Utilities & Water Division

Included:

Department Rules & Regulations
Year-Round Conservation Irrigation Ordinance & Schedule
How To Read Your Meter
How to Detect Leaks
I. **CLASSIFICATION OF SERVICE**
   All services are classified under three categories; Single-Unit residential, Multi-Unit residential, and Non-Residential Production.

   **Single-Unit Residential** – any water service which solely serves a residential dwelling contains no other business or service needs, except that of a residence. (Farms which only have county water service to the residential dwelling would qualify as a residence. If any of the water service extends to facilities associated with farming, such service would be considered nonresidential. Churches, schools, and other related structures would also be considered non-residential).

   **Multi-Unit Residential** – one meter serving multiple dwelling units (i.e. apartment building or mobile home park sharing a master meter).

   **Non-Residential Production** – a meter account serving non-residential, manufacturing or agricultural customers who use the majority of their water for production purposes. (i.e. poultry houses, brick manufacturing, plant nurseries).

II. **RATE SCHEDULE**
   User rates are established from time to time by the County Board of Commissioners and are on file with the Chatham County Utilities Department. (See Exhibit A).

III. **APPLICATION FOR SERVICE**
   Service will be supplied only to those who have paid the current applicable fees.

   Users must make an application for service at the County Utilities Department.

   The County may reject any application for service not available under a standard rate, or which involves excessive service cost, or service that may adversely affect the supply of service to other customers or for other good and sufficient reasons.

   The County may reject any application for service when the applicant is delinquent in payment of bills incurred for service previously supplied at any location.

IV. **DEPOSIT**
   All users will make a minimum cash deposit at the current published rate. Deposits shall not draw interest.

   The individual in whose name the deposit is made shall be responsible for payment of all bills incurred in connection with the service furnished.

   A separate deposit is required for each meter installed.

   The deposit receipt is not negotiable and can be redeemed only at the County office less any amount owed the County for water furnished.

V. **COUNTY’S RESPONSIBILITY AND LIABILITY**
   The County shall run a service line from its distribution line to the property line where the distribution line runs immediately adjacent and parallel to the property to be served, and for which a tap on fee then in effect for each size of meter will be charged, as hereinbefore specified.

   The County may install its meter at the property line or, at the County’s option, on the consumer’s property, or in a location mutually agreed upon. Easements for the maintenance of any public improvement shall be required if located on private property.

   When two or more meters are to be installed on the same premises for different consumers, the meters shall be closely grouped and each clearly designated as to which consumer it applies.
The County does not assume the responsibility of inspecting the consumer’s inside house piping or apparatus.

All lines from wells to residences must be disconnected and inspected by County.

The County shall not be liable for damage of any kind whatsoever resulting from water or the use of water on the consumer’s premises, unless such damage results directly from negligence on the part of the County. The County shall not be responsible for any damage done by or resulting from any defect in the piping, fixtures, or appliances on the consumer’s premises. The County shall not be responsible for negligence of third persons or forces beyond the control of the county resulting in any interruption of service.

The County shall furnish and maintain a private cutoff valve on the County’s side of the meter, the consumer to provide a like valve on the consumer’s side of such meter.

The County reserves the right to refuse service for the following reasons:
- The consumer’s lines or piping are not installed in such manner as to prevent cross-connections or backflow.
- The service is classified as a potential health risk and the consumer has not installed a reduced pressure zone backflow preventor (RPZ)
- The consumer has not installed a Pressure Reducing Valve (PRV) of appropriate size and capacity to protect the customer’s property from possible excessive pressures.

Under normal conditions, the consumer will be notified of any anticipated interruption of service.

Expansion of the Distribution Network
When a project for expansion of the Distribution Network is to be paid for by Chatham County, the Utilities Department will complete its canvass of potential new customers on the proposed extension and water purchase agreements prior to issuance of invitations to bid on the design or construction of the project.

Unless specifically authorized by the County to be situated elsewhere, water system meters will be installed at the boundary which separates the water customer’s property from the road right-of-way in which the System’s water main is located.

VI. CONSUMER’S RESPONSIBILITY
Consumers requesting a new service will be required to obtain a plumbing permit from the Chatham County Central Permitting office. An inspector from the Central Permitting Office will inspect the consumer’s outside water piping at the time of meter installation to ensure that there is no connection to another water supply for service inside of the house. No connection will be permitted if such a condition exists.

All services that are classified as a potential health risk, including but not limited to farms, factories, irrigation systems, etc., are required to have a reduced pressure zone backflow preventor (RPZ) installed on the service line on the customer’s side of the water meter.

The customer is required to have the RPZ inspected annually by a certified inspector. An inspection report is to be sent to the Chatham County Utilities Department by the certified inspector. The certified inspection report will be kept on file by the Utilities Department. Failure to inspect as required or to correct any deficiencies noted upon inspection may be grounds for termination of service.

There shall be installed on every water service to customers on the Chatham County Water System a Pressure Reducing Valve (PRV) of appropriate size and capacity to protect the customer’s property from possible excessive pressures. The PRV shall be installed by the customer at his own expense on the customer’s side of the meter box. Maintenance, repair and/or replacement of the PRV shall be the customer’s responsibility.

Piping on the consumer’s premises must be so arranged that the connections are conveniently located with respect to the County lines or mains.
If the consumer's piping on consumer's premises is so arranged that the County is called upon to provide additional meters, each place of metering will be considered as a separate and individual account.

The consumer's piping and apparatus shall be installed and maintained by the consumer at the consumer's expense in a safe and efficient manner, in accordance with the County's rules and regulations, and in full compliance with the sanitary regulations of the North Carolina Department of Human Resources.

The consumer shall guarantee proper protection for the County's property placed on the consumer's premises and shall permit access to it only by authorized representatives of the County.

In the event that any loss or damage to the property of the County or any accident or injury to persons or property is caused by or results from the negligence or wrongful act of the consumer, his agents, or employees, the cost of any necessary repairs or replacements shall be paid by the consumer to the County; and any liability otherwise resulting shall be assumed by the consumer. The amount of such loss or damage or the cost of repairs shall be added to the consumer's bill; and if not paid, service shall be discontinued by the County.

Failure to comply with these rules and regulations may lead to a disconnection from the water system.

VII ACCESS TO PREMISES

Duly authorized agents of the County shall have access at all reasonable times to the premises of the consumer for the purpose of installing or removing County's property, inspecting piping, reading or testing meters, or for any other purpose in connection with the County's service and facilities.

Each consumer shall grant or convey, or shall cause to be granted or conveyed, to the County a perpetual easement and right-of-way across any property owned or controlled by the consumer wherever said perpetual easement and right-of-way is necessary for the County's water facilities and lines so as to be able to furnish service to the consumer. Service may be conditioned upon such easement grant.

VIII CHANGE OF OCCUPANCY

Not less than three days notice must be given in person or in writing, at the County's Utilities office, to discontinue service for a change in occupancy.

The outgoing party shall be responsible for all water consumed up to the time of departure or the time specified for departure, whichever period is longer.

IX METER READING/ BILLING/COLLECTING

Meters are read on a monthly basis. Utility bills are mailed on or about the 1st of every month and are due by the 25th of each month. The bill will become delinquent on the 26th day of each month with a late fee applied. Cut-off of service for non-payment of the bill with an outstanding balance of a minimum charge or more will occur if payments for the past due amount were not paid by the 15th of the following month. Should the 15th fall upon a weekend or holiday, cut-off of service shall take place on the following business day. A reconnection fee will be charged for services discontinued for non-payment.

Customers are responsible for paying their water bills every month even if the bill is not received. Billing information may be obtained from the County Utilities Department.

Bills for water will be figured in accordance with the County's published rate schedule then in effect and will be based on the amount consumed for the period covered by the meter readings.

Charge for service commences when the meter is installed and the connection is made, whether used or not. Charges will commence upon use but no later than sixty (60) days from the installation of the service. This will allow the customer time to make plumbing connections from the residence to the County meter.
Readings from different meters will not be combined for billing, irrespective of the fact that said meters may be for the same or different premises, the same or different consumers, or the same or different services.

X  SUSPENSION OF SERVICE
Deposits will be refunded when services are disconnected and all bills paid.

Upon discontinuance of service for nonpayment of bills, the deposit will be applied by the County toward settlement of the account. Any balance will be refunded to the consumer, but if the deposit is not sufficient to cover the bill, the County may proceed to collect the balance in the usual way provided by law for the collection of debts.

Service discontinued for nonpayment of bills will be restored only after the past due amount, the current month’s charges, and a re-connection service fee is paid for each meter reconnected.

The County reserves their right to discontinue its service without notice for the following additional reasons:
- To prevent fraud or abuse.
- Consumer’s willful disregard of the County’s rules.
- Emergency repairs.
- Insufficiency of supply due to circumstances beyond the County’s control.
- Legal procedures.
- Direction of public authorities.

The County may, in addition to prosecution by law, permanently refuse service to any consumer who tampers with a meter or other measuring device. The County may initiate legal action for anyone tampering with any portion of the County’s system.

XI. COMPLAINTS/ADJUSTMENTS
If the consumer believes his bill to be in error, he shall present his claim in writing to the County Utilities Department before the bill becomes delinquent. Such claim if made after the bill has become delinquent shall not be effective in preventing discontinuance of service as heretofore provided. The consumer may pay such bill under protest and said payment shall not prejudice his claim.

The County will make special meter readings at the request of the consumer for a fee. No fee will be charged if the special reading discloses that the meter was read incorrectly.

The County will test residential meters at the request of the consumer for a fee. Other meters will be tested for a fee not to exceed the actual cost to the County of making the test. If the meter is found to over register beyond two percent of the correct volume, no fee will be charged.

If the seal of a meter is broken by other than the County’s representative or if the meter fails to register correctly, or is stopped for any cause, the consumer shall pay an amount estimated from the record of his previous bills and/or from other proper data.

An allowance may be made to a customer for adjustment of his bill for one undetected leak per year while allowing the County to recover the cost for lost water. The customer would be paying a more equitable rate for water loss through no fault of their own. A maximum of two consecutive months’ billings may be adjusted.

Adjustments may be allowed when:
- The bill exceeds the customer’s “average monthly bill” by three times. “Average monthly bill” would be calculated on the past twelve (12) months’ billings (when possible).
- Immediate steps were taken, after detection of the leak, to prevent further loss of water.
- Customer has made the necessary repairs.

Methods for Adjustments:
- Adjustments would be based on the customer’s “average monthly bill.”
Part B – Rules and Regulations

- The customer would pay the amount of their “average monthly bill” plus all water used over their average usage calculated at the prevailing purchase rate.
- If the usage crossed two months of billings, two minimums would be paid.

Adjustment in billing to sewer customers for undetected water leaks
Sewer adjustments may be made for undetected leaks that do not go through the sewer system. These leaks must be verified in writing by a certified plumber when he makes the repair. Should a Utilities Department employee in the normal course of their work, discover a leak, this information along with a written statement by the property owner that the leak has been repaired would suffice in determining the validity of the leak. The customer’s revised bill shall be based upon the consumption for that month during the preceding calendar year. If this information is unavailable, the average consumption for the preceding three months shall be utilized.

Nonconforming Water Service Connections
Nonconforming Water Service Connections can be defined as but not limited to: multiple connections to a single service line and/or metered connections without proper backflow protection, exclusive of multiple residential services through an approved master meter.

The County Staff will provide written notification to any customer(s) in violation of the current policy. The customer(s) will have 60 days to install a separate service line and meter to each residential dwelling. All installations and equipment shall meet all applicable State and Local Building Code and all applicable fees shall be paid.

If after 60 days from the date of the notification, the Nonconforming Water Service Connections have not been corrected in accordance with standards established by Chatham County, the customer is subject to disconnection from the County water system.

Exemptions to this policy (non conforming water service):
- Any developments which have a written contractual agreement with Chatham County for multiple residential use on a master meter.
- Facilities such as commercial farms or customers classified as non-residential production.

XII. SEWER – GRETASE TRAP POLICY
All non-residential sewer customers that discharge grease, oil, or sand in their waste water streams shall install and operate grease/oil/sand interceptors at their own expense. Interceptors shall be maintained in a manner that prevents the discharge of grease/oil/sand into the county wastewater collection system. Interceptors shall be easily accessible for cleaning and inspection. All interceptors shall be of a design and construction approved by the county utility.

Customers shall maintain pumping and maintenance records for their interceptors for the previous two years.

The county shall have the right to inspect during normal business hours interceptors and interceptor maintenance records.

Failure to properly maintain an interceptor may result in termination of water and sewer service.

XIII. AMENDMENT OF RULES
No promise, agreement, or representation of any employee of the County shall be binding upon the County except as it shall have been agreed upon in writing; signed and accepted by the County Manager.

No modification of rates or any of the rules and regulations shall be made by any agent of the County.
Rate Schedule - Residential and Non-Residential

All water service connections will be billed at the current published rates. All rates are reviewed periodically and subject to adjustment

**Residential/Commercial (single family dwelling unit & convenience store, office water use, etc)**

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Rate</th>
<th>Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative fee/meter</td>
<td>$15.00</td>
<td>plus</td>
</tr>
<tr>
<td>Block 1 (0 to 5000) gallons</td>
<td>$7.00</td>
<td>per 1000 gallons</td>
</tr>
<tr>
<td>Block 2 (5001 to 8000) gallons</td>
<td>$8.50</td>
<td>per 1000 gallons</td>
</tr>
<tr>
<td>Block 3 (over 8000) gallons</td>
<td>$10.00</td>
<td>per 1000 gallons</td>
</tr>
</tbody>
</table>

**Multi-Unit Residential Complexes (apartments, condominiums, etc)**

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Rate</th>
<th>Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
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<td>plus</td>
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<tr>
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<td>$8.50</td>
<td>per 1000 gallons</td>
</tr>
<tr>
<td>Block 3 (over 8000) gallons</td>
<td>$10.00</td>
<td>per 1000 gallons</td>
</tr>
</tbody>
</table>

**Non-Residential/Industrial Production**

*manufacturing facility using water for production, poultry farms, nurseries, etc.*  

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Rate</th>
<th>Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative fee/meter</td>
<td>$15.00</td>
<td>plus</td>
</tr>
<tr>
<td>0 gallons and over</td>
<td>$4.57</td>
<td>per 1000 gallons</td>
</tr>
</tbody>
</table>

Multi-unit users served through one meter will be billed at the County’s prevailing fees. The administrative fee shall only apply to the meter(s) being used for billing purposes

**Sewer Rates**

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Rate</th>
<th>Per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1 (0 to 5000) gallons</td>
<td>$7.00</td>
<td>per 1000 gallons</td>
</tr>
<tr>
<td>Block 2 (5001 to 8000) gallons</td>
<td>$8.50</td>
<td>per 1000 gallons</td>
</tr>
<tr>
<td>Block 3 (over 8000) gallons</td>
<td>$10.00</td>
<td>per 1000 gallons</td>
</tr>
</tbody>
</table>
## Connection Charges:

### Meter Size, Maximum Flow, and Fees

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Meter Capacity</th>
<th>System Development Fee</th>
<th>Tap Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot;x3/4&quot;  inch</td>
<td>20 gpm</td>
<td>$3,431 per unit</td>
<td>$1,000</td>
</tr>
<tr>
<td>1&quot; inch</td>
<td>50 gpm</td>
<td>$5,729 per connection</td>
<td>Actual Cost</td>
</tr>
<tr>
<td>1 1/2&quot; inch</td>
<td>100 gpm</td>
<td>$11,425 per connection</td>
<td>Actual Cost</td>
</tr>
<tr>
<td>2&quot; inch</td>
<td>160 gpm</td>
<td>$18,287 per connection</td>
<td>Actual Cost</td>
</tr>
<tr>
<td>3&quot; inch</td>
<td>350 gpm</td>
<td>$34,310 per connection</td>
<td>Actual Cost</td>
</tr>
<tr>
<td>4&quot; inch</td>
<td>630 gpm</td>
<td>$57,194 per connection</td>
<td>Actual Cost</td>
</tr>
<tr>
<td>6&quot; inch</td>
<td>1,500 gpm</td>
<td>$114,355 per connection</td>
<td>Actual Cost</td>
</tr>
</tbody>
</table>

Source of maximum flow data is American Water Works Association

* Approved by BOC on June 18, 2018 in accordance with SL 2017-138. Effective July 1, 2018.
** In cases when developer installs meter box, customer shall be charged a meter installation fee consistent with the County’s prevailing rate at the time of connection.

**Notes:**

1. For meter size larger than 3/4 inch, the customer will pay the System Development Fee and will be billed separately for the actual cost of the tap (supplies and material)
2. Multi-Unit Residential, Commercial, Industrial users served through one meter: System Development Fee shall be charged based on the Connection Size of the bulk meter.
3. Meter sizes and types shall be approved/determined by the Chatham County Utilities Department.
Other Fees and Charges

<table>
<thead>
<tr>
<th>Description</th>
<th>Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Deposit:</td>
<td></td>
</tr>
<tr>
<td>Owner</td>
<td>$40.00</td>
</tr>
<tr>
<td>Renter</td>
<td>$80.00</td>
</tr>
<tr>
<td>Late Fee</td>
<td>$5.00</td>
</tr>
<tr>
<td>Reconnection Fee</td>
<td>$35.00</td>
</tr>
<tr>
<td>Returned Check Fee</td>
<td>$25.00</td>
</tr>
<tr>
<td>Tap Fee</td>
<td>$1,000.00</td>
</tr>
<tr>
<td>Meter Installation Fee</td>
<td>$200.00</td>
</tr>
<tr>
<td>Hydrant Deposit</td>
<td>$50 fee plus $10 daily</td>
</tr>
<tr>
<td>Hydrant Fee (Refundable)</td>
<td>$1,000.00</td>
</tr>
<tr>
<td>Theft/Tampering/Vandalism</td>
<td>$500.00</td>
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<tr>
<td>Bacteriological Samples</td>
<td>$35.00</td>
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<tr>
<td>Inspection Fees</td>
<td>$45.00 per hour</td>
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<tr>
<td>Design/Plan Review</td>
<td>$60.00 per hour</td>
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<tr>
<td>Consulting Engineer:</td>
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<tr>
<td>Design Review</td>
<td>$120.00 per hour</td>
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<tr>
<td>Inspection</td>
<td>$55.00 per hour</td>
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<tr>
<td>Meter Test</td>
<td>$35.00</td>
</tr>
<tr>
<td>Chatham County Specifications Book</td>
<td>$20.00</td>
</tr>
</tbody>
</table>
YEAR ROUND CONSERVATION
IRRIGATION SCHEDULE 2008
(2 DAYS PER WEEK)

Irrigation Sub-Areas -
- Governors Club – Odd Addresses
- Governors Club – Even Addresses
- Carolina Meadows – Odd Addresses
- Carolina Meadows – Even Addresses
- Carolina Meadows – Golf Course
- Big Woods: (includes The Preserve, Legacy & Windfall subdivisions)
- Fearrington Village
- All Others

Irrigation Times: 12:00am (midnight) to 7:00am

**EXAMPLE:** If you are scheduled to irrigate on Tuesdays and Fridays, you would start irrigating Monday night (midnight)/Tuesday morning (until 7:00 AM), and on Thursday night (midnight)/Friday morning (until 7:00 AM).

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Governors Club Odd Addresses</th>
<th>Governors Club Even Addresses</th>
<th>Carolina Meadows Odd Addresses</th>
<th>Carolina Meadows Even Addresses</th>
<th>Carolina Meadows Golf Course</th>
<th>Big Woods Rd</th>
<th>Fearrington Village</th>
<th>All Others</th>
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</thead>
<tbody>
<tr>
<td>Monday</td>
<td></td>
<td>X</td>
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<td>Tuesday</td>
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<td>Sunday</td>
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<td>X</td>
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</tbody>
</table>
How To Read Your Analog Meter

Where To Look On The Meter

- Locate the white numbers on the right side of the meter dial (black background). Turns of numbers in the black area register that hundreds of gallons of water have passed through the meter.

- Locate the black numbers on the left side of the meter dial (white background). Turns of numbers in the white area register indicates that 1000 gallons of water have passed through the meter.

- The meter dial is read like an automobile odometer, straight from left to right.

Determining Your Water Usage

Use the following example to help read your meter.

- Select a day to take an initial water meter reading.

- Write down the numbers you see on the meter odometer. Example: 0076400

- After a period of time has passed (a day or week, for example), read your meter again at approximately the same time of day. Example: 0083300

- Subtract your first reading from the second. This is your water usage for the period. Example: 0083300 - 0076400 = 6900

- The 6900 figure indicates that 6900 gallons of water have been used during the time period between the two readings. The average residential customer uses about 7,000 gallons per month.
How to Read A Digital Dial Meter

How to Read an Encoder
HR | E LCD Encoder and E-Series® Meters with High Resolution Protocol

The HR-E LCD encoder has a 9-digit Liquid Crystal Display (LCD) to show consumption, flow and alarm information. The display automatically toggles between 9-digit and 6-digit consumption, rate of flow and meter model.

VISUAL READING DISPLAYS
- The 9-digit display provides your utility with the finest reading resolution.
- The 6-digit display represents the equivalent of the moveable number wheels on a 6-dial mechanical encoder.

UTILITY BILLING STANDARDS FOR METER READING
Typical 6-wheel odometer registration is designed with white and black number wheels for local readability with the white number wheels corresponding to the "typical" utility standard meter reading units:
- Gallons – reading to the nearest 1000 gallons
- Cubic Feet – reading to the nearest 100 ft³
- Cubic Meters – reading to the nearest 10 m³

The HR-E LCD encoder is designed with segmented lines above the numeric dials. The segmented lines above the numbers on the LCD display represent what the white numbers wheels do for the mechanical encoders—the typical utility standard meter reading.

Application Brief

LCD-A-01-EN (December 2012)
GALLONS
Typical Billing Unit of 1000 Gallons

9-DIGIT VISUAL DISPLAY

Recordall Disc LP, M25, M35, M40, M55, M70, Recordall CSM 2, 3, 4, 6 inch Low Side,
E-Series E-25, E-35, E-55 (9-digit display only)

Meter reading to the nearest?
100th gallon = 1234567,89
10th gallon = 1234567,8
1 gallon = 1234567
10 gallons = 123456
100 gallons = 12345

Typical Billing Units → 1000 gallons = 1234

6-DIGIT VISUAL DISPLAY

Flow Finder in this view

Recordall Disc M120 & M170, Recordall TSM 1-1/2, 2, 3 & 4 inch, Recordall CSM 2, 3 & 4 inch High Side,
Recordall Combo 8 inch Low Side, E-Series E-1-1/2 inch & E-2 inch (9-digit display only)

Meter reading to the nearest?
10th gallon = 12345679,89
1 gallon = 12345678
10 gallons = 1234567
100 gallons = 123456

Typical Billing Units → 1000 gallons = 1234

Flow Finder in this view

Recordall TSM 6, 8 & 10 inch, Recordall CSM 6 inch High Side, Recordall Combo 8 inch High Side

Meter reading to the nearest?
1 gallon = 123456789
10 gallons = 12345678
100 gallons = 123456

Typical Billing Units → 1000 gallons = 1234

Flow Finder in this view

Recordall TSM 12, 16 and 20 inch

Meter reading to the nearest?
1 gallon = 1234567890
10 gallons = 123456789
100 gallons = 1234567
1000 gallons = 12345

Typical Billing Units → 10000 gallons = 12345
**Status Indicators**

Status indicators are sent as part of the encoder message to AMR/AMI systems that are capable of receiving an extended message, such as ORION Cellular, Fixed Network (SE) and Migratable (ME) endpoints. The details can also be read through an IR interface.

Status indicators appear in the display as symbols that illuminate when the condition is active and dim when the condition is eliminated.

All HR-E LCD Encoders are delivered in a storage mode so that a meter alarm is not triggered. During storage mode, the meter model displays on the encoder. As water begins to flow through the meter, the encoder switches from storage mode to normal operation.

The following chart indicates the HR-E LCD Encoder conditions when connected to a Badger Meter ORION Cellular, Fixed Network or Migratable endpoint. The chart does not apply to ORION Classic (CE) or GALAXY endpoints, or HR-E LCD encoders programmed to 4.5- or 6-digit output. The HR-E LCD displays the information, but the extra information is not reported through the endpoints.

<table>
<thead>
<tr>
<th>Status Indicator</th>
<th>Icon</th>
<th>Status Description</th>
<th>HR-E LCD Display</th>
<th>HR-E LCD with ORION Cellular or Fixed Network* and Migratable* Endpoints Firmware version 1.8 or higher required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meter functioning correctly</td>
<td>![checkmark]</td>
<td>Encoder operating correctly.</td>
<td>Continuous display on encoder as long as no other status indicators are triggered.</td>
<td>Indicator status not sent to the endpoint.</td>
</tr>
<tr>
<td>Encoder alarm</td>
<td>![exclamation]</td>
<td>Several potential conditions may exist, including: - Encoder removal - Temperature limit exceeded (34...140°F) - Magnetic tamper</td>
<td>Encoder alarm remains active for 35 days. The alarm automatically clears after 35 days if any of the 3 conditions has not recurred.</td>
<td>Encoder alarm sent to the endpoint.</td>
</tr>
<tr>
<td>Reverse flow</td>
<td>![arrow]</td>
<td>Encoder detects reverse flow.</td>
<td>Reverse flow alarm remains active for 35 days. The alarm automatically clears after 35 days if reverse flow condition has not recurred.</td>
<td>Encoder detects reverse flow and sends alarm message to the endpoint.</td>
</tr>
<tr>
<td>Suspected leak</td>
<td>![leak]</td>
<td>Encoder detects 24 hours without one 15-minute interval of no flow.</td>
<td>The alarm clears automatically when a 15-minute no-flow interval occurs</td>
<td>Encoder detects suspected leak and sends alarm message to the endpoint. If condition clears before message is sent to the endpoint, it is not reported.</td>
</tr>
<tr>
<td>30 day no usage</td>
<td>![x]</td>
<td>No measured flow in past 30 days.</td>
<td>The alarm is automatically cleared once flow occurs.</td>
<td>Encoder detects 30 days no usage and sends alarm to the endpoint.</td>
</tr>
<tr>
<td>End of life battery indicator</td>
<td>![battery]</td>
<td>Indicated battery life based on pre-calculated consumption.</td>
<td>Alarm activated at 19 years and does not clear.</td>
<td>Encoder sends alarm to the endpoint.</td>
</tr>
</tbody>
</table>
How to Detect Leaks

A small leak, about the size of the head of a pin, dripping at one drop per second can add up to 7 gallons of water per day. A large leak, the kind most often found in toilets, can waste 200 gallons of water or more per day! Check out the following when you suspect a leak:

**Faucets**
Check faucets in the bathroom and kitchen periodically. Most often, worn washers are the cause of dripping faucets.

**Sprinkler Systems**
Broken sprinkler heads or damaged underground pipes are common sources of sprinkler system leaks. Watch your system run at least once per month to spot problems early. Usually, leaks are easy to fix. Do-it-yourself books with easy to follow instructions are available at libraries and stores.

**Toilets**
Check toilets for leaks often. The most common causes of a leaking toilet are 1) float device set too high, which causes water to run into the overflow tube and 2) a warped or cracked flapper.

Toilet leak kits are available. The kit contains tablets that are dropped into the toilet tank. After the tablets are placed in the tank wait 15 minutes, then check the toilet bowl. (Remember, don't flush during this time.) If the water in the bowl changes color, you have a leak!

**Don't forget to use your water meter to detect leaks**
Use your water meter to determine if you have a leak.

- Make sure no water is being used inside or outside (no clothes washer filling, no shower running, no water outdoors, etc.).
- Locate your water meter box, carefully remove the cover and lift the top of the meter.
- Find the leak detector (the small triangle on the meter dial). If all of your water sources are off and the leak detector is rotating, you may have a leak. Leaks can waste thousands of gallons of water in just a few days. It pays to fix leaks promptly.