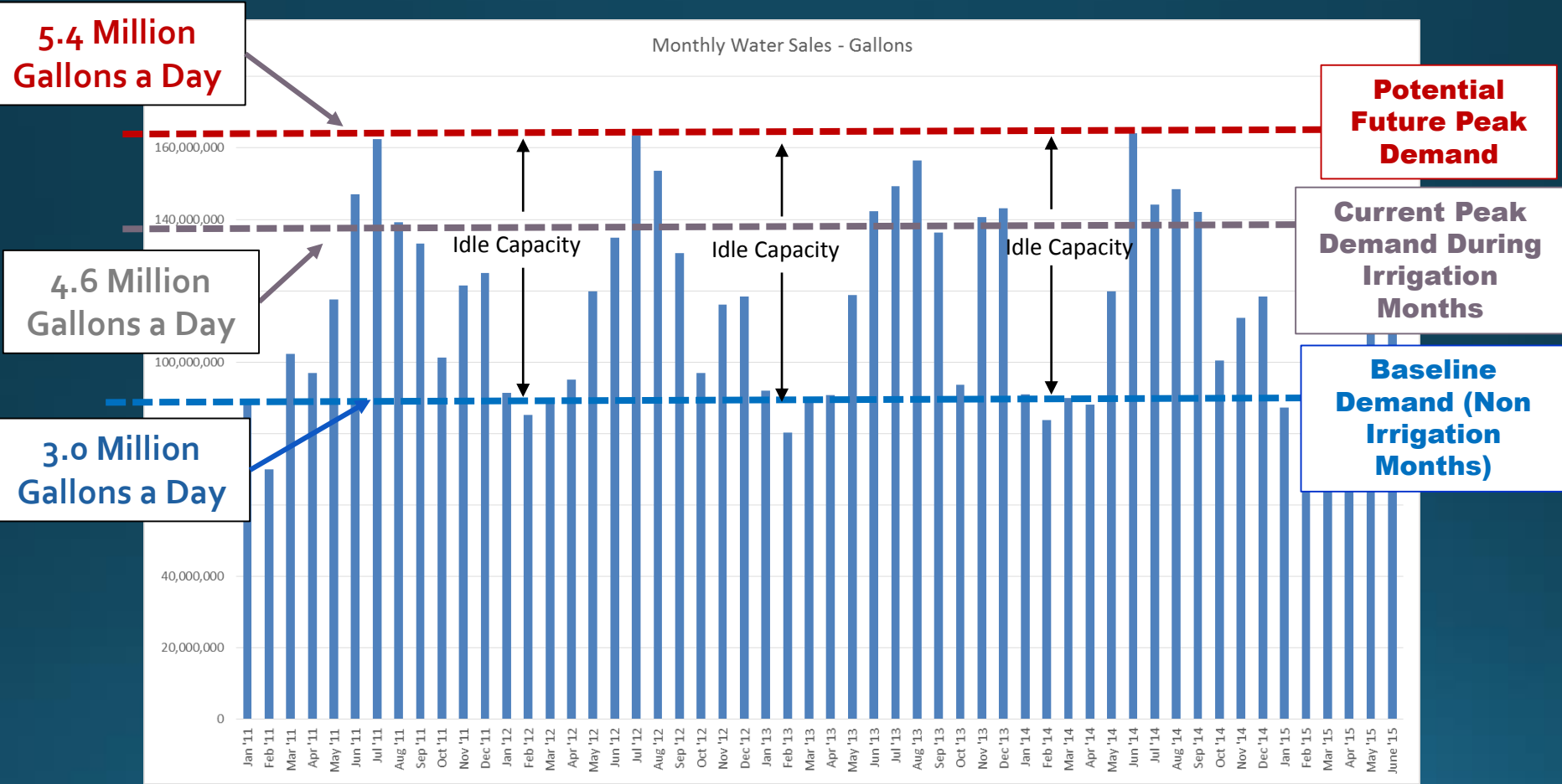


# Expanding Irrigation Meters to All Customers **Draft**

- This will increase water demand
- This will require additional water supply capacity to meet peak demands during the summer
- Metered water revenue will increase, metered sewer revenue will decrease

# Draft

## Potential Irrigation Demand with Expanded Irrigation Meters (based on last five years of water sales)





# Expanding Irrigation Meters to all **Draft** customers will: **Increase seasonal demand**

- Currently, all customers pay for their metered use for both water and sewer:
- Billed for each Unit of Consumption (748 gallons)
  - Water = \$4.15/unit – first 10 units - \$5.00/unit thereafter
  - Sewer = \$11.77/unit – first 10 units - \$12.95/unit thereafter
  - **Total = \$15.92/unit**
- An irrigation service only pays at the higher water rate for each unit of water (\$5.00/unit instead of \$15.92/unit)
- Reduction in cost will send a strong pricing signal that will lead to increased seasonal demands

# Recommendation if Irrigation Meters Are Expanded: **Draft**

- Increase the Irrigation Rate to pay for additional system capacity necessary to meet peak demands
- Customer with irrigation meter does not pay capital fee (Capacity Use Surcharge) for use of capacity
- Capacity use charge per CCF reflects use of capacity not purchased when connecting to the City water system

| <b>Irrigation Rate Structure</b> | <b>O&amp;M and Capital Rate per CCF</b> | <b>Capacity Use Charge per CCF</b> | <b>Total Irrigation Rate per CCF</b> |
|----------------------------------|---|------------------------------------|--------------------------------------|
| 0 to 5 Units <sup>(1)</sup>      | \$5.00                                  | -                                  | \$5.00                               |
| 5 to 15 Units                    | \$5.00                                  | \$4.70                             | \$9.70                               |
| Over 15 Units <sup>(2)</sup>     | \$5.00                                  | \$7.05                             | \$12.05                              |

*(1) First five units provides an allowance for discretionary use*

*(2) Use of capacity above 10 units, 1.5 times capacity use charge*

## Recommendation if Irrigation Meters Are expanded:

- Encouraging water conservation is through specific policies that govern how irrigation water can be used within the community. These policies would include such items such as:
  - The ability of the City to turn off irrigation meters during periods of drought.
  - Requiring that in-ground irrigation systems include moisture sensors.
  - Restricting irrigation usage to specific days or periods of time.
  - Adopting significant penalties for not complying with irrigation policies.

# Expanding Irrigation Meters to customers will: Reduce sewer system revenues

|   | FY 2016              | FY 2017              | FY 2018              |
|---|----------------------|----------------------|----------------------|
| Current Projected Sewer Revenues <sup>(1)</sup> | \$14,117,217         | \$14,874,178         | \$15,740,616         |
| Expanded Irrigation Sewer Revenues              | \$12,889,019         | \$13,580,125         | \$14,371,182         |
| <b>Sewer System Revenue Reduction</b>           | <b>(\$1,228,198)</b> | <b>(\$1,294,053)</b> | <b>(\$1,369,434)</b> |
| <b>% Revenue Reduction</b>                      | 8.70%                | 8.70%                | 8.70%                |

(1) Based on long-term financial projections for sewer fund.

# Recommendation if Irrigation Meters Are expanded: **Draft**

- Increase sewer rates
  - Based on our financial analysis the sewer fund will not be able to remain financially viable with an 8.7% reduction in sewer revenues.

| <b>Sewer Rates</b>   | <b>Current Rates</b> | <b>Break-Even Rates <sup>(1)</sup></b> |
|--|----------------------|--|
| First Tier Rate (10 Units or less per month)                         | \$11.77              | \$12.59                                |
| Second Tier Rate per CCF (over 10 units per month)                   | \$12.95              | \$14.25                                |
| <b>Sample Bill</b>   |                      |  |
| <b>Average Annual Residential Sewer Bill<br/>(5 units per month)</b> | <b>\$706.20</b>      | <b>\$755.63</b>                        |

(1) Rates to generate lost revenues from irrigation meter expansion

# Sewer Fixed Charges

- The City's current sewer revenues are completely dependent on billed water usage.
- The City does not assess a fixed charge for the availability of sewer service (a fixed charge is currently assessed for water service).
- The City incurs significant costs regardless of whether a customer uses the sewer system or not (typically around 80% of sewer system costs are fixed).
- It is common industry practice to assess a sewer fixed charge to recover a portion of the fixed cost of providing sewer service.

# Sewer Fixed Charges

- Instead of increasing sewer usage rates if irrigation service is expanded the City could begin assessing a fixed charge by meter size to make up for the lost revenue.

| Meter Size | FY 16    |
|------------|----------|
| 5/8"       | \$11.40  |
| 3/4"       | \$11.40  |
| 1"         | \$19.05  |
| 1 1/2"     | \$32.82  |
| 2"         | \$52.76  |
| 3"         | \$83.51  |
| 4"         | \$158.31 |

# Draft

# Questions?

