

Function/Feature	
USAGE MANAGEMENT	
UM1	Usage
UM1.1	Can measure usage:
UM1.1.1	Fixed amount based on elapsed days or fixed periods (eg. a quarter, semi-annually or annually)
UM1.1.2	Fixed amount or percentage based on SIC
UM1.1.3	Measured flow. For example, meter readings, volume of garbage, flow of wastewater
UM1.1.4	Maximum usage in a period
UM1.1.5	For periods of time and record usage by period
UM1.1.6	Based on lineal feet (for example, of work location or of main extension)
UM1.1.7	Based on area (for example, square footage or acreage)
UM1.1.8	Based on surface imperviousness
UM1.1.9	Based on time of day
UM1.1.10	Based on type and number of container and number of pickups
UM1.2	Can view usage:
UM1.2.1	On an account by service address(es).
UM1.2.2	On an account by service and service point(s).
UM1.2.3	On an account by meter, equipment, or product
UM2	Consumption Validation & Estimation
UM2.1	Validate readings prior to billing. The validations performed are:
UM2.1.1	Number of dials on a read
UM2.1.2	Dial turnover
UM2.1.3	Read units (gallons, CCFs, MCFs)
UM2.1.4	Provides checks for zero consumption, negative consumption
UM2.1.4.1	Compare current consumption to previous consumption to determine high and low reads
UM2.1.4.2	Have up to three steps within each high and low validation (eg. 50% over/under, 100% over/under)
UM3	Meter Reading Performance
UM3.1	General:
UM3.1.1	Verifies that values were entered for meters scheduled for read, or that a non-read code was entered
UM3.1.2	Records the time/date stamp of every read to support route time study
UM3.2	Records and tracks meter reader performance measurements by reader and by route:
UM3.2.1	Error rates
UM3.2.2	Overrides
UM3.2.3	Reads per hour
UM3.2.4	Reads per hour adjusted for route difficulty
UM4	Unauthorized Usage
UM4.1	Accepts reader and service personnel keyed codes indicating suspicion of unauthorized usage:
UM4.1.1	Spacer found
UM4.1.2	Marks on meter
UM4.1.3	Meter installed backwards
UM4.2	View on-line and report meters with unauthorized usage/consumption (no Account)
UM4.3	Capable of accepting a read for a meter on an inactive account.
UM5	Estimates
UM5.1	General:
UM5.1.1	A set of meter reading estimate methods
UM5.1.2	Permits staff to use customer's usage history at old address to provide estimates for a new address
UM5.1.3	Ability to add or vary the standard meter reading estimate methods
UM5.2	Estimating capabilities include:

UM5.2.1	Estimation methods
UM5.2.1.1	Average based on history of the life of the account
UM5.2.1.2	Average of rolling 12 months' consumption
UM5.2.1.3	Consumption during the same period last year
UM5.2.1.4	Average consumption during same "n" month period for past "n" years ("n" values user-selected)
UM5.2.1.5	Consumption previous month
UM5.2.1.6	Consumption of comparable accounts
UM5.2.2	Will estimate an entire reading route or billing cycle
UM5.2.3	Flag for review customers with greater than "n" number of estimated bills over "n" period of time ("n" values user-selected)
UM5.3	Estimation calculation is based on the number of days the customer has been receiving service during the billing period:
UM5.3.1	For customer moving in:
UM5.3.1.1	Calculating tiered consumption
UM5.3.1.2	Calculating flat fees
UM5.3.2	For customer moving out:
UM5.3.2.1	Calculating tiered consumption
UM5.3.2.2	Calculating flat fees
UM5.3.3	Estimation formulas can take into account varying average rainfall and apply those formulas to specified geographic areas
UM5.3.4	Can exclude types of customers from estimation, e.g., large commercial customers
UM5.3.5	Indicator on a bill that the bill is based on an estimate of consumption
UM5.3.6	Calculate consumption based on readings/measurements
UM6	Route & Cycle Management
UM6.1	Routes & Sequences:
UM6.1.1	Provides for routes, sequence numbers, and stops
UM6.1.2	Provides for combining route and sequence numbers to allow multiple meters/equipment to be read/recorded in a single stop (for example, an adjacent residential read taken on a commercial route)
UM6.1.3	Can accommodate routes based on service point address rather than premises address
UM6.1.4	Can accommodate routes for non-metered services separately from meter reading routes (for example solid waste pickup routes, recycle, and yard pickup)
UM6.1.5	Routes can be reviewed/maintained via GIS
UM6.1.6	Allows staff to establish a new route
UM6.1.7	Route and/or sequence number is independent of the account number
UM6.1.8	Route may be read remotely or via radio read (sequence is less relevant)
UM6.1.9	Allows staff to delete a route
UM6.2	Re-routing feature for rearranging routes that allows staff to reorganize and/or combine existing routes in:
UM6.2.1	On-line mode
UM6.2.2	Batch mode
UM6.3	Staff can resequence on the hand-held device and automatically change the routing in the system upon upload.
UM6.4	There is a feature for rearranging the sequence of a route to allow for addition of premises.
UM6.5	There is an re-sequencing feature for renumbering sequences to allow for the addition of meters or equipment at a service address.
UM6.6	For each route, permits staff to change:
UM6.6.1	Route identifier
UM6.6.2	Staff person assigned to route
UM6.6.3	System-generated next read date
UM6.6.4	Description of route
UM6.6.5	System-generated last read date
UM6.6.6	System-generated total number of meters in route
UM6.6.7	End time of reading route

UM6.6.8	Elapsed time between readings (number of days)
UM6.6.9	Scheduled start time of reading on route
UM6.6.10	Mileage of route
UM6.7	Initiates reads based on reading schedules
UM7	Meter Readings
UM7.1	Initiate reads from specific events such as high bill, disconnection/connection of service, etc.
UM7.2	Can record reader-keyed notes
UM7.3	Can record reader-keyed codes about meter conditions eg. Cracked glass
UM7.4	Permits staff to key in a usage and the system will retain both the actual value and the billable value
UM7.5	Converts usage units to billing units with the ability to have more than one usage unit per billing unit (eg, gallons and cubic feet usage converted to billing in gallons)
UM7.6	Allows number of usage decimal places to be flexible and vary per unit of measure (yards, gallons, etc)
UM7.7	Accepts substitution of actual read date for scheduled read date
UM7.8	Consumption has a review screen where various reading/usage exceptions can be actioned
UM7.9	Can print route books for specific services that may not utilize automated devices
UM7.10	Can accept input of a variety of consumption units of measure
UM7.11	Store all reads received regardless of their validity
UM7.12	Staff can key reads in manually when received from sources other than the meter reading system
UM8	Meter Reading Interfaces
UM8.1	Has validation checks to avoid the upload and processing of the same readings (duplicate reads)
UM8.2	Validation override performed by meter reader at hand-held device is recorded
UM8.3	Downloads information to a PC-driven hand-held meter reading system
UM8.4	Will download meter information for inactive accounts to include them in routes
UM8.5	Accepts updated premises conditions keyed by reader (eg, new owners have a large dog)
UM8.6	Will accept updated service point location and read instructions keyed by reader
UM8.7	will download to the reading device information for the reader
UM8.8	Can accept and process batch tape or file transfer of meter reads performed by another company
End of Section	