


**Badger Meter**
**BEACON<sup>®</sup> AMA Solution**
**ORION<sup>®</sup> Cellular Coverage Analysis (CCA)**
**Customer:** Kentucky American Water - KY

**Date Issued:** 2/15/2023

**Project:** Owenton, KY, Plant #D601

**Revision:** 1.0

## SUMMARY INFORMATION

**Endpoint Type:** **LTE-M & LTE-MS**
**Service Area (square miles):** **365**
**Total Endpoints:** **3,244**

## REQUEST INFORMATION

**Solution Architect:** Bruce Aquilina

**Account Manager:** Tom Watts, Mark Wright

## INFORMATION PROVIDED

	<u>FILE NAME</u>	<u>DATE RECEIVED</u>
<b>Coverage Request Form:</b>	AW KY D601 Northern CCA 2023 02 13.pdf	2/13/2023
<b>Endpoint Locations:</b>	CCA Premise Extract 2023_02_13_KY.xlsx	2/13/2023

## ANALYSIS COVERAGE AREA

Analysis is based on GPS Coordinates provided by Kentucky American Water, KY. A map of the provided endpoint locations is shown below.



**Badger Meter**

# BEACON<sup>®</sup> AMA Solution

ORION<sup>®</sup> Cellular Coverage Analysis (CCA)

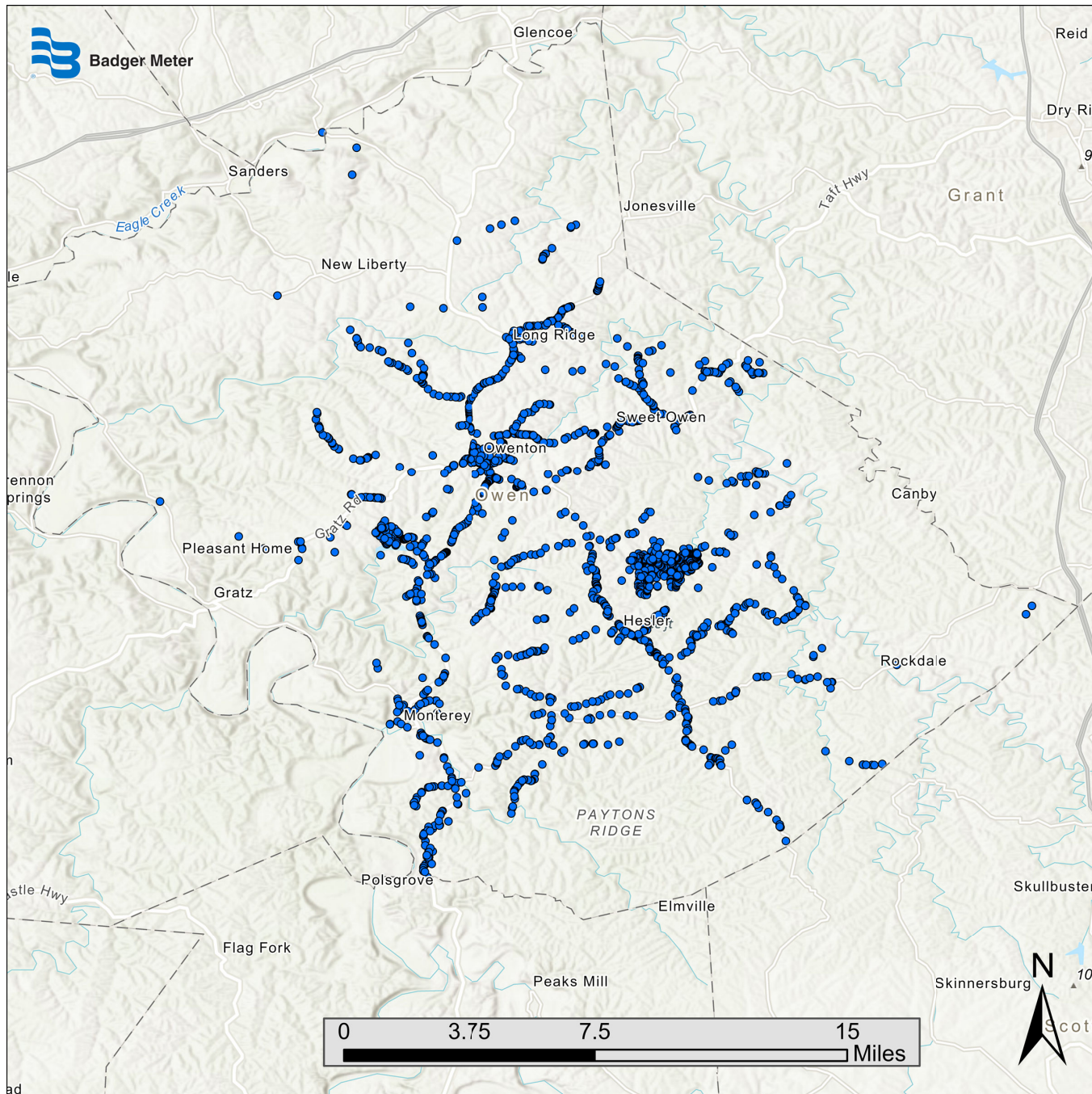
**Customer:** Kentucky American Water - KY

**Date Issued:** 2/15/2023

**Project:** Owenton, KY, Plant #D601

**Revision:** 1.0

## ENDPOINT LOCATIONS MAP





**Badger Meter**

# BEACON<sup>®</sup> AMA Solution

## ORION<sup>®</sup> Cellular Coverage Analysis (CCA)

**Customer:** Kentucky American Water - KY

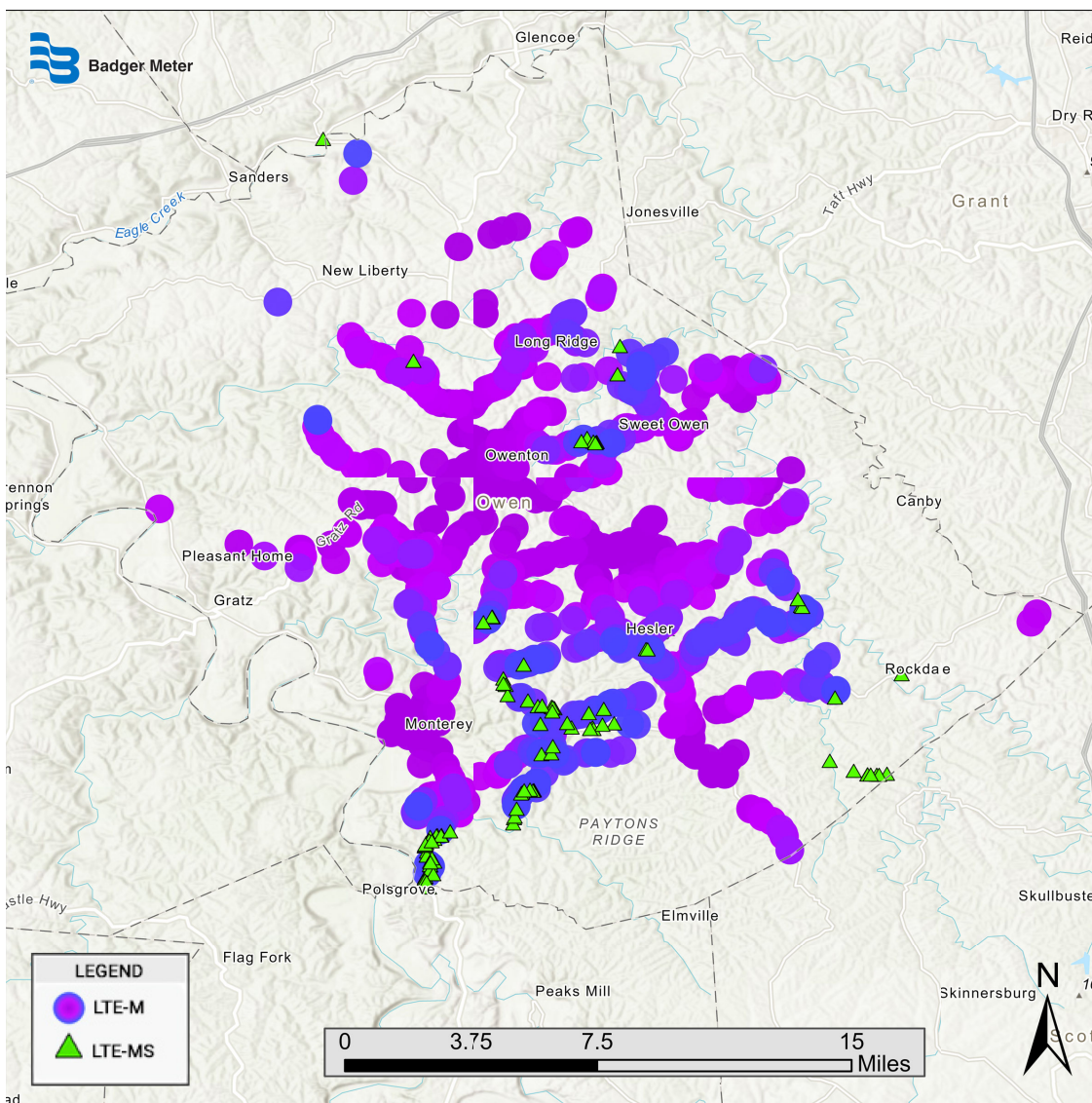
**Date Issued:** 2/15/2023

**Project:** Owenton, KY, Plant #D601

**Revision:** 1.0

### CELLULAR COVERAGE ANALYSIS

- A check of our cellular network providers' Machine-to-Machine (M2M) cellular coverage for the service locations provided has indicated that LTE-M and LTE-MS cellular coverage is available.
- Approximately 96% of locations evaluated are expected to have coverage for the ORION LTE-M endpoint, with a Field Evaluation recommended for 4% of the LTE-MS locations evaluated.
- The map below provides an illustration of that coverage. Further guidance as to the placement of endpoints by type will be provided as deployment plans are refined.



**Badger Meter****BEACON® AMA Solution****ORION® Cellular Coverage Analysis (CCA)****Customer:** Kentucky American Water - KY**Date Issued:** 2/15/2023**Project:** Owenton, KY, Plant #D601**Revision:** 1.0

## ASSUMPTIONS MADE

- Submitted information including but not limited to street addresses, service area, GPS coordinates, and meter locations are accurate.
- If GPS coordinates or a GIS shapefile are not provided for endpoint locations, street addresses are geocoded into decimal-degree latitude and longitude using ESRI's StreetMap Premium for ArcGIS North America HERE address locaters.
- Data from third party providers such as USGS National Elevation Dataset (NED), USGS National Land Cover Database (NLCD), Tele-Atlas municipal boundaries, cellular providers, and the RF propagation software used by Badger Meter is accurate.
- ORION endpoints are installed and maintained according to "ORI-UM-00025 ORION Water Endpoint Installation Manual" using a Badger Meter approved endpoint installation kit in a location that allows two-way communication between the endpoint and the cellular network.
  - Pit or vault installations are through a non-metal pit lid and the pit or vault lid is at or above grade
  - Indoor installations are mounted as high as possible in the floor joists above grade on an exterior wall

## CLARIFICATIONS

- The ORION cellular coverage analysis is subject to change for reasons which may include but are not limited to; consultation with the customer, site visit by Badger Meter authorized personnel, and the availability of new or updated information.
- Cellular coverage within the utility service area is required to deploy ORION cellular endpoints.
- Review the cellular coverage analysis with your Badger Meter representative in order to understand how it may be used by the utility as a tool to deploy the system.
- All endpoints are to be installed in compliance with the published ORION installation guidelines which can be found at [www.badgermeter.com](http://www.badgermeter.com)
- Cellular endpoint type recommended is specific to the latitude and longitude for each location.

## SMART WATER IS BADGER METER

BEACON and ORION are registered trademarks of Badger Meter, Inc. Other trademarks appearing in this document are the property of their respective entities. Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists. © 2019 Badger Meter, Inc. All rights reserved.

[www.badgermeter.com](http://www.badgermeter.com)