Utility Vehicles: Model Your Ordinance, AMI Your Usage

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Moderator: Pedro Hernandez
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Model Your Ordinance
Ensuring New Developments are Built for the Future

May 29, 2019
Introductions

Metra Richert
Conservation Manager
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Chief Executive Officer
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Background

- 2015  Formation of Santa Clara County Water Efficient New Development Task Force
- 2018  Valley Water procures technical assistance from Green Evolution
- 2019  Water Efficient New Development Model Ordinance completed
- Now   Jurisdictions considering adopting and implementing ordinance
Scope of Model Ordinance

- Single-Family Residential
- Multi-Family Residential and Nonresidential
- Commercial Facilities
- Sale and Installation of Fixtures and Fittings
- Landscape Irrigation
- Swimming Pool and Spa Covers
- Designed to be easily customizable for each jurisdiction
Single-Family Residential Requirements

- Heating Water
  - Aligns with some 2019 Title 24 language, but more restrictive
  - Amends Title 24 in accordance with CBSC and CEC requirements
  - Cost-effectiveness analysis completed for all CA climate zones

- Graywater Ready

- Onsite Treated Nonpotable Water Systems
Multi-Family and Nonresidential Req’s

- Exterior Faucet Locks
- Water Meters
- Cooling Towers
- Alternate Water Sources
  - Recycled Water
  - Onsite Treated Nonpotable Water Systems
Commercial Facilities

- Manually operated toilets and faucets
- Water efficiency in commercial kitchens
Sale and Installation of Fixtures + Fittings

- Requires the sale and installation of only plumbing fixtures and fittings in compliance with the most stringent appliance water efficiency standards
- Applies to retail establishments regarding sale
- Applies to plumbers, contractors, and service providers regarding installation
Landscape Irrigation

- Water Meters
- Irrigation Controllers
- Irrigation Nozzle Maximum Precipitation Rate
- Irrigation Audits
Swimming Pool and Spa Covers

- Aligns with 2019 Title 24
- Also covers swimming pools and spas not covered by 2019 Title 24
What’s Next

- Jurisdictions adopt and implement!
- We are here to help jurisdictions with the process
- **Contact us** if you are interested
Thank You

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“A multicounty agency authorized to plan for and acquire supplemental water supplies, encourage water conservation and use of recycled water on a regional basis.”

[BAWSCA Act, AB2058 (Papan-2002)]

Rains to Bay Conference

Sustainable Silicon Valley

May 29, 2019
Alameda County
• Hayward, Alameda County Water District

Santa Clara County
• Milpitas, San Jose, Santa Clara, Sunnyvale, Mountain View, Palo Alto, Purissima Hills W D, Stanford University

San Mateo County
• East Palo Alto, Menlo Park, Redwood City, Cal Water Service Company, Mid-Peninsula WD, Coastside CW D, Foster City (Estero), Burlingame, Hillsborough, Millbrae, San Bruno, Brisbane, Guadalupe Valley MID, North Coast CW D, Westborough CW D, Daly City
Important Components of an AMI System

- Meters
- Data transmitters
- Network infrastructure
- Communications (hardware, software) integration with existing systems that rely on meter data (e.g., billing)
- User interface software for end users
  - Agency staff
  - Agency customers
BAWSCA’s Recent AMI Efforts

2015

Innovative Technology Forum

2018

Bay Area Water Supply & Conservation Agency’s
"Making Conservation a Way of Life"
Strategic Plan – Phase 1

2019

AMI Survey and Workshop
AMI Can Provide Multiple Benefits for Utilities and Customers

Examples of routine reports from AMI systems include:

- Low flow leaks
- Continuous high consumption events
- Consumption profiles and trends (by season, week day, rate class, customer type, and/or any user-specified collection of meters)
- Usage on “inactive” accounts / automatically generate alerts and notifications
- Potential underperforming meters
- Analysis for water theft, use after shut-off, and reverse flow
- Intermittent backflow situations
- Accounts where usage violates a temporary restriction
- Consumption trends
Case Study: Town of Hillsborough

Implemented AMI for:
- Private Side Leak Alerts
- High Bill / Water Use Inquiries
- Customer Contact Information for Service Issues
- Drought Preparation
Town of Hillsborough Leak Data Analysis

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Monthly billing
Consistent number of days in each billing cycle
Provide more flexibility for distribution operators to work on special projects and routine maintenance

Better data for real water loss understanding and water audits
Provide customer portal with water usage data
Help customers prevent high bills from leaks and over irrigation
Better comparison between monthly production data and monthly consumption data

Better understanding of consumption patterns and better data for rate studies
Opportunities for Utilities to Expand Use of the Capabilities of their AMI System(s)

For many utilities, AMI primarily used for simple meter reading or billing

Underutilization due to:

- AMI technology integration takes focused work with supplier
- Limited staff time
- Testing & data crunching requirements present hurdles

Untapped opportunity since:

- AMI can provide data that in turn helps better manage water systems

Suggestion = start small:

- Identify routing reporting that is needed; work to automatically “mine” AMI data for such reporting (and become more familiar with the process)
BAWSCA and Valley Water Collaborating to Support Member Agency AMI Work

Interest

Many BAW SCA member agencies as well as SCVW D wholesale agencies are either implementing AMI or will soon embark upon AMI programs.

Joint AMI Assessment and Workshop

Purpose = to identify potential AMI work efforts of interest and opportunities for regional coordination.

Agencies survey results presented at AMI Workshop.

Opportunities identified for regional collaboration on AMI implementation.
41% of BAWSCA and Santa Clara Agencies Currently Use AMI for Meter Reading Method

What is the predominant (>50%) meter reading method for your agency?

- AMI – 41%
- Manual/Visual – 34%
- Mobile AMR – 12%
- Touchpad – 12%
Most BAWSCA and Santa Clara Agencies Planning to Implement AMI

What is the status of AMI implementation for your agency?

- 19% We don’t plan AMI <= 2 years
- 6% We plan to start AMI <= 2 years
- 13% In process of AMI pilot project
- 6% In process of implementing AMI
- 35% Deployed AMI >50%
- 19% Other
Interest in Collaboration on Research, Analysis, Reporting, and Purchasing

Question Posed = Which of the following AMI and related areas are you interested in working on with other agencies in the next 2 years?

- None: 19%
- Research about AMI technologies: 35%
- Feasibility study for AMI: 26%
- Presentations to my management about AMI: 10%
- Cost/benefit analysis: 32%
- Develop an AMI Pilot project: 13%
- Survey/geolocate my meters: 19%
- Routine report templates: consumption: 32%
- Implement regional purchasing for AMI: 23%
- Implement regional purchasing: AMI customer portal: 19%
- Other: 13%
Opportunities for Regional Collaboration

1. Information sharing among agencies
   - Regional database of RFPs and studies

2. Potential for group procurement among small groups of agencies in similar stages of AMI implementation for
   - Joint RFQ for those agencies in planning stages

3. Leverage collective voice to seek changes from AMI vendors

4. Explore opportunities to expand uses of AMI data beyond conservation for additional value to agencies
   - Managing peaks
   - Engineering and planning – CIP
   - Evaluation of agency water-savings programs
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