

STATE OF COLORADO

Colorado Water Conservation Board Department of Natural Resources

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| TO: | Colorado Water Conservation Board Members | John W. Hickenlooper Governor |
| FROM: | Veva Deheza, Section Chief Kevin Reidy, Water Conservation Technical Specialist Office of Water Conservation & Drought Planning | Mike King DNR Executive Director Jennifer L. Gimbel CWCB Director |
| DATE: | November 2, 2011 | |
| SUBJECT: | Agenda Item #24, November 15-16, 2011 Board Meeting Proposed Guidelines Regarding the Reporting of Water Use and Conservation Data by Covered Entities – Implementation of HB10-1051 | |

Staff Recommendation

Staff recommends final adoption of the *Guidelines Regarding the Reporting of Water Use and Conservation Data by Covered Entities*, including Appendices.

Guideline Adoption Process

This is the second reading of the proposed *Guidelines Regarding the Reporting of Water Use and Conservation Data by Covered Entities*. The CWCB's process for adopting guidelines in the past, dictate that these Guidelines are presented to the Board twice prior to final adoption. The Board may adopt the Guidelines upon their second presentation. Comments received during a 45-day public comment period, which ran from September 15 to October 31, 2011, were addressed in this final version of the Guidelines and Appendices.

Attached you will find the *Public Comment Matrix* documenting all the comments and feedback received from various Water Conservation Technical Advisory Group (WCTAG) members, water providers, and other stakeholders during the comment period. Staff worked with the WCTAG over 2 meetings in October to discuss all comments and determine responses and appropriate edits to the Guidelines and Appendices. The comment matrix provides responses to the comments.

Background

In 2010, the Colorado General Assembly adopted HB10-1051, which requires covered entities to annually report water use and water conservation data to be used for statewide water supply planning. The Bill directs the Colorado Water Conservation Board (CWCB) to adopt guidelines regarding the reporting of water use and water conservation data by covered entities, and to report to the legislature regarding the Guidelines.

Since November, 2010, the Office of Water Conservation & Drought Planning has conducted 13 meetings with the CWCB's Water Conservation Technical Advisory (WCTAG)/1051 working group, and twice with the 1051 Stakeholder Advisory Group (SAG). There are a total of 40 members on the WCTAG and 34 members on the SAG.

The WCTAG met monthly (by phone or in person), and will continue to do so after the Board adopts these Guidelines to begin working on the development of the online data reporting tool. Draft Guidelines and supporting documents have been reviewed each month, requiring an estimated total of up to 10 hours per month for attending meetings and providing input on draft documents.

The SAG expanded the perspective to provide recommendations focused on the practicality of implementing the Guidelines. The group met twice (by phone or in person) and provided review and comment on at least two draft Guidelines through August 2011, requiring an estimated total of 10 hours. All covered entities were encouraged to participate.

In developing the Guidelines, the CWCB and advisory groups considered examples of categories of customers, uses, and measurements currently reported by covered entities under existing water conservation plans, data that is anticipated to be readily available to the majority of covered entities, and data that would improve statewide water planning.

In addition to working with the advisory groups, the CWCB outreached to the IBCC Roundtables on this initiative, and presented to the Interim Water Resources Review Committee at their August 23, 2011 meeting in Steamboat Springs regarding the 1051 process and progress.

Goals of HB10-1051

Data reported under HB10-1051 will further support statewide water supply planning efforts by improving the quantity and quality of data available and improving consistency in the data reporting. The goal of the effort currently underway between the WCTAG/1051 working group and the CWCB is to produce reporting Guidelines that result in data that is useful toward statewide water supply planning, while facilitating the reporting process and also limiting the level of effort required for the covered entities in the reporting process.

Attachments

Final Guidelines Regarding the Reporting of Water Use and Conservation Data by Covered Entities

House Bill 10-1051 – *An Act Concerning Additional Information Regarding Covered Entities' Water Efficiency Plan*

Appendix B – Draft Reporting Data Definitions

Appendix C – The Draft Reporting Tool Template (spreadsheet for illustrative purposes only)

1051 Public Comment Matrix



COLORADO WATER CONSERVATION BOARD

Guidelines Regarding the Reporting of Water Use and Conservation Data by Covered Entities

INTRODUCTION

The purpose of this document is to describe the Colorado Water Conservation Board (CWCB) process to implement the *Act Concerning Additional Information Regarding Covered Entities' Water Efficiency Plans*, as approved under House Bill (HB) 10-1051. The Act calls for the Board to establish Guidelines¹ regarding the reporting of water use and conservation data by covered entities. A "covered entity" is defined as each municipality, agency, utility, including any privately owned utility, or other publicly owned entity with a legal obligation to supply, distribute, or otherwise provide water at retail to domestic, commercial, industrial, or public facility customers, and that has a total demand for such customers of two thousand acre-feet or more, per Section 37-60-126(1)(b) of the Colorado Revised Statutes (C.R.S.).

The CWCB developed these Guidelines through a public participation process that included outreach to stakeholders from water providers with geographic and demographic diversity, nongovernmental organizations, and water conservation professionals, per Section 37-60-126(4.5), C.R.S. A Technical Advisory Group was formed to provide recommendations and advise on the development of the specific data requirements and definitions in the Guidelines, focusing on technical issues, to ensure the usefulness of the data for statewide water supply planning. A Stakeholder Advisory Group expanded the perspective to provide recommendations focused on the practicality of implementing the Guidelines. Following development of the draft Guidelines with input from the advisory groups, the CWCB provided a full public review process with public comments incorporated in the final Guidelines. A briefing to the CWCB Board is provided as **Attachment A**.

In developing the Guidelines, the CWCB and advisory groups considered examples of categories of customers, uses, and measurements currently reported by covered entities under existing water conservation plans, data that are anticipated to be readily available to the majority of covered entities, and data that would improve statewide water planning. Descriptions of these data for the Guidelines were developed through the advisory groups and supplemented with terminology that is utilized within the water resources industry, as identified through published professional references.²

WATER USE AND CONSERVATION DATA REPORTING GOALS AND PURPOSE

The purpose of the data reporting, per Section 37-60-126(4.5)(a), C.R.S., is to provide water use and conservation data to be used for statewide water supply planning. The data collection process described in these Guidelines, developed as part of HB10-1051, is designed to provide better, more frequent, and more reliable data than currently available. These Guidelines create standardized reporting in that each covered entity is required to report the same type of

information. However, this does not necessarily standardize the data collection process and does not require entities to change their data/billing systems to report in a particular format.

Specific reporting categories were identified to allow the data to be utilized for annual forecasting purposes and to predict how water demands for different customer categories may evolve over time, through considering potential effects of water conservation. This information will be incorporated into existing statewide water supply planning efforts, specifically but not limited to the Statewide Water Supply Initiative (SWSI) process and the CWCB's role in supporting covered entities seeking to develop and update water conservation and drought mitigation and response plans. Additionally, data reporting will help the CWCB in developing more targeted technical outreach efforts aimed at providing better local water conservation planning tools to covered entities throughout Colorado.

Water demand and conservation savings forecasts developed under the statewide water supply planning process strive to employ consistency in data collection and forecast methodology across the state and to maximize available data. The statewide and basinwide planning efforts are not intended to replace water conservation, water resources planning, nor projections prepared by local entities for project-specific purposes. This data alone will not provide useful comparisons nor is it intended to be used to provide comparisons between utilities, but will greatly improve the statewide water supply planning efforts.

The authorizing legislation for the reporting requirements is provided as **Appendix A**. Specific data collection and reporting needed to meet the goal of the reporting process are provided under the subsequent sections of this document. The following Guidelines have been developed pursuant to Section 37-60-126(4.5), C.R.S. and are adopted by the CWCB.

NOTE:

All water use and conservation data reporting under these Guidelines will become public record and will be available to the public through the CWCB website. The reporting under Section 37-60-126(4.5), C.R.S. does not take the place of local conservation planning or plans that must be submitted per Section 37-60-126(2), C.R.S. These data will be used for general statewide water supply planning per section Section 37-60-126(4.5(a), C.R.S. These Guidelines shall be reviewed and updated as necessary.

REPORTING REQUIREMENTS

HB10-1051 directs the Board to establish Guidelines that include clear descriptions of categories of customers, uses, and measurements. Recognizing that each covered entity is unique in its particular water supply portfolio, distribution system, and customer base, the CWCB utilized a public outreach process to establish reporting requirements that will enhance the consistency of the data that are collected, to increase the utility of data for statewide planning purposes, and to facilitate the reporting process. In developing these Guidelines, the CWCB and advisory groups recognized that it is not possible to create data reporting categories and descriptions that are universally applicable to all covered entities. The public participation process was utilized to develop reporting guidelines that relate to a broad group of covered entities. A reporting tool, as

further described under the Reporting Process section below, will support the data reporting process.

To address the unique framework of each covered entity's water distribution system and customer characterization, certain water use and water conservation data will be reported by water distribution system type and customer class. Based on advisory committee input and review of the water conservation plans on file with the CWCB, the following water distribution system categories and customer classes are anticipated to represent the majority of systems:

Water Distribution Systems:

- Potable Water,
- Non-Potable Raw Water, and
- Non-Potable Reuse (or Reclaimed) Water.

Customer Categories:

- Residential (Single Family and Multi-Family),
- Utility/Municipal Facility
- Commercial, Industrial, and Institutional (CII), and
- Irrigation Only.

A list of the water use and water conservation data categories for reporting is provided below. These data are identified specifically to improve statewide water planning. Additionally, the advisory groups encouraged covered entities to collect all of the data for the value it will add to the covered entities' individual water supply planning efforts. Recognizing that all of the data may not be immediately available from all covered entities, the majority of the data are anticipated to be readily available to the majority of covered entities, based on the advisory group input. Additional descriptions and definitions are provided in [Appendix B](#) and a draft reporting tool template is provided as [Appendix C](#). For those covered entities that have multiple water distribution systems, as described in Appendix B, certain data will be reported for each system.

Data Categories:

- 1) Contact and Submittal Information
 - a) Contact information
 - b) Reporting date
 - c) Applicable customer categories
- 2) Water Use Data by Customer Category for each Applicable Water Distribution System
 - a) Distributed water (water produced and put into distribution system)
 - b) Wholesale water provided to another entity
 - c) Frequency of billing
 - d) Metered water use

- e) Normalizing data
 - i) Population served during reporting period
 - ii) Number of active service connections
 - iii) Number of service connections with zero use
- f) Annual system water audit report
 - i) Billed unmetered water use
 - ii) Unbilled authorized water use
 - iii) Apparent losses
 - iv) Real losses
- g) Supplemental information
 - i) Irrigated acreage by customer category
 - ii) Average annual gross evapotranspiration rate for service area
 - iii) Average annual total precipitation for service area
 - iv) Typical irrigation application rate for service area
 - v) Number of housing units for each residential water use category
 - vi) Return flow information
- 3) Foundational Water Conservation Program Information
 - a) Percentage of meters under each type of meter reading method, by customer category for each applicable water distribution system
 - i) Unmetered
 - ii) Manual Read
 - iii) Estimated Read
 - iv) AMR
 - v) AMI
 - b) Frequency of meter readings by customer category for each applicable water distribution system
 - i) Monthly
 - ii) Bi-monthly
 - iii) Other (specify)
 - c) Type of billing rate structure by customer category for each applicable water distribution system
 - i) Declining tiered rates
 - ii) Fixed (flat) fee

- iii) Uniform rates
- iv) Inclining tiered rates
- v) Water budget-based rates
- vi) Seasonal rates
- vii) No charge
- viii) Other
- d) Details of billing rate structures by customer category for each applicable water distribution system
 - i) Tiers (number or name)
 - ii) Price per billing unit within each identified tier
 - iii) Consumption range within each rate tier
 - iv) Service charge/base rate/fixed charges
- e) Tap fees/development charges/connection charges or equivalent (if applicable)
- f) Water loss characterization
 - i) Meter testing program characteristics
 - ii) Large meter testing frequency
 - iii) Average replacement age for small meters
 - iv) Nature of leak detection program
 - v) Percent of system inspected annually for leaks
 - vi) Percent of pipe replaced annually throughout system
- g) Water conservation program staffing levels
- 4) Targeted Technical Assistance and Incentives
 - a) Management of utility/municipal facility demands
 - b) Management of largest water customer demands
 - c) Management of remaining customer demands
- 5) Ordinances and Enforcement Activities
 - a) Water provider's land use authority
 - b) Water waste ordinance information
 - c) New construction regulations information
 - d) Existing building stock/retrofit construction regulations information
- 6) Education
 - a) One-way educational programs information
 - b) One-way with feedback educational programs information

- c) Two-way educational programs information
- 7) Costs (staff time and other)
 - a) Total annual cost of water conservation program incurred by the utility/district
 - b) Annual cost breakdown by SWSI Conservation Levels categories for water conservation programs incurred by the utility/district (optional)
 - c) Total annual customer costs (optional)

REPORTING PROCESS

HB10-1051 directs the Board to establish Guidelines and describe how the Guidelines will be implemented and how data will be reported to the Board. A reporting tool will be developed to support the reporting process and allow covered entities to describe any cases where certain definitions in these Guidelines are not directly applicable to data available from the particular entity. It will also provide a location for metadata to be entered to describe how the data were prepared. Through outreach and communication, the CWCB may obtain additional information that can be used to improve interpretation of the reported data and the statewide water supply planning process. The draft reporting tool template provided as Appendix C is for illustrative purposes only. While the draft reporting tool is comprehensive and captures the full breadth of the potential reporting, the final reporting tool will be refined to customize and condense the required data reporting fields based on actual reporting information. For example, if the entity reports that it serves solely residential customers, the tool will not prompt questions related to water use or water conservation programs applicable to other customer categories.

Section 37-60-126(4), C.R.S. establishes certain processes and obligations for covered entities as well as the CWCB, as further described in this section.

A. Covered Entities

- i. For each annual report, covered entities shall utilize the current version of the data reporting tool to report the data identified in these Guidelines. Covered entities shall download the most recent version of the data reporting tool from the CWCB website (<http://cweb.state.co.us>) each January 1 for use in the previous calendar year reporting. Any updates or modifications to the data reporting tool will be completed and made available to the public by December 31 of each calendar year.
- ii. Covered entities shall submit information following the Reporting Requirements section described above for the previous calendar year to the CWCB annually by June 30, starting no later than June 30, 2014 and continuing through June 30, 2020, per Section 37-60-126(4.5)(a), C.R.S. This requirement pertains to entities meeting the covered entity definition under during Section 37-60-126(4.5)(b), C.R.S. Entities will be allowed a one year grace period once becoming a covered entity. As an example, an entity that first delivers over two thousand acre-feet in 2015 (i.e. is not a covered entity for the entire calendar year of 2015) is not required to report until June 30, 2017, for the 2016 calendar year water use and water conservation data.

- iii. A covered entity responsible for administering a water conservation master plan approved by the Colorado Water Conservation Board's Office of Water Conservation and Drought Planning in compliance with Section 37-60-126, C.R.S (Integrated System Water Conservation Plan) shall be responsible for reporting information for all covered entity members of the Integrated System as specified under Reporting Process of these Guidelines. The covered entity responsible for creating the Integrated System water conservation plan as described in the "Guidelines for the Office to Review and Evaluate Water Conservation Plans" will be responsible for reporting all required information under House Bill 10-1051.
- iv. The statute repeals the reporting requirement as of July 1, 2020, per Section 37-60-126(4.5)(c)(II), C.R.S.

B. Colorado Water Conservation Board

- i. No later than February 1, 2012, the Board shall adopt Guidelines regarding the reporting of water use and conservation data by covered entities, per Section 37-60-126(4.5)(b), C.R.S. The Guidelines shall be adopted pursuant to the Board's public participation process and shall include outreach to stakeholders from water providers with geographic and demographic diversity, nongovernmental organizations, and water conservation professionals. The Guidelines shall include clear descriptions of categories of customers, uses, and measurements, how the Guidelines will be implemented, and how the data will be reported to the Board.
- ii. No later than February 1, 2012, the Board shall provide a report to the Senate Agriculture and Natural Resources Committee and the House of Representatives Agriculture, Livestock, and Natural Resources Committee, or their successor committees, regarding the guidelines, per Section 37-60-126(4.5)(b), C.R.S.
- iii. The data reporting tool will be accessible through the CWCB website (<http://cwcb.state.co.us>) no later than December 31, 2013. Any updates or modifications to the data reporting tool will be completed and made available to the public by December 31 of each calendar year.
- iv. Beginning June 30, 2014, the annual deadline for covered entities to report water use and conservation data will be June 30, through the year 2020. CWCB shall utilize the data in statewide water supply planning efforts, per Section 37-60-126(4.5)(a), C.R.S. Data reported under these Guidelines will support statewide water supply planning efforts by improving the quantity and quality of data available and improving consistency in the data reporting. Additionally, data reporting will help the CWCB in developing more targeted technical outreach efforts aimed at providing better local water conservation planning tools to covered entities throughout Colorado.
- v. No later than February 1, 2019, the Board shall brief the Senate Agriculture and Natural Resources Committee and the House of Representatives Agriculture, Livestock, and Natural Resources Committee, or their successor committees, on the guidelines and data collected by the Board under the guidelines, per Section 37-60-126(4.5)(c)(I), C.R.S.

All water use and conservation data reporting under these Guidelines will become public record and will be available to the public through the CWCB website. The reporting under Section 37-60-126(4.5), C.R.S. does not take the place of local conservation planning or plans that must be submitted per Section 37-60-126(2), C.R.S. These data will be used for general statewide water supply planning per section Section 37-60-126(4.5(a), C.R.S. These Guidelines shall be reviewed and updated as necessary.

¹ Per Section 37-60-126(4.5)(b), C.R.S., the board shall adopt guidelines regarding the reporting of water use and conservation data by covered entities and shall provide a report to the senate agriculture and natural resources committee and the house of representatives agriculture, livestock, and natural resources committee, or their successor committees, regarding the guidelines. These guidelines shall:

- (I) Be adopted pursuant to the board's public participation process and shall include outreach to stakeholders from water providers with geographic and demographic diversity, nongovernmental organizations, and water conservation professionals; and
- (II) Include clear descriptions of: Categories of customers, uses, and measurements; how guidelines will be implemented; and how data will be reported to the board.

² *Citizen's Guide to Colorado Water Law, 3rd Edition*. Colorado Foundation for Water Education, 2009.

Forecasting Urban Water Demand, 2nd Edition. American Water Works Association, 2008, R. Bruce Billings and Clive V. Jones.

Guidebook of Best Practices for Municipal Water conservation in Colorado. Colorado WaterWise, 2010. Prepared by Aquacraft, Inc. with support from Colorado Water Conservation Board.

SWSI Conservation Levels Analysis. Colorado Water Conservation Board, 2010. Prepared by Great Western Institute.

DRAFT SWSI Conservation Levels Analysis: Phase II Draft. Colorado Water Conservation Board, 2011. Prepared by Great Western Institute.

USEPA WaterSense Partnership Program. www.epa.gov/WaterSense/

Utility Water Loss, A Review of Current Practices in Colorado, Requirements of Other States, and New Procedures and Tools. Colorado Water Conservation Board, 2009. Prepared by Aquacraft, Inc.

Water Audits and Loss Control Programs, American Water Works Association Manual M36, Third Edition. 2009.

Water Conservation Measurement Metrics Guidance Report. American Water Works Association, Water Conservation Division Subcommittee Report, 2009. Benedykt Dziegielewski and Jack C. Kiefer.

Water Conservation Programs – A Planning Manual, American Water Works Association Manual M52, First Edition, 2006.

NOTE: This bill has been prepared for the signature of the appropriate legislative officers and the Governor. To determine whether the Governor has signed the bill or taken other action on it, please consult the legislative status sheet, the legislative history, or the Session Laws.



HOUSE BILL 10-1051

BY REPRESENTATIVE(S) Pommer, Fischer, Frangas, Hullinghorst,
Labuda, Looper, Pace;
also SENATOR(S) Whitehead, Carroll M., Foster, Tochtrop.

CONCERNING ADDITIONAL INFORMATION REGARDING COVERED ENTITIES'
WATER EFFICIENCY PLANS.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. 37-60-126 (4) (a) (I) and (9) (a), Colorado Revised Statutes, are amended, and the said 37-60-126 is further amended BY THE ADDITION OF A NEW SUBSECTION, to read:

37-60-126. Water conservation and drought mitigation planning - programs - relationship to state assistance for water facilities - guidelines - water efficiency grant program - repeal. (4) A plan developed by a covered entity pursuant to subsection (2) of this section shall, at a minimum, include a full evaluation of the following plan elements:

(a) The water-saving measures and programs to be used by the covered entity for water conservation. In developing these measures and programs, each covered entity shall, at a minimum, consider the following:

Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

(I) Water-efficient fixtures and appliances, including toilets, urinals, CLOTHES WASHERS, showerheads, and ~~faucets~~ FAUCET AERATORS;

(4.5) (a) ON AN ANNUAL BASIS STARTING NO LATER THAN JUNE 30, 2014, COVERED ENTITIES SHALL REPORT WATER USE AND CONSERVATION DATA, TO BE USED FOR STATEWIDE WATER SUPPLY PLANNING, FOLLOWING BOARD GUIDELINES PURSUANT TO PARAGRAPH (b) OF THIS SUBSECTION (4.5), TO THE BOARD BY THE END OF THE SECOND QUARTER OF EACH YEAR FOR THE PREVIOUS CALENDAR YEAR.

(b) NO LATER THAN FEBRUARY 1, 2012, THE BOARD SHALL ADOPT GUIDELINES REGARDING THE REPORTING OF WATER USE AND CONSERVATION DATA BY COVERED ENTITIES, AND SHALL PROVIDE A REPORT TO THE SENATE AGRICULTURE AND NATURAL RESOURCES COMMITTEE AND THE HOUSE OF REPRESENTATIVES AGRICULTURE, LIVESTOCK, AND NATURAL RESOURCES COMMITTEE, OR THEIR SUCCESSOR COMMITTEES, REGARDING THE GUIDELINES. THESE GUIDELINES SHALL:

(I) BE ADOPTED PURSUANT TO THE BOARD'S PUBLIC PARTICIPATION PROCESS AND SHALL INCLUDE OUTREACH TO STAKEHOLDERS FROM WATER PROVIDERS WITH GEOGRAPHIC AND DEMOGRAPHIC DIVERSITY, NONGOVERNMENTAL ORGANIZATIONS, AND WATER CONSERVATION PROFESSIONALS; AND

(II) INCLUDE CLEAR DESCRIPTIONS OF: CATEGORIES OF CUSTOMERS, USES, AND MEASUREMENTS; HOW GUIDELINES WILL BE IMPLEMENTED; AND HOW DATA WILL BE REPORTED TO THE BOARD.

(c) (I) NO LATER THAN FEBRUARY 1, 2019, THE BOARD SHALL REPORT TO THE SENATE AGRICULTURE AND NATURAL RESOURCES COMMITTEE AND THE HOUSE OF REPRESENTATIVES AGRICULTURE, LIVESTOCK, AND NATURAL RESOURCES COMMITTEE, OR THEIR SUCCESSOR COMMITTEES, ON THE GUIDELINES AND DATA COLLECTED BY THE BOARD UNDER THE GUIDELINES.

(II) THIS PARAGRAPH (c) IS REPEALED, EFFECTIVE JULY 1, 2020.

(9) (a) Neither the board nor the Colorado water resources and power development authority shall release grant or loan proceeds to a

covered entity unless ~~such~~ THE covered entity provides a copy of the water conservation plan adopted pursuant to this section; except that the board or the authority may release ~~such~~ THE grant or loan proceeds NOTWITHSTANDING A COVERED ENTITY'S FAILURE TO COMPLY WITH THE REPORTING REQUIREMENTS OF SUBSECTION (4.5) OF THIS SECTION OR if the board or the authority, as applicable, determines that an unforeseen emergency exists in relation to the covered entity's loan application, in which case the board or the authority, as applicable, may impose a grant or loan surcharge upon the covered entity that may be rebated or reduced if the covered entity submits and adopts a plan in compliance with this section in a timely manner as determined by the board or the authority, as applicable.

SECTION 2. Applicability. This act shall apply to conduct occurring on or after the effective date of this act.

SECTION 3. Safety clause. The general assembly hereby finds,

determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

Terrance D. Carroll
SPEAKER OF THE HOUSE
OF REPRESENTATIVES

Brandon C. Shaffer
PRESIDENT OF
THE SENATE

Marilyn Eddins
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

Karen Goldman
SECRETARY OF
THE SENATE

APPROVED _____

Bill Ritter, Jr.
GOVERNOR OF THE STATE OF COLORADO

Guidelines Regarding the Reporting of Water Use and Conservation Data by Covered Entities

Appendix B Reporting Data Definitions

Descriptions of the data for the Guidelines were developed through the advisory groups and supplemented with terminology that is utilized within the water resources industry, as identified through published professional references.¹ The following definitions clarify specific terminology that could have multiple interpretations throughout the water industry but is not intended to be comprehensive to the extent of defining every term in the data reporting list. The definitions are intended to help provide clarity, and are not intended to promote one type of system or program over another. The metadata category of the reporting tool provides an opportunity to describe situations that are unique or need further clarification.

- 1) **Distributed Water.** The purpose of the distributed water information is to determine the total amount of water provided to end users (customers) through distribution system(s), based on water production records. This may also be referred to as “water production” data (i.e. amounts of water pumped into the distribution system). This may entail multiple types of distribution systems such as potable water delivered through a treated water system and/or non-potable water delivered as raw water or reuse. For example, surface water may be diverted from a stream, treated, and distributed as a potable water supply; ground water may be pumped from a well and distributed as a non-potable raw water supply, etc. May include stand-alone systems that are under the responsibility of the reporting entity.
 - a) **Potable Water Into a Distribution System:** Volume of treated water entering the distribution system. May include both surface and ground water supplies.
 - b) **Non-Potable Raw Water Into a Distribution System:** Volume of raw water entering the distribution system. May include both surface and ground water supplies.
 - c) **Non-Potable Reuse (or Reclaimed) Water Into a Distribution System:** Volume of reuse or reclaimed water entering the distribution system.
- 2) **Customer Categories.** Report water use data for each distribution system. The following customer categories apply to Potable Water uses and some categories may also apply to Non-Potable Raw Water and Non-Potable Reuse (or Reclaimed) water uses. The reporting tool allows reporting for each customer category within each distribution system. Based on existing water conservation plans and input from the advisory committees, the following customer categories are relevant for the majority of reporting entities. These definitions are not suggesting entities modify customer categories, rather that any exceptions be reported by describing as metadata using the reporting tool.
 - a) **Residential:** Residential water use will be differentiated by single family and multi-family uses if the covered entity tracks these customer uses separately; otherwise total residential water use may be reported.
 - (i) **Single Family:** Includes all billed and metered water use by single-family residential customers for indoor and outdoor uses served by a distribution system. Single-family

uses may include, but are not limited to, residential single family, large residential lots, small residential lots, owners, renters, individual mobile homes and standard Single Family Equivalent taps, 5/8 inch taps, and/or 3/4 inch taps that serve single family dwellings.

- (ii) **Multi-Family:** Includes all billed and metered water use by multi-family residential customers for indoor and outdoor uses in locations both inside and outside of the city/town limits. Multi-family uses may include, but are not limited to, attached residential units (e.g. duplexes, triplexes), master-metered mobile homes, apartments, condominiums, and town homes. Note that some entities may include multi-family irrigation under “irrigation only” accounts.
- b) **Commercial, Industrial, and Institutional (CII):** Includes all billed and metered water use by CII customers for indoor and combined indoor and outdoor uses (report CII taps for outdoor-only uses under the “irrigation only” category) in locations both inside and outside the city/town limits. CII uses may include, but are not limited to, commercial businesses, industry, dairies, greenhouses, hotels, motels, restaurants, offices, breweries, military, hospitals, schools, assisted living and extended care facilities, churches, airports, fairgrounds, car washes, etc. City/Municipal/District uses may be reported separately or otherwise noted.
- c) **Municipal/Utility Facility:** Includes all billed and metered water use by the water utility, municipality, and/or the district that operates the water utility for indoor and combined indoor and outdoor uses (report Municipal/Utility facility taps for outdoor-only uses under the “irrigation only” category). Municipal/Utility Facility uses may include, but are not limited to, recreation centers, town hall, administrative buildings, hydrants, other government uses, etc. These uses may be aggregated under the CII category.
- d) **Irrigation Only:** Includes all billed and metered water use by customers for outdoor watering exclusively (report Residential taps for outdoor-only uses under the appropriate Residential category). The Irrigation Only category may include, but is not limited to, city and town parks, HOAs, open space, swim clubs, landscape uses, golf courses, etc.
- e) **Other:** Includes any other water use not captured in the above defined categories with the exception of non-revenue (a.k.a. unaccounted for) water (reported separately). Other uses may include large short-term seasonal uses (e.g., snow making), one time construction water, bulk water, etc. Explicitly report any single “other” use that is greater than 3% of the total metered water use for a particular distribution system, separate from the general “Other” category.
- f) **Wholesale:** Includes water sold by the reporting entity to another entity, for resale to the end customer.
- 3) **Metered Water Use.** The purpose of the metered water use information is to determine the demand or total amount of water used by end users (customers) indoors and outdoors. Metered water use data are typically available through billing records, with entities using a variety of billing cycle periods. Individual billing records often include information regarding the type of account (i.e. customer category), meter size, meter readings, and dates of readings. The reporting tool will allow metered water use data to be entered for each

distribution system category of Potable Water, Non-Potable Raw Water, and Non-Potable Reuse (or Reclaimed) Water, such that outdoor and indoor uses can be determined.

- a) **Metered Water Use:** Metered water use for each customer category provided monthly, or if monthly data are not available, an estimate of monthly use from bi-monthly, quarterly, or other specified metered water use/billings.
 - b) **Average Monthly Indoor Use:** Average monthly indoor metered water use estimated for each distribution system and customer category. Average monthly indoor water use in Colorado is often projected using metered water use data for a subset of winter months, e.g. (January + February metered use) / 2. This methodology may not apply to all communities and billing cycles may affect the specific months used to estimate indoor uses. The reporting tool will allow reporting the average monthly indoor use or specification of the months in which metered water use data are most representative of indoor uses, from which CWCB may estimate the average monthly indoor use.
- 4) **Normalizing Data (or Scaling Variables).** The purpose of the normalizing data is to allow water use to be evaluated on a common unit basis and to add perspective to water use trends.
- a) **Population Served During Reporting Period:** Permanent (total year-round) residential population served reported along with the source of information (e.g. census and state demographer data). Recognizing that entities are affected differently by transient populations associated with students, tourism, jobs, military, etc., indicate whether the population is affected by these and provide an estimate if available, along with the source of information.
 - b) **Number of Active Service Connections:** Monthly number of active/billed customer accounts (service connections) by customer category.
 - c) **Number of Service Connections with Zero Use:** Monthly number of customer accounts (service connections) with zero consumption, by customer category. This may include accounts that are temporarily inactive but anticipated to come back on-line at a future date, accounts with zero use during portions of the year, etc.
- 5) **Annual Audit Report:** The purpose of the annual audit reporting data is to obtain information on water audit and loss control through real and apparent loss data. The American Water Works Association (AWWA) has developed a standard methodology for determining water loss for municipal water providers (2009 AWWA M36 Manual of Practice – *Water Audits and Loss Control Programs (3rd Edition)*). For systems in which the following data cannot be provided, the CWCB will estimate real losses as the total Distributed Water minus total Metered Water Use. The sum of total Metered Water Use, apparent losses (unauthorized consumption), and real losses should equate to the total Distributed Water.
- a) **Billed Unmetered Water Use:** Any unmetered water use such as customers billed at a flat rate. May also be used to account for metered uses with meters known to be highly nonfunctional, highly inaccurate, or readings are unobtainable in which case, estimates of water use are used in place of measured water use.

- b) **Unbilled Authorized Water Use:** Any kind of authorized water use which is unbilled (metered or unmetered). Typically describes water taken irregularly in a variety of manners from nonaccount connections that typically do not supply permanent structures. May include, but is not limited to, fire fighting, flushing of mains and sewers, street cleaning, construction, water treatment facility backwash water, etc.
 - c) **Apparent Losses:** Nonphysical losses that occur when water is successfully delivered to the customer but, for various reasons, is not measured or recorded accurately. Includes losses in customer water use attributed to inaccuracies associated with customer metering, systematic data handling error, plus unauthorized water use (theft or illegal use of water). May include, but is not limited to, water illegally withdrawn from hydrants, illegal connections, meter equipment tampering, adjustments to metered water use for meter under- or over-registration, and billing adjustments.
 - d) **Real Losses:** Physical water losses from the distribution system, up to the point of the customer's meter. May include, but is not limited to leakage from water mains and customer service connection pipes, joints, and fittings (the largest component by volume for most systems), storage tank overflows, or similar operator error.
- 6) **Supplemental Information:** Recognizing that the following information may not be available for many covered entities, it is requested to the extent that it is readily available or can be estimated within reasonable levels of effort.
- a) **Irrigated Acres:** Best estimate of irrigated acres served by each customer category, including source of information.
 - b) **Average Annual Gross Evapotranspiration Rate for Service Area:** Average local inches of gross evapotranspiration for service area during reporting period, including source of information and method used.
 - c) **Average Annual Total Precipitation for Service Area:** Average local total inches of precipitation for service area during reporting period, including source of information.
 - d) **Irrigation Application Rate:** Application rate of outdoor use in gallons per square foot of irrigated area, including source of information.
 - e) **Number of Housing Units:** Total number of households for each residential customer category. Recognizing that data for the Multi-Family category may require audits and information on occupancy rates, provide and estimate if available along with the source of information.
 - f) **Return Flows:** Water that returns to streams, rivers, and aquifers after it has been applied to beneficial use. It may return as surface flow or as ground water flow.
- 7) **Meter Types:** Specify the percentage of meters under each type of meter reading method, by customer category, for each applicable water distribution system.
- a) **Manual Read:** Manual meter reading with reading personnel physically visiting individual meters to collect readings.
 - b) **Estimated Read:** Estimated meter reading based on historical trends from past meter readings.

- c) **AMR:** Automatic meter reading where radio signals transmit the current meter reading to a device outside of the building or meter pit in which the meter is located. Mobile AMR systems allow readings to be collected by readers with hand-held devices or via automobiles patrolling scheduled meter reading routes. Fixed network AMR include permanently installed data collector units located throughout the service area.
 - d) **AMI:** Advanced metering infrastructure, also referred to as smart meters, goes beyond AMR to include networking technology (telemetry) for remote leak detection, frequent meter data collection, and two-way communication between customer and utility.
- 8) **Rate Structures:** Provide information by customer category, for each applicable water distribution system. The reporting tool will provide an option to attach the entity's current rate structure for each customer class.
- a) **Declining tiered rates:** Lower rate charges for higher quantities of water use.
 - b) **Fixed (flat) fee:** Fixed fee (charge) regardless of how much water is used.
 - c) **Uniform rates:** Same unit charge for water regardless of how much water is used.
 - d) **Inclining tiered rates:** Higher unit charges are triggered at higher levels of water use.
 - e) **Water budget-based rates:** A variation of increasing tiered rates, where tailored allocations are developed for each customer and rates increase as the allocation is used or exceeded. Tier (or block) size is typically defined by an empirical determination of efficient use for each customer using customer specific characteristics such as irrigable area.
 - f) **Seasonal rates:** Higher prices are charged during periods of scarcity (typically summer and fall) to more efficiently allocate water in times of shortage.
- 9) **Educational Programs:** Provide information on the types of educational programs and estimates of number of customers reached with each program.
- a) **One-Way Education:** One-way educational efforts send out information without tracking or specific follow-up (e.g. bill stuffers).
 - b) **One-Way With Feedback Education:** One-way "with feedback" educational efforts send out information and allow for some level of tracking or feedback (e.g. K-12 classroom presentations and interactive websites).
 - c) **Two-Way Education:** Two-way educational efforts involve two-way communications (e.g. focus groups).
- 10) **Point of Sale Controls:** Ordinance/regulation to provide opportunity to ensure the water efficiency features meet current regulations and/or to incentivize increased efficiency through retrofit of fixtures, appliances, landscape, and irrigation systems. Requirements can be triggered before a residence or building can be sold, transferred from one owner to another, or renovated beyond a predetermined level.

- 11) Costs:** Costs incurred by the utility/municipality/district may be reported as a total over the past reporting period, or as a breakdown by the SWSI Level categories. See the SWSI Conservation Levels Analysis Phase II Report for more information on the categories.

¹ *Citizen's Guide to Colorado Water Law, 3rd Edition*. Colorado Foundation for Water Education, 2009.

Forecasting Urban Water Demand, 2nd Edition. American Water Works Association, 2008, R. Bruce Billings and Clive V. Jones.

Guidebook of Best Practices for Municipal Water conservation in Colorado. Colorado WaterWise, 2010. Prepared by Aquacraft, Inc. with support from Colorado Water Conservation Board.

SWSI Conservation Levels Analysis. Colorado Water Conservation Board, 2010. Prepared by Great Western Institute.

DRAFT SWSI Conservation Levels Analysis: Phase II Draft. Colorado Water Conservation Board, 2011. Prepared by Great Western Institute.

USEPA WaterSense Partnership Program. www.epa.gov/WaterSense/

Utility Water Loss, A Review of Current Practices in Colorado, Requirements of Other States, and New Procedures and Tools. Colorado Water Conservation Board, 2009. Prepared by Aquacraft, Inc.

Water Audits and Loss Control Programs, American Water Works Association Manual M36, Third Edition. 2009.

Water Conservation Measurement Metrics Guidance Report. American Water Works Association, Water Conservation Division Subcommittee Report, 2009. Benedykt Dziegielewski and Jack C. Kiefer.

Water Conservation Programs – A Planning Manual, American Water Works Association Manual M52, First Edition, 2006.

| Contact & Submittal Information | |
|---------------------------------|--|
| Utility Information | |
| Covered Entity Name | |
| Contact Name | |
| Contact Phone | |
| Contact Email | |
| Contact Address (Street or PO) | |
| Contact Address (City) | |
| Contact Address (State) | |
| Contact Address (Zip) | |
| Submittal Information | |
| Year of Data | |
| Report Date | |

What customer categories do you have in your water distribution system(s)? (Check all that apply)

| | |
|----------------------------|--|
| Residential | |
| OR | |
| Single Family | |
| Multi-Family | |
| Utility/Municipal Facility | |
| CII | |
| Irrigation Only | |
| Other | |

Water Use Data (Potable Treated Water Only)

Enter Reporting Unit (e.g., AF, MG, thousands of gallons, etc.)

Distributed Water (annual water production)

Wholesale Water Provided to Another Entity or Entities (annual delivery)

| Frequency of Billing | | Monthly | Bi-Monthly | Quarterly | Other (specify) |
|----------------------|----------------------------|---------|------------|-----------|-----------------|
| Customer Category | Residential | | | | |
| | Single Family | | | | |
| | Multi-Family | | | | |
| | Utility/Municipal Facility | | | | |
| | CII | | | | |
| | Irrigation Only | | | | |
| | Other | | | | |

| Metered Water Use | Residential | OR | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other | Wholesale |
|-------------------|-------------|----|---------------|--------------|----------------------------|-----|-----------------|-------|-----------|
| January | | | | | | | | | |
| February | | | | | | | | | |
| March | | | | | | | | | |
| April | | | | | | | | | |
| May | | | | | | | | | |
| June | | | | | | | | | |
| July | | | | | | | | | |
| August | | | | | | | | | |
| September | | | | | | | | | |
| October | | | | | | | | | |
| November | | | | | | | | | |
| December | | | | | | | | | |

Please select the most representative months to describe your Monthly Indoor Use (i.e. Dec., Jan., Feb.)

| | | | | | | | | | | | |
|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | | | | | | | | | | | |
| January | February | March | April | May | June | July | August | September | October | November | December |
| | | | | | | | | | | | |

Water Use Data (Potable Treated Water Only)

Normalizing Data

| | |
|--|--|
| Population Served for Year of Reporting | |
| <i>Source</i> | |

| | | |
|---|-----|----|
| | Yes | No |
| Do you have a large transient population in your service area (i.e. tourism, second homes, students, military, etc.)? | | |
| If yes, are associated population changes seasonal, annual, or otherwise? | | |
| If yes, what is the estimate of this population (annual, monthly, or otherwise as available)? | | |
| <i>Source</i> | | |

| Number of Active Service Connections | Residential | | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other |
|---|-------------|----|---------------|--------------|----------------------------|-----|-----------------|-------|
| January | | OR | | | | | | |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

| Number of Service Connections with Zero Use | Residential | | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other |
|--|-------------|----|---------------|--------------|----------------------------|-----|-----------------|-------|
| January | | OR | | | | | | |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

Water Use Data (Potable Treated Water Only)**Annual Audit Report**

| | | |
|--|-----|----|
| | Yes | No |
| Do you use AWWA M36 Manual of Practice-Water Audits and Loss Control Programs (3rd Edition) for to perform system wide audits? | | |
| If no, what method is used to estimate water losses? | | |

| | | | | |
|-------------------------------|--|----|----------------------------------|--|
| Billed Unmetered Water Use | | OR | Total Distributed/Produced Water | |
| Unbilled Authorized Water Use | | | Total Metered Water Use | |
| Apparent Losses | | | | |
| Real Losses | | | | |

Supplemental Information

| | | | | | | | | |
|--|-------------|----|---------------|--------------|----------------------------|-----|-----------------|-------|
| | Residential | OR | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other |
| Estimate of Irrigated Acres by Customer Category | | | | | | | | |

| | |
|--|--|
| Average Annual Gross Evapotranspiration Rate for Service | |
|--|--|

| | |
|--|--|
| Average Annual Total Precipitation for Service Area (inches) | |
|--|--|

| | |
|--|--|
| Irrigation Application Rate for Service Area (gallons/square foot) | |
|--|--|

| | | | | |
|-------------------------|-------------|----|---------------|--------------|
| Number of Housing Units | Residential | OR | Single Family | Multi-Family |
| January | | | | |
| February | | | | |
| March | | | | |
| April | | | | |
| May | | | | |
| June | | | | |
| July | | | | |
| August | | | | |
| September | | | | |
| October | | | | |
| November | | | | |
| December | | | | |

| | | |
|---|-----|----|
| Return Flows | Yes | No |
| Do your water rights/water supplies allow direct or indirect use of return flows? | | |

| | |
|--|---|
| | % |
| If so, what percent of the potable supply comes from recapturing return flows? | |

Water Use Data (Non -Potable Raw Water Only)

Enter Reporting Unit (e.g., AF, MG, thousands of gallons, etc.)

Distributed Water (annual water production)

Wholesale Water Provided to Another Entity or Entities (annual delivery)

| Frequency of Billing | | Monthly | Bi-Monthly | Quarterly | Other (specify) |
|----------------------|----------------------------|---------|------------|-----------|-----------------|
| Customer Category | Residential | | | | |
| | Single Family | | | | |
| | Multi-Family | | | | |
| | Utility/Municipal Facility | | | | |
| | CII | | | | |
| | Irrigation Only | | | | |
| | Other | | | | |

| Metered Water Use | Residential | OR | | | | | | |
|-------------------|-------------|---------------|--------------|----------------------------|-----|-----------------|-------|-----------|
| January | | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other | Wholesale |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

Please select the most representative months to describe your Monthly Indoor Use (i.e. Dec., Jan., Feb.)

| | | | | | | | | | | | |
|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | | | | | | | | | | | |
| January | February | March | April | May | June | July | August | September | October | November | December |
| | | | | | | | | | | | |

Water Use Data (Non -Potable Raw Water Only)

Normalizing Data

| | |
|--|--|
| Population Served for Year of Reporting | |
| <i>Source</i> | |

| | | |
|---|-----|----|
| | Yes | No |
| Do you have a large transient population in your service area (i.e. tourism, second homes, students, military, etc.)? | | |
| If yes, are associated population changes seasonal, annual, or otherwise? | | |
| If yes, what is the estimate of this population (annual, monthly, or otherwise as available)? | | |
| <i>Source</i> | | |

| Number of Active Service Connections | Residential | | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other |
|---|-------------|-----------|---------------|--------------|----------------------------|-----|-----------------|-------|
| January | | | | | | | | |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | OR | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

| Number of Service Connections with Zero Use | Residential | | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other |
|--|-------------|-----------|---------------|--------------|----------------------------|-----|-----------------|-------|
| January | | | | | | | | |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | OR | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

Water Use Data (Non -Potable Raw Water Only)

Annual Audit Report

| | | |
|--|-----|----|
| | Yes | No |
| Do you use AWWA M36 Manual of Practice-Water Audits and Loss Control Programs (3rd Edition) for to perform system wide audits? | | |
| If no, what method is used to estimate water losses? | | |

| | | | | |
|-------------------------------|--|----|----------------------------------|--|
| Billed Unmetered Water Use | | OR | Total Distributed/Produced Water | |
| Unbilled Authorized Water Use | | | Total Metered Water Use | |
| Apparent Losses | | | | |
| Real Losses | | | | |

Supplemental Information

| | | | | | | | | |
|--|-------------|----|---------------|--------------|----------------------------|-----|-----------------|-------|
| | Residential | OR | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other |
| Estimate of Irrigated Acres by Customer Category | | | | | | | | |
| Average Annual Gross Evapotranspiration Rate for Service | | | | | | | | |
| Average Annual Total Precipitation for Service Area (inches) | | | | | | | | |
| Irrigation Application Rate for Service Area (gallons/square foot) | | | | | | | | |
| Number of Housing Units | Residential | OR | Single Family | Multi-Family | | | | |
| January | | | | | | | | |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

Water Use Data (Non-Potable Reuse Water Only)

Enter Reporting Unit (e.g., AF, MG, thousands of gallons, etc.)

Distributed Water (annual water production)

Wholesale Water Provided to Another Entity or Entities (annual delivery)

| Frequency of Billing | | Monthly | Bi-Monthly | Quarterly | Other (specify) |
|----------------------|----------------------------|---------|------------|-----------|-----------------|
| Customer Category | Residential | | | | |
| | Single Family | | | | |
| | Multi-Family | | | | |
| | Utility/Municipal Facility | | | | |
| | CII | | | | |
| | Irrigation Only | | | | |
| | Other | | | | |

| Metered Water Use | Residential | OR | | | | | | |
|-------------------|-------------|---------------|--------------|----------------------------|-----|-----------------|-------|-----------|
| January | | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other | Wholesale |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

Please select the most representative months to describe your Monthly Indoor Use (i.e. Dec., Jan., Feb.)

| | | | | | | | | | | | |
|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | | | | | | | | | | | |
| January | February | March | April | May | June | July | August | September | October | November | December |
| | | | | | | | | | | | |

Water Use Data (Non-Potable Reuse Water Only)

Normalizing Data

| | |
|--|--|
| Population Served for Year of Reporting | |
| <i>Source</i> | |

| | | |
|---|-----|----|
| | Yes | No |
| Do you have a large transient population in your service area (i.e. tourism, second homes, students, military, etc.)? | | |
| If yes, are associated population changes seasonal, annual, or otherwise? | | |
| If yes, what is the estimate of this population (annual, monthly, or otherwise as available)? | | |
| <i>Source</i> | | |

| Number of Active Service Connections | Residential | | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other |
|---|-------------|----|---------------|--------------|----------------------------|-----|-----------------|-------|
| January | | OR | | | | | | |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

| Number of Service Connections with Zero Use | Residential | | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other |
|--|-------------|----|---------------|--------------|----------------------------|-----|-----------------|-------|
| January | | OR | | | | | | |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

Water Use Data (Non-Potable Reuse Water Only)

Annual Audit Report

| | | |
|--|-----|----|
| | Yes | No |
| Do you use AWWA M36 Manual of Practice-Water Audits and Loss Control Programs (3rd Edition) for to perform system wide audits? | | |
| If no, what method is used to estimate water losses? | | |

| | | | | |
|-------------------------------|--|----|----------------------------------|--|
| Billed Unmetered Water Use | | OR | Total Distributed/Produced Water | |
| Unbilled Authorized Water Use | | | Total Metered Water Use | |
| Apparent Losses | | | | |
| Real Losses | | | | |

Supplemental Information

| | | | | | | | | |
|--|-------------|----|---------------|--------------|----------------------------|-----|-----------------|-------|
| | Residential | OR | Single Family | Multi-Family | Utility/Municipal Facility | CII | Irrigation Only | Other |
| Estimate of Irrigated Acres by Customer Category | | | | | | | | |
| Average Annual Gross Evapotranspiration Rate for Service | | | | | | | | |
| Average Annual Total Precipitation for Service Area (inches) | | | | | | | | |
| Irrigation Application Rate for Service Area (gallons/square foot) | | | | | | | | |
| Number of Housing Units | Residential | OR | Single Family | Multi-Family | | | | |
| January | | | | | | | | |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |

Metering and Billing (Meter Types, Frequency of Meter Reading, Type of Rate Structures and Tap Fees)

| Meter Types | | Percentage of Each Type | | | | | | | | | | | | | | |
|-------------------|----------------------------|-------------------------|-------------|----------------|-----|-----|-----------------------|-------------|----------------|-----|-----|-------------------------|-------------|----------------|-----|-----|
| | | Treated Water | | | | | Non-Potable Raw Water | | | | | Non-Potable Reuse Water | | | | |
| | | Unmetered | Manual Read | Estimated Read | AMR | AMI | Unmetered | Manual Read | Estimated Read | AMR | AMI | Unmetered | Manual Read | Estimated Read | AMR | AMI |
| Customer Category | Residential | | | | | | | | | | | | | | | |
| | Single Family | | | | | | | | | | | | | | | |
| | Multi-Family | | | | | | | | | | | | | | | |
| | Utility/Municipal Facility | | | | | | | | | | | | | | | |
| | CI | | | | | | | | | | | | | | | |
| | Irrigation Only | | | | | | | | | | | | | | | |
| | Other | | | | | | | | | | | | | | | |

| Frequency of Meter Reading | | Treated Water | | | Non-Potable Raw Water | | | Non-Potable Reuse Water | | |
|----------------------------|----------------------------|---------------|------------|-----------------|-----------------------|------------|-----------------|-------------------------|------------|-----------------|
| | | Monthly | Bi-Monthly | Other (specify) | Monthly | Bi-Monthly | Other (specify) | Monthly | Bi-Monthly | Other (specify) |
| Customer Category | Residential | | | | | | | | | |
| | Single Family | | | | | | | | | |
| | Multi-Family | | | | | | | | | |
| | Utility/Municipal Facility | | | | | | | | | |
| | CI | | | | | | | | | |
| | Irrigation Only | | | | | | | | | |
| | Other | | | | | | | | | |

| Rate Structure | | Treated Water | | | | | | | | Non-Potable Raw Water | | | | | | | | Non-Potable Reuse Water | | | | | | | |
|-------------------|-----------------------------|------------------------|------------------|---------------|------------------------|--------------------------|----------------|-----------|------------------------|------------------------|--------------------|---------------|------------------------|--------------------------|----------------|-----------|------------------------|-------------------------|--------------------|---------------|------------------------|--------------------------|----------------|-----------|------------------------|
| | | Declining Tiered Rates | Fixed (Flat) Fee | Uniform Rates | Inclining Tiered Rates | Water Budget-Based Rates | Seasonal Rates | No charge | Other (Please Explain) | Declining Tiered Rates | Fixed (Flat) Rates | Uniform Rates | Inclining Tiered Rates | Water Budget-Based Rates | Seasonal Rates | No charge | Other (Please Explain) | Declining Tiered Rates | Fixed (Flat) Rates | Uniform Rates | Inclining Tiered Rates | Water Budget-Based Rates | Seasonal Rates | No charge | Other (Please Explain) |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Customer Category | Residential | | | | | | | | | | | | | | | | | | | | | | | | |
| | Single Family | | | | | | | | | | | | | | | | | | | | | | | | |
| | Multi-Family | | | | | | | | | | | | | | | | | | | | | | | | |
| | Utility/ Municipal Facility | | | | | | | | | | | | | | | | | | | | | | | | |
| | CI | | | | | | | | | | | | | | | | | | | | | | | | |
| | Irrigation Only | | | | | | | | | | | | | | | | | | | | | | | | |
| | Other | | | | | | | | | | | | | | | | | | | | | | | | |

Details of Rate Structure(s) - Note: This will be generated for whichever or however many rate structures are chosen from above.

| | Tier I | Tier II | Tier III | Tier IV | Tier V | |
|--|--------|---------|----------|---------|--------|---|
| Tiers (number or name) | | | | | | Explanation of rate structure if numbers alone do not capture all details (provide an option to attach entity's current rate structure information for each customer class) |
| Price/billing unit within each rate tier (\$) | | | | | | |
| Consumption range within each rate tier (gallons) | | | | | | |
| Service charge/base rate/fixed charges | | | | | | |
| Other (if rate structure does not fit the provided format) | | | | | | |

Metering and Billing (Meter Types, Frequency of Meter Reading, Type of Rate Structures and Tap Fees)

Tap Fees/Development Charges/Connection Charges or Equivalent (if applicable)

Does the square footage and type of landscaping affect you tap fee pricing or is tap size the basis for irrigation tap fees?

Check all that apply

| | | |
|------------------------------|----------|------|
| Size and type of landscaping | Tap Size | Both |
| | | |

What is your irrigation tap fee schedule? Choose one Category

| Categories | | | | | | Tap Size Based Irrigation Tap Fees | |
|--|-------------------------|---|---------------|---|--|------------------------------------|------|
| Landscape Irrigation Requirement Based Irrigation Tap Fees | | | | | | Tap Size Based Irrigation Tap Fees | |
| Landscape type | Define Type (if needed) | Irrigation Requirement Tap Fee Unit | Cost per unit | Tap Size Component (if any) of Irrigation Requirement Tap Fee | | Tap Size Based Irrigation Tap Fee | |
| low water, high water, permanent irrigation, establishment irrigation(EXAMPLE) | | Square Foot, Acre Foot, tap equivalent (define) | | | | Tap Size | Cost |
| | | | | 3/4" | | 3/4" | |
| | | | | 1" | | 1" | |
| | | | | 1.5" | | 1.5" | |
| | | | | 2" | | 2" | |
| | | | | 3" | | 3" | |
| | | | | 4" | | 4" | |
| | | | | 6" | | 6" | |

Who calculated the tap size required? (check one)

| | |
|-----------|----------------|
| Developer | Water Provider |
| | |

Who calculates the irrigation requirement of the landscape? (check one)

| | |
|-----------|----------------|
| Developer | Water Provider |
| | |

Which are your non-residential indoor tap fees based on (check all that apply)

| | | | |
|--------------------------------|---------------------------------------|---------------------------------------|--|
| Tap size provided by developer | Tap size calculated by water provider | Water Demands Calculated by Developer | Water Demands calculated by water provider |
| | | | |

| If water demands are calculated what is the calculation method (check all that apply) | |
|---|--|
| Size of Building | |
| Calculated GPM building requirement | |
| Type of business | |

Water Loss Characterization

Do you have a meter testing and repair program?

| Yes | No |
|-----|----|
| | |

Do you adhere to the *AWWA Policy Statement for Metering and Accountability* as illustrated in the AWWA M36 Manual of Practice-Water Audits and Loss Control Programs (3rd Edition)?

| | |
|--|--|
| | |
|--|--|

If not, what are your testing, repair, and maintenance policies or procedures?

| |
|--|
| |
|--|

Do you test your largest meters (> 1 inch) ? (describe)

| |
|--|
| |
|--|

How often do you test your largest meters?

| |
|--|
| |
|--|

What is the average replacement age for small meters (1 inch or less)?

| |
|--|
| |
|--|

Status of Water Loss Characterization

| (Check all that apply) | Yes | No | Date of Last Audit |
|---|-----|----|--------------------|
| Performed System Wide Audit (using AWWA M-36 Methodology) | | | |

| Nature of Leak Detection Program | Yes | No |
|---|-----|----|
| Reactive approach to leak detection (when water is evident at surface corrective action is taken) | | |
| Active Use of Accounting Methods to Find Leaks | | |
| Active Use of Field Testing Methods to Find Leaks | | |

| | |
|--|--|
| What type of technology is used in the field to find leaks (describe)? | |
|--|--|

| | |
|---|--|
| How much of system is inspected annually for leaks (%)? | |
|---|--|

| | |
|--|--|
| How much pipe is replaced annually in system (% of total system) | |
|--|--|

Staffing

Is There a Staff Person Assigned to Water Conservation Program Management? (check all that apply)

| Type of Staffing | Yes | If Yes, how many ? | No |
|---|-----|--------------------|----|
| Full Time | | | |
| Part Time (if yes, provide estimated number of hours per week budgeted for water conservation program management) | | | |
| Contracted Labor | | | |
| Non-Profit Organization | | | |
| Other | | | |

Targeted Technical Assistance and Incentives (quantify efforts from reporting period)

Level 1-Management of Utility/Municipal Facility Demands (Check all that apply)

Technical Assistance

Specialty Trainings and Workshops
Indoor Facility Efficiency Evaluations
Irrigation Efficiency Evaluations
Landscape Design Assistance
Process Water Efficiency Evaluations (i.e. COOLING TOWERS, fleet vehicle wash facilities etc.)
Other (describe)

| Yes | No | Number performed during reporting period | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|-----|----|--|--|-------------------------------|------------------------|
| | | | | | |
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Incentives

Indoor Fixtures/Appliances

Toilets
Urinals
Showerheads
Faucet Aerators
Clothes Washers
Dish Washers
Other (describe)

| Yes | No | Number performed during reporting period (specify number of giveaways vs rebates vs retrofits) | What level of technology is incentivized? (i.e. gallons per flush, gallons per minute, etc.) | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|-----|----|---|--|--|-------------------------------|------------------------|
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| Yes | No | Number of each rebated/distributed in last reporting period (specify number of giveaways vs rebates vs retrofits) | | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | |
| | | | | | | |
| | | | | | | |
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| Yes | No | Amount of square feet removed/converted in last reporting period | | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | |
| | | | | | | |
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| | | | | | | |
| Yes | No | # performed during reporting period (specify number of giveaways vs rebates vs retrofits) | What level of technology is incentivized? (i.e. gallons per flush, gallons per minute, etc.) | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | |
| | | | | | | |
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Landscape Irrigation Equipment

Rain Sensors (including rain and wind sensors)
Soil Moisture Sensors
ET Controllers
Other (describe)

Landscape Installation

Turf Replacement with low water use plant materials
Soil Amendment
Other (describe)

Other (describe)

Targeted Technical Assistance and Incentives (quantify efforts from reporting period)

Level 2-Management of Largest Water Customers Demands (Check all that apply)

Technical Assistance

Specialty Trainings and Workshops
Indoor Facility Efficiency Evaluations
Irrigation Efficiency Evaluations
Landscape Design Assistance
Process Water Efficiency Evaluations (i.e. COOLING TOWERS, CHIP MANUFACTURERS, car/fleet washes etc.)
Other (describe)

| | | | | Number of each performed/distributed in last reporting period (specify number of giveaways vs rebates vs retrofits) | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|-------------|-----|-----------------|-------|---|--|-------------------------------|------------------------|
| Residential | CII | Irrigation Only | Other | | | | |
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Incentives

Indoor Fixtures/Appliances

Toilets
Urinals
Showerheads
Faucet Aerators
Clothes Washers
Dish Washers
Other (describe)

| | | | | Number of each rebated/distributed in last reporting period (specify number of giveaways vs rebates vs retrofits) | What level of technology is incentivized? (i.e. gallons per flush, gallons per minute, etc.) | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|-------------|-----|-----------------|-------|---|--|--|-------------------------------|------------------------|
| Residential | CII | Irrigation Only | Other | | | | | |
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Landscape Irrigation Equipment

Rain Sensors (including rain and wind sensors)
Soil Moisture Sensors
ET Controllers
Other (describe)

| | | | | Number of each rebated/distributed in last reporting period (specify number of giveaways vs rebates vs retrofits) | | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|-------------|-----|-----------------|-------|---|--|--|-------------------------------|------------------------|
| Residential | CII | Irrigation Only | Other | | | | | |
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Landscape Installation

Turf Replacement with low water use plant materials
Soil Amendment
Other (describe)

| | | | | Amount of square feet removed/converted in last reporting period | | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|-------------|-----|-----------------|-------|--|--|--|-------------------------------|------------------------|
| Residential | CII | Irrigation Only | Other | | | | | |
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Other (describe)

| | | | | Number of each rebated/distributed in last reporting period (specify number of giveaways vs rebates vs retrofits) | What level of technology is incentivized? (i.e. gallons per flush, gallons per minute, etc.) | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|-------------|-----|-----------------|-------|---|--|--|-------------------------------|------------------------|
| Residential | CII | Irrigation Only | Other | | | | | |
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Targeted Technical Assistance and Incentives (quantify efforts from reporting period)

Level 3- Management of Remaining Customer Demands (Check all that apply)

Technical Assistance

Specialty Trainings and Workshops
Indoor Facility Efficiency Evaluations
Irrigation Efficiency Evaluations
Landscape Design Assistance
Process Water Efficiency Evaluations (i.e. COOLING TOWERS, CHIP MANUFACTURERS, car/fleet washes etc.)
Other (describe)

| | Residential | CII | Irrigation Only | Other | Number of each performed/distributed in last reporting period | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|--|-------------|-----|-----------------|-------|---|--|-------------------------------|------------------------|
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Incentives

Indoor Fixtures/Appliances

Toilets
Urinals
Showerheads
Faucet Aerators
Clothes Washers
Pre-rinse spray valves
Dish Washers
Customer Water Use Monitoring Device
Indoor Water Audit Kits
Other (describe)

| | Residential | CII | Irrigation Only | Other | Number of each rebated/distributed in last reporting period (specify number of giveaways vs rebates vs retrofits) | What level of technology is incentivized? (i.e. gallons per flush, gallons per minute, etc.) | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|--|-------------|-----|-----------------|-------|---|--|--|-------------------------------|------------------------|
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Landscape Irrigation Equipment

Rain Sensors (including rain and wind sensors)
Soil Moisture Sensors
ET Controllers
Other (describe)

| | Residential | CII | Irrigation Only | Other | Number of each rebated/distributed in last reporting period (specify number of giveaways vs rebates vs retrofits) | What level of technology is incentivized? (i.e. gallons per flush, gallons per minute, etc.) | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|--|-------------|-----|-----------------|-------|---|--|--|-------------------------------|------------------------|
| | | | | | | | | | |
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Landscape Installation

Turf Replacement with low water use plant materials
Soil Amendment
Other (describe)

| | Residential | CII | Irrigation Only | Other | Amount of square feet removed/converted in last reporting period | What level of technology is incentivized? (i.e. gallons per flush, gallons per minute, etc.) | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|--|-------------|-----|-----------------|-------|--|--|--|-------------------------------|------------------------|
| | | | | | | | | | |
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Other (describe)

| | Residential | CII | Irrigation Only | Other | Number of each rebated/distributed in last reporting period (specify number of giveaways vs rebates vs retrofits) | What level of technology is incentivized? (i.e. gallons per flush, gallons per minute, etc.) | Have you done this program prior to THIS reporting period? | If YES, Start date - end date | Additional Information |
|--|-------------|-----|-----------------|-------|---|--|--|-------------------------------|------------------------|
| | | | | | | | | | |

Ordinances

Do you, as a water provider, have authority over land use?

| Yes | No | Other (describe) |
|-----|----|------------------|
| | | |

Water Waste

Level 1-Water Waste Ordinance

check all that apply

Yes
Voluntary
Mandatory
Variable*

| Water Waste Ordinance/Regulation in place | Time of Day Restrictions | Limits to Irrigation Runoff | Limits on Car Washing (e.g., automatic shutoff on hose) | Limits on Power-Washing and Hosing Down Pavement, etc. | Failing to Repair Leaks | Day of Week Watering Restrictions | Other (describe) |
|---|--------------------------|-----------------------------|---|--|-------------------------|-----------------------------------|------------------|
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |

* dependant on determination of stage of water shortage or other utility/district action

Level1- Enforcement of Water Waste

check all that apply

Warnings
Fines
Account Restrictions
Account Shut-Offs
Other (describe)

| Water Waste Ordinance/Regulation in place | Time of Day Restrictions | Limits to Irrigation Runoff | Limits on Car Washing (e.g., automatic shutoff on hose) | Limits on Power-Washing and Hosing Down Pavement, etc. | Failing to Repair Leaks | Day of Week Watering Restrictions | Other (describe) | Number of each performed in last reporting | Who controls enforcement for ordinance? |
|---|--------------------------|-----------------------------|---|--|-------------------------|-----------------------------------|------------------|--|---|
| | | | | | | | | | |
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New Construction

Level 2- New Construction Regulations

check all that apply

EPA Water Sense Specification
Soil Amendments
Turf Restrictions
Landscape Design Requirements
Landscape Installation Requirements
Irrigation Design Requirements
Process Water Design Requirements
Other (describe)

| Residential | Municipal | CII | Irrigation Only |
|-------------|-----------|-----|-----------------|
| | | | |
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| | | | |
| | | | |

Ordinances

Level 2-Enforcement/Inspection of New Construction

check all that apply

Plan Reviews
Field Inspections
Other (describe)

| Yes | Number of each performed in last reporting period | Who controls enforcement for ordinance? |
|-----|---|---|
| | | |
| | | |
| | | |

Existing Building Stock

Level 3-Existing/Retrofit Construction Regulations

check all that apply

EPA Water Sense Specification
Soil Amendments
Turf Restrictions
Landscape Design Requirements
Landscape Installation Requirements
Irrigation Design Requirements
Car Wash Certification/Requirements
Process Water Design Requirements
Point of Sale Controls
Other (describe)

| Residential | Municipal | CII | Irrigation Only |
|-------------|-----------|-----|-----------------|
| | | | |
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| | | | |

Level 3-Enforcement/Inspection of Existing/Retrofit Construction Regulations

check all that apply

Plan Reviews
Field Inspections
Other (describe)

| Yes | Number of each performed in last reporting period | Who controls enforcement for ordinance? |
|-----|---|---|
| | | |
| | | |
| | | |

Education

Level 1- One Way Educational Programs

check all that apply

Bill Stuffers
Newsletters
Door Hangers
Informational Website
Mass Mailings
Water Wise Demonstration Garden(s)
Other (describe)

* Describe the measure of occurrences in metadata (e.g. pieces of literature versus customers reached).

| Yes | Number of pieces of literature, website visits, attendees, etc. during reporting period. * |
|-----|--|
| | |
| | |
| | |
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| | |
| | |

Level 2-One Way with Feedback Educational Programs

check all that apply

K-12 Classroom Programs
Water Fairs
Interactive Websites
Customer Informational Workshops
Organizational Messaging Programs
Customer Surveys
Other (describe)

* Describe the measure of occurrences in metadata (e.g. pieces of literature versus customers reached).

| Yes | Number of pieces of literature, website visits, attendees, etc. during reporting period. * |
|-----|--|
| | |
| | |
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| | |

Level 3-Two Way Educational Programs

check all that apply

Community Working Groups
Focus Groups
Citizen Advisory Boards
Organizational Messaging Campaigns (multi-media)
Other (describe)

* Describe the measure of occurrences in metadata (e.g. pieces of literature versus customers reached).

| Yes | Number of pieces of literature, website visits, attendees, etc. during reporting period. * |
|-----|--|
| | |
| | |
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| | |

Costs Incurred Over Last Reporting Period

Costs Incurred Only by the Utility/Municipality/District over Last Reporting Period

Total Annual Cost of Water Conservation Program (only dedicated staff and budget)

OR

Annual cost breakdown by SWSI Conservation Level Category - Refer to SWSI Conservation Levels Analysis Phase II Report for definitions (optional, but desired if provider can break this down to level)

Foundational

Targeted Technical Assistance and Incentives

Ordinances

Education

Monitoring and Verification

* Costs of incentives such as rebates or audit kits, supplies to carry out programs and measures, costs of equipment to carry out programs and measures.

Customer Costs (optional)

Total Annual Customer Costs of Water Conservation Program

[illegible]

| | | |
|--|--|-------|
| | | Total |
| | | |



DRAFT 1051 REPORTING GUIDELINES

Section: Potable Treated Water Data

| Data Category | Author | Comments | Response |
|--------------------------------------|--------------------|--|---|
| Number of Housing Units | WRA | Require an estimate of the number of multi-family households served by the system. | The Technical Advisory Group identified this as a valuable piece of information both for statewide water supply planning and for utilities, and that it should be provided if available, but also recognized that this data may be difficult for some entities to collect. Removed the word "optional" in the category heading, leave the category as "Supplemental". Added sentence at beginning of the definitions about the benefit of all of this information to utilities and request reporting to the extent available. |
| Irrigated Acres by Customer Category | WRA | Require an estimate of the irrigated area served by the system. | |
| Supplemental Information | Aquacraft (DeOreo) | Retitle section to "Recommended Information" or "Mandatory-If Currently Available"; if currently not available, make it mandatory after 1 or 2 year period | |
| Number of Housing Units | Aquacraft (DeOreo) | Number of multi-family units served needs to be reported. | |
| Irrigated Acres by Customer Category | Aquacraft (DeOreo) | Best estimate of irrigated area for at least the SF, MF, and irrigation accounts. | |
| Supplemental Information | CEC | Data labeled "optional" should be required, particularly multi-family and irrigated area. | |
| Supplemental Information | CWW | Data labeled "optional" should be "recommended" or "encouraged" but voluntary and remain unrequired at this time. | |
| Normalizing Data | Aurora Water | Normalizing data reporting should be optional fields for the raw water and reuse water systems. | |
| Irrigated Acres by Customer Category | Ute Water | Irrigated acreage by customer category - is impossible to collect for a Domestic water provider and also none of the State's business. | |
| Irrigated Acres by Customer Category | Ft. Collins | Few utilities have the square feet of irrigated area for each parcel and it's costly to obtain. | |
| Employment/Student Population | Aquacraft (DeOreo) | Estimate of total employment and number of students in the CII sector should be reported. | Addressed in normalizing data reporting. |
| Distributed Water | Aquacraft (DeOreo) | Amount of imported and exported water needs to be reported. | Addressed by Distributed Water and Wholesale definitions. |
| Metered Water Use | Aquacraft (DeOreo) | Should include all metered use, both billed and unbilled; include only water delivered to a customer of the agency (not exported). | Addressed by Definition 3. |



DRAFT 1051 REPORTING GUIDELINES

Section: Potable Treated Water Data

| Data Category | Author | Comments | Response |
|---------------------|------------------------|---|--|
| Annual Audit Report | Aquacraft (DeOreo) | Unbilled authorized uses should be changed to "total authorized unbilled use". | Comment addressed by using AWWA M36 terminology. |
| Annual Audit Report | Aquacraft (DeOreo) | Recommendations to revise audit section to add Total supplied water to customers; Total unmetered deliveries to customers; Total authorized unmetered deliveries; Total losses calculated; Estimate of unauthorized use in the system; Estimate of average customer meter under-resignation; Real losses calculated; Total apparent losses; Total percent of supplied water accounted for by metered deliveries, real losses and apparent losses. | Technical Advisory Group recommended at October 26, 2011 meeting to include categories in M36 Figure 2-1 Column 5, but not further details in Column 6. |
| Distributed Water | Aurora Water | Wholesale deliveries should not be reported; wholesale customers should be responsible for reporting the amount entering the distribution system and the end use of such water. | Added box in draft reporting tool template and added Wholesale monthly water use reporting. |
| Annual Audit Report | Aurora Water | The ability for an entity to provide Unbilled Authorized Water Use should be available even if AWWA M36 is not strictly followed. | Technical Advisory Group recommended at October 26, 2011 meeting to include categories in M36 Figure 2-1 Column 5, but not further details in Column 6. |
| Metered Water Use | Arvada | The City does not separate out Utility and Municipal use from Commercial use category, wanting to clarify that this is not a required customer category. | The advisory groups determined that the categories identified are applicable to the majority of entities; please use discretion to address exceptions and explain with metadata. |
| Annual Audit Report | Arvada | Apparent losses - based on the definition in the appendix, it does not seem necessary to have this listed as a separate category for reporting. | Changed question to ask if entity uses M36 or what other method was used; keep categories in column 5 of AWWA M36 Table 2-1; entities should fill out data as available. |
| Normalizing Data | Colo Springs Utilities | Provide ability for provider to report whether transient population is seasonal, annual, or otherwise and provide structure to report estimates, if available to the provider. | Information can be provided in metadata report |
| Annual Audit Report | Colo Springs Utilities | Allow provider some method to state whether they use M36 or not. If so, allow them to report the specific detail derived by M36 process. | Changed question to ask if entity uses M36 or what other method was used; keep categories in column 5 of AWWA M36 Table 2-1; entities should fill out data as available. |



DRAFT 1051 REPORTING GUIDELINES

Section: Potable Treated Water Data

| Data Category | Author | Comments | Response |
|--------------------------|------------------------|---|---|
| Supplemental information | Colo Springs Utilities | Return Flows - Does "recapturing" return flows include reuse by exchange? Does the percentage include water reused by augmentation? | Addressed with return flow definition. |
| Annual Audit Report | Greeley | Unnecessary to separate Apparent Losses and Real Losses. | Technical Advisory Group recommended at October 26, 2011 meeting to include categories in M36 Figure 2-1 Column 5, but not further details in Column 6. |
| Landscape Savings | Greeley | "... reporting landscape savings data may not be feasible the very next year following retrofitting since it usually requires a full season to evaluate its effectiveness. Furthermore, Greeley reports the efficiency following retrofits as water savings alone is weather dependent." | The Technical Advisory Group identified this as a valuable piece of information both for statewide water supply planning and for utilities, and that it should be provided if available, but also recognized that this data may be difficult for some entities to collect. |
| Multi-Family Water Use | Ft. Collins | Many multi-family water customers share a water tap and per capita usage is not distinguishable. | Please report the best information available and use discretion to address exceptions and explain with metadata. |
| Distributed Water | LAPLAWD | Water use can be measured at three possible locations: (1) the raw water diversion from a stream or reservoir; (2) at the treatment plant but factor in whether measured before or after backwash of the filters which can be a substantial amount of water; and (3) at the meter to individual customers. The guidelines do not address raw water diversions at all. The annual water produced needs to be defined as to whether it is total water produced including any uses at the treatment plant (e.g. backwash) or is the estimate of water to the distribution system. Many entities do not measure water to the distribution system but only total water produced. How will the guidelines address this? The meter readings at the customer location are more straightforward and maybe the best source of base data to monitor statewide water use. | The advisory groups determined that the categories identified are applicable to the majority of entities; please use discretion to address exceptions and explain with metadata. The purpose of the distributed water reporting is to provide information toward losses within the distribution system. Estimates should be provided if a full system water audit is not available. |



DRAFT 1051 REPORTING GUIDELINES

Section: Potable Treated Water Data

| Data Category | Author | Comments | Response |
|--------------------------|---------|---|---|
| Metered Water Use | LAPLAWD | When reporting water production on an annual basis the typical timeframe is usually January 1 thru December 31. When reporting metered water use, there is usually a lag that does not match the water production. This can skew the comparison between metered water use and water production. How is this going to be addressed? | Frequency of meter reading questions, along with meta data provided on the distributed water data may be used to address this topic. |
| Normalizing Data | LAPLAWD | Population is typically not static for most systems. What should the reported population number reflect? Population at the beginning of the period, ending population, average population, high or low population for that reporting period, etc. | In addition to the average annual population served question, a question was added to identify the an estimate of transient population on whatever time scale it is available (monthly, seasonal, annual, etc.), as this affects communities differently. |
| Normalizing Data | LAPLAWD | Population is just a best guess on the part of most utilities because US Census or State Demographer do not estimate population on a water system basis. Utilities usually estimate population on a "persons per household" such as 2.5 people per home. This can have significant error of 20% or more, especially for smaller systems. This can have a dramatic effect on the calculations when determining water use per capita. How will the guidelines address the potential for dramatic swings in water use per capita solely because entities change their method of estimating population? | Recognizing such challenges, the source of information and method of estimating population is requested (metadata). In addition to per-capita use, water use may also be normalized on a household/unit basis and monthly estimates of units in each water category are included in the reporting. Data will likely be analyzed multiple ways to identify potential related issues. |
| Supplemental Information | LAPLAWD | Water use is extremely affected by climatic conditions. How will the Board differentiate changes in water use attributable to conservation vs. climate? For instance, during a very dry mild winter many people will water their outdoor landscaping during months that typically see no or little, outdoor water use. Conversely, a wet cool summer will reduce outdoor water use. Neither of these have any connection to a conservation program, but the data could be used to indicate that a conservation program is being effective. | Certain climate data (average annual evapotranspiration and precipitation) are included in the reporting. Temperature data was anticipated to be more readily available and therefore was not included in the reporting but will be considered in trend/correlation analyses of the data. |



DRAFT 1051 REPORTING GUIDELINES

Section: Potable Treated Water Data

| Data Category | Author | Comments | Response |
|--|------------------------|---|--|
| Non-Potable & Reuse Water Comments: | | | |
| Reuse | GWI | Ask if water supply includes transmountain diversions and/or non-tributary groundwater. | Water supply system profile information can be obtained from Water Conservation/Efficiency Plans. This annual reporting starts on the distribution side and any "imported" water is included for a mass balance but did not specifically ask about the source. |
| Annual Audit Report | Aurora Water | Audit reporting should be optional fields for the raw water and reuse water systems. | Comment noted for online reporting tool enhancements. |
| Normalizing Data | Colo Springs Utilities | Make normalizing data optional. Colorado Springs only served non-potable water to CII customer, so normalizing data is meaningless. | Normalizing data is desired to the extent it is available; please use discretion to address exceptions and explain with metadata. |
| Raw versus Reuse Data | Colo Springs Utilities | Make it an option to combine raw and reuse water data as it is very difficult or impossible to differentiate each by customer classification. | If raw and reuse water cannot be separated for a particular situation, please select one category to report under and explain with metadata. |
| Conservation Oriented Tap Fees | Colo Springs Utilities | Make annual audit report optional for all non-potable water reporting. | Audit data is desired to the extent it is available; if it is not applicable for a particular situation, please explain with metadata. |



DRAFT 1051 REPORTING GUIDELINES

Section: Foundational Data I

| Data Category | Author | Comments | Response |
|--------------------------------|------------------------|---|---|
| Details of Rate Structure | Northern Water | Add an Other category to include metadata about how rate structure works, if it does not fit into template | Expanded the note in the draft reporting tool template; added "other" box (online reporting tool will facilitate). |
| Details of Rate Structure | GWJ | Rate structure that captures tiers for residential needs to be duplicated for other customer categories and for different water sources. | Expanded the note in the draft reporting tool template; added clarification to Guidelines document. |
| Conservation Oriented Tap Fees | GWJ | Show as voluntary. | Added "if applicable" to Guidelines document and draft reporting tool template. The categories were based on Westminster and Parker programs, and reviewed by Technical Advisory Group for general consistency with relevant existing programs. |
| Meter Types | Aquacraft (Mayer) | Revise "Manual Read" to Physical Meter Reading. | Added "physical" to the definitions document. |
| Meter Types | Aquacraft (Mayer) | Add "Estimated Meter Read". | Added question. |
| Meter Readings | Aquacraft (Mayer) | Appears to be repeat of Frequency of Billing | One section is frequency of billing and the other is frequency of meter readings. |
| Rate Structure | Aquacraft (Mayer) | Edit rate terminology (see Mayer's redlines of Guidelines Doc) | Updated definitions using AWWA M52 and Forecasting Urban Water Demands. Removed text related to rate structures encouraging conservation. |
| Details of Rate Structure | Aquacraft (Mayer) | Edit rate terminology (see Mayer's redlines of Guidelines Doc) | Updated definitions using AWWA M52 and Forecasting Urban Water Demands. Removed text related to rate structures encouraging conservation. |
| Details of Rate Structure | Aquacraft (Mayer) | Add "Billing units (kgal, CCF, M3, etc.) | Comment noted for online reporting tool enhancements. |
| Meter Types | Aurora Water | Regarding meter reading, should be omitted or an approximate % should be sufficient | Changed to percentage versus number of meters. |
| Rate Structure | Aurora Water | If rate structure data is to be collected, considerable time should be dedicated to making the reporting tool flexible enough to accept the complexities of various rate structures for each customer class. Alternatively, some general questions about rate structures may be sufficient and be much less onerous for the state to compile. | Comment noted for online reporting tool enhancements. |
| Conservation Oriented Tap Fees | Aurora Water | If tap fee schedules will be collected, additional tables for each customer class may be necessary. Alternatives should be considered to reduce the required effort by the State in compiling this data. | Comment noted for online reporting tool enhancements. |
| Meter Readings | Ute Water | How meters are read - that is none of the State's business. | The types of meters and frequency of readings will be used to better understand the availability and quality of water use data. |
| Conservation Oriented Tap Fees | Colo Springs Utilities | Change this to "Tap Fees/Development Charges/Connection Charges or Equivalent" | Change made. |
| Conservation Oriented Tap Fees | Colo Springs Utilities | This will require careful designed in the tool in order for this information to be utilized efficiently and effectively. | Comment noted for online reporting tool enhancements. |
| Conservation Oriented Tap Fees | Colo Springs Utilities | "Who calculated the tap size required?" - Is this really important and useful. | The categories were based on Westminster and Parker programs, and reviewed by Technical Advisory Group for general consistency with relevant existing programs. |



DRAFT 1051 REPORTING GUIDELINES

Section: Foundational Data II

| Data Category | Author | Comments | Response |
|-----------------------------|------------------------|--|--|
| Meter Age | Greeley | Greeley at this time has no way of providing the ages of meters. | Removed meter age section. Meter testing and replacement program information is available from Water Conservation/Efficiency Plans updated every 7 years. Added questions: a) Do you adhere to the AWWA testing policy standard for large meters (2 inch or above) ? b) What is the planned age of replacement for small meters (1 inch or less)? (replace question 20). |
| System Wide Audit | Aurora Water | Reporting the exact number of meters in each age category should be changed to a general description of the provider's testing program. | |
| | | Suggest removing the meter age information entirely as it may not be readily available for many entities. Just because a meter is older than 10 years does not make it inaccurate. Some manufacturers warrant meter accuracy for 15 years. A testing and/or replacement program is more important than a meter's age. Therefore, the questions about meter testing could be expanded to include additional details about meter testing programs. | |
| Meter Age | Aurora Water | | |
| Meter Age | Ute Water | Age of meters by category - that is none of the State's business. | |
| Meter Age | Arvada | Meter age by customer category seems excessive and unnecessary. | |
| Water Loss Characterization | Colo Springs Utilities | Eliminate "Meter Age" question. It provides no utility and can be misleading is it presumed that a younger meter is a better meter. | |
| | | Loveland does not track the age of the meters, all meters are tested regularly and repaired or replaced if they do not meet accuracy standards. Meters are often rebuilt rather than replaced. Loveland is more concerned about the volume through the meter and the field conditions of the meters than their age. ... Please make reporting the meter age optional | |
| Meter Age | Loveland | | Changed question to ask if entity uses M36 or what other method was used; keep categories in column 5 of AWWA M36 Table 2-1; entities should fill out data as available. |
| Meter Age | GW1 | Ask for "effective age" of meter. | |
| Water Loss Characterization | Aquacraft (DeOreo) | Add an estimate of meter accuracy for both master meter and customer meters. | Meter testing and replacement program information is available from Water Conservation/Efficiency Plans updated every 7 years. Added questions: a) Do you adhere to the AWWA testing policy standard for large meters (2 inch or above) ? b) What is the planned age of replacement for small meters (1 inch or less)? (replace question 20). |
| Meter Testing | GW1 | Ask for % of meters tested in all categories, not just largest customers. | Changed question to ask if entity uses M36 or what other method was used; keep categories in column 5 of AWWA M36 Table 2-1; entities should fill out data as available. |
| System Wide Audit | GW1 | Expand the question to ask what the audit included (check box list of M36, e.g. meter testing, master meter testing, characterization of unbilled water, etc.) | Added question. |
| Water Loss Characterization | Colo Springs Utilities | Replace "Do you have a meter testing program?" with "Do you use AWWA methodology for meter testing?" | Added question. |
| Water Loss Characterization | Colo Springs Utilities | Replace "What % of total meters do you replace annually?" with "How often do you plan to replace meters 1" or smaller?" | Removed meter age section. Meter testing and replacement program information provides perspective on the system losses and future water demand forecasts. |
| Water Loss Characterization | LAPLAWD | The water loss characterization does not appear to be requested in HB10-1051 and should be considered for deletion. | |



DRAFT 1051 REPORTING GUIDELINES

Section: Foundational Data III

| Data Category | Author | Comments | Response |
|---------------------------|--------|--|---|
| Integrated Water Planning | GWJ | Expand the question to ask the types of planning integrated with the Water Conservation Plan (e.g. Drought Plan, Water Supply Master Plan, Water Resources Plan, etc.) | Removed question, information can be obtained from Water Conservation/Efficiency Plans. |



DRAFT 1051 REPORTING GUIDELINES

Targeted Tech Assistance & Incentives

| Data Category | Author | Comments | Response |
|------------------------------|------------------------|--|---|
| Terminology | GWI | Suggestions for improving consistent terminology | |
| Incentives | GWI | Need to include "giveaways", "rebates" and "retrofits" for various fixtures/appliances; expand to include home audit kits, toilet flappers, water use meters, etc; add audits with retrofits for projects tracking water use | Online reporting tool can expand categories and ask if it is rebate, retrofit, or giveaway. Added question for breakdown by giveaways vs rebates vs retrofits. |
| Tech Assistance & Ordinances | GWI | Add Car Washers/Vehicle Wash Facilities | Change made. |
| General | Colo Springs Utilities | For all measures, it is just as important to capture the number of incentives, retrofits, etc. prior to the reporting period as it is to capture the start and end date. It is by no means a perfect measure of penetration, but it may be the best we have for the vast majority of providers. | Previously discussed at July 2011 Technical Advisory Group meeting. Any available estimate of actual numbers prior to the first reporting period may be provided in metadata but was identified as being too cumbersome for many entities, rather dates were determined to be a more readily available piece of information. |
| General | Colo Springs Utilities | The tools should be designed to allow the provider to select from a wide variety of targets (general, low income, large customers, etc.), and customer classes. | Comment noted for online reporting tool enhancements. |
| General | Colo Springs Utilities | The tools should be flexible so that over time, fixtures and program types that become passé are no longer including to not present the illusion that providers are somehow doing less than they used to. | Comment noted for online reporting tool enhancements. |
| General | Broomfield | Despite the length of the reporting tool template, it does not include any quantification or reporting of estimated annual water savings, either as an aggregate or by specific conservation programs. Instead, it only asks to indicate which water conservation programs apply. Annual water use and the savings attributed to water conservation seem to be the two most important pieces of information required for statewide planning. | The State used a public participation process to develop the Guidelines, with stakeholders from a broad geographic and demographic diversity to develop the Guidelines, including small, medium and large sized utilities, NGOs and water conservation professionals. Reporting requirements were driven by the legislation's focus on water use and conservation data to be used for statewide water supply planning. The water conservation related reporting was driven by input from the Technical Advisory Group and the recent SWSI update and SWSI Conservation Levels Analysis, which are indicative of how the State will use the data for future statewide planning purposes. |



DRAFT 1051 REPORTING GUIDELINES

Section: **Education**

| Data Category | Author | Comments | Response |
|-------------------|------------------------|--|--|
| One-Way Education | Aurora Water | Some clarification on the number of customers reached should be provided in the reporting tool: number of bills stuffed, mass mailers mailed, or door hangers hung may be more appropriate to collect than the number of customers reached. Also the number of times in a reporting period that each is used could be collected. | Changed from number of customers to number of pieces of literature, website visits, attendees, etc. during reporting period. |
| One-Way Education | Colo Springs Utilities | Number of occurrences (times bill stuffers were used) is a better measure than number of customers reached for most, but not all, one-way educational programs. Provide the option to report either or both. | |



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Section: **Costs**

| Data Category | Author | Comments | Response |
|---------------|--------|---|--|
| Costs | GWI | Need to link the measures and program identified with a question on funding (especially with regard to CIPs, as well as other measures and programs). Could be take care of with creation of online reporting tool. | Modified the reporting categories to the foundational, monitoring and verification, education, ordinances, and targeted technical assistance and incentives and refer to the SWSI Levels II documentation for definitions. |



DRAFT 1051 REPORTING GUIDELINES

Section: General Comments

| Data Category | Author | Comments | Response |
|-----------------------|------------------------|--|--|
| Potable Treated Water | Aquacraft (DeOreo) | Form currently allows data reported in either Millions of Gallons or AF; standardize on a single unit of measure (preferably MG). | The draft reporting tool template will be enhanced with the online reporting tool, including facilitating data entry and instructions; comments noted. |
| Key Data Summary | Aquacraft (DeOreo) | Summarize the key data in a 1 page annual summary sheet. | Comment noted for online reporting tool enhancements. |
| General | Colo Springs Utilities | Number and letter each section of the reporting tools. | Comment noted for online reporting tool enhancements. |
| General | Colo Springs Utilities | Create an instructions guide corresponding to each numbered and lettered section. | Comment noted for online reporting tool enhancements. |
| General | Colo Springs Utilities | Hyperlink all reporting categories to the appropriate definition. | Comment noted for online reporting tool enhancements. |
| General | Colo Springs Utilities | Allow provider to define reporting units up front. Not all providers have data in same units and conversion should not be necessary. | Comment noted for online reporting tool enhancements. |



DRAFT 1051 REPORTING GUIDELINES

Section: Appendix B Definitions

| Data Category | Author | Comments | Response |
|-------------------|-------------------------------|--|---|
| Return Flows | NWCCOG/QQ | Recommended new definition: Volume of water returning from all diversions and uses to source waters such that a downstream user can put it to beneficial use, or volume of water which could have been discharged as above but is available for re-use by the reporting entity. | New definition added, with modifications from the Technical Advisory Group (using CFWE Citizen's Guide definition). |
| Distributed Water | CRWCD | Editorial recommendations. | Change made. |
| Rate Structures | Greeley | Editorial recommendations. | Change made. |
| Education | Aquacraft (Mayer) | Define One-Way versus Two-Way Education | Added definitions. |
| Rate Structures | Red Oak Consulting (Corssmit) | <p>The comments on the respective effects of different rate structures on water conservation are insufficiently qualified.</p> <p>1. For example, it is stated that declining rate blocks do not promote conservation. This is only true when compared with the conservation achieved with another rate design with lesser conservation impact, such as flat rates. Even in a declining block rate structure there is an incentive to conserve water as long as the customer is charged for additional use.</p> <p>2. The statements in section D seem to advise utilities to adopt rate structures with increasing rate blocks but without any caution that these rates should maintain a strong cost nexus within each rate block. By doing so CWCB might expose itself to possible legal consequences. For reference see the latest water industry guidebook on these matters. Water Rates, Fees, and the Legal Environment AWWA second edition, 2010.</p> <p>My presentation to Water Wise last Friday provides further explanations on the legal aspects of water conservation rates.</p> | Updated definitions using AWWA M52 and Forecasting Urban Water Demands. Removed text related to rate structures encouraging conservation. |
| Customer Category | Aurora Water | "Monthly metered" should be omitted from the first sentence as not all water is metered monthly or metered at all. | Change made. |
| Customer Category | Aurora Water | Many providers will have exceptions to the customer categories as defined. Emphasis should be placed on the fact that these Guidelines are not suggesting people change customer categories, but that exceptions can be described in metadata. | Additional clarification provided. |
| Customer Category | Aurora Water | Add to the multi-family category the following "(note that some providers may include multi-family irrigation under irrigation only accounts)". | The goal is to capture residential outdoor-only in the residential category; please use discretion to address exceptions and explain with metadata. |



DRAFT 1051 REPORTING GUIDELINES

Section: Appendix B Definitions

| Data Category | Author | Comments | Response |
|-------------------------------|------------------------|---|--|
| Customer Category | Aurora Water | The Irrigation Only category states that residential taps for outdoor-only use should be reported under the appropriate residential category. This could be onerous for some utilities. Change "should" to "can" and request metadata to explain that it is included in the Irrigation Only account. | The goal is to capture residential outdoor-only in the residential category; please use discretion to address exceptions and explain with metadata. |
| Number of Service Connections | Aurora Water | Number of Inactive Service Connections - Please clarify how this calculation should be performed. | Definition updated per October 31, 2011 Technical Advisory Group conference call. |
| General | Arvada | Lack of descriptions and definitions - Appendix B appears to end about half way through the list of requests. Will this be expanded? | Only terms anticipated to need clarity were included (see paragraph at the top of the definitions document for explanation). |
| Distributed Water | Colo Springs Utilities | Broaden this definition to encompass stand alone systems that are under the umbrella of a central entity, e.g. a system of independent wells under the same augmentation plan or a system with some instances of stand-alone infrastructure. If an entity is responsible for supplying the water physically and/or legally, then it should be reported regardless of the infrastructure used to get it there. | Definition of distributed water and "wholesale" updated per October 31, 2011 Technical Advisory Group conference call. |
| Customer Categories | Colo Springs Utilities | Add a category for wholesale water customers and define what should be included in this category. | |
| Customer Categories | Colo Springs Utilities | Clarify under definition for "Utility/Municipal Facility" whether this use should be reported as its own class if not all Utility/Municipal use is easily classified as such, i.e. if only a portion of municipal accounts can easily be separated from the CII class under which they were billed, are they all better left under CII? | The categories identified are applicable to the majority of entities; please use discretion to address exceptions and explain with metadata. |
| Customer Categories | Colo Springs Utilities | Clarify in this definition that providers can report data in whatever classifications they already have and ensure that the reporting tool allows for this. | Definitions state: "Based on existing water conservation plans and input from the advisory committees, the following customer categories are relevant for the majority of reporting entities. These definitions are not suggesting entities modify customer categories, rather any; exceptions shall be described as metadata by the reporting entities under the reporting tool." |
| Normalizing Data | Colo Springs Utilities | Population served - Add military as a transient population category. | Change made. |



DRAFT 1051 REPORTING GUIDELINES

Section: Appendix B Definitions

| Data Category | Author | Comments | Response |
|---------------------|------------------------|--|---|
| Normalizing Data | Colo Springs Utilities | Elaborate on or clarify the definition of an active service connection (is it active meters, service agreements (may have multiple meters), premises (may have multiple service agreements), or accounts, may have multiples of each of the above. | Discussed on October 31, 2011 Technical Advisory Group conference call, definition of "inactive" accounts enhanced. |
| Normalizing Data | Colo Springs Utilities | Clarify inactive service connections as in 4)b) (meters, SA's, premises, or accounts) | |
| Annual Audit Report | Colo Springs Utilities | All definitions a), b), c), and d) should be defined verbatim with the 2009 AWWA M36 Manual to eliminate any confusion. | Edits were made for better consistency with AWWA M36 (verbatim definitions are not available for all terms). |
| Annual Audit Report | Colo Springs Utilities | All water audit categories listed in M36 should be provided and defined according to M36 so those following M36 methodology can simply report the findings as is. | Technical Advisory Group recommended at October 26, 2011 meeting to include categories in M36 Figure 2-1 Column 5, but not further details in Column 6. |
| Rate Structures | Colo Springs Utilities | Change name to "Flat Charge" or "Flat Fee". Calling it a rate confuses it with "Uniform Rate". | Change made. |
| General | Longmont | The definition of "Normalizing Data" is not really a definition, but a list of types of data to be evaluated. What is the proposed "common unit basis" for presenting the data in a normalized way, or is this to be determined on a case-by-case basis? This definition needs to be revised. | Clarifying language added. |
| General | Longmont | Several of the definitions contain statements about the expected results of implementing the term being defined. For example, the definition for Conservation Oriented Tap Fee states that " . . .this structure incentivizes customers to join the system at a better level of water efficiency for a lower connection charge with the commitment of installing water efficient fixtures and landscaping during the construction process." There is also language in almost all of the Rate Structure definitions about whether or not the structures encourage conservation. These are policy or position statements that may or may not be true in any given application of a rate structure and do not belong in the definitions. We suggest that they be deleted. | Updated definitions using AWWA M52 and Forecasting Urban Water Demands. Removed text related to rate structures encouraging conservation. |



DRAFT 1051 REPORTING GUIDELINES

Section: Guidelines Document

| Data Category | Author | Comments | Response |
|--|---------------------------|--|---|
| General | CRWCD | Editorial recommendations. | |
| General | Aquacraft (Mayer) | Editorial recommendations. | |
| Incentives, Technical Assistance, and Technological Efficiencies | Aquacraft (Mayer) | Indicated this section is not clear | Comment addressed. |
| Page 7, Aii RE Integrated Systems | Platte Canyon | A covered entity responsible for administering a water conservation master plan approved by the Colorado Water Conservation Board's Office of Water Conservation and Drought Planning in compliance with Section 37-60-126, CRS (Integrated System Water Conservation Plan) shall be responsible for reporting information for all covered entity members of the Integrated System as specified under Reporting Process, Paragraph A. iii of these Guidelines. No covered entity member of an Integrated System Water Conservation master plan shall be required to individually report information as specified in these Guidelines unless such covered entity chooses in writing to report said information separately from the covered entity responsible for administering the water conservation master plan. | Technical Advisory Group agreed to language provided by Denver Water on October 31, 2011 conference call. |
| General | Westminster | The information gained from our recent study on water use and single family demand reductions is proving critical in accurately projecting the City's future water use and conservation options. The CWCB might find value in providing assistance so that providers can learn more about their customers and better address long term needs. The City understands the value of data and potential uses, but stresses that the level of data needs differs from local to statewide planning efforts. | See page 2 of the Guidelines: "Additionally, data reporting will help the CWCB in developing more targeted technical outreach efforts aimed at providing better local water conservation planning tools to covered entities throughout Colorado." |
| Page 4, 3)a) | Colo Springs Utilities | Change "Number of each type ..." to "Percentage of each type ..." | |
| Page 4-5, 3)d) | Colo Springs Utilities | Provide an option to attach one's current tariff for each class. | Added an option to the reporting tool template and definitions. |
| Page 5, 3)f)i) | Colo Springs Utilities | Eliminate meter age. This is too difficult to get for just about everyone and has limited, if any, value. | |



DRAFT 1051 REPORTING GUIDELINES

Section: Guidelines Document

| Data Category | Author | Comments | Response |
|--|------------------------|--|--|
| Page 5, 3)f)v,vi) | Colo Springs Utilities | Allow providers to describe leak detection and pipe replacement protocols rather than list % of system inspected or % of pipes replaced as these results may be misleading. | |
| General | Longmont | Mixed use is becoming a more common type of development and will probably be even more prevalent in the future. We have found the water use patterns to be different from single or multi-family development. Mixed use is not in the customer category definitions and it should be included in the reporting requirements. | Ideally the domestic part of mixed use would be reported under multi-family (with normalizing data) and the commercial portion would be reported separately under CII; if disaggregated data is not available, please report under "other" category and explain with metadata. |
| General | Longmont | Water usage patterns in some service areas are significantly affected by the mix of year-round and transient population. Significant daytime worker influx (or exit) can also have major impacts on water demand patterns. Without this information, water use patterns can be difficult to compare among water providers. As such, unless the CWCB can fund acquisition of the applicable population data we suggest that this information not be collected or used for metrics purposes. | One of the purposes of the data collection is to learn about effects of such issues, and how to improve interpretation of water use and where better information may be needed. Recognizing the challenge with estimating transient population, the Guidelines recommend an estimate if available, along with metadata describing the source of information. |
| General | Loveland | Some of the information is already reported to the State as required in Water Court Decrees. | Through the forthcoming BNDSS, the State will strive to reduce redundancy in data reporting requirements under various initiatives. |
| Comments Regarding Intent of the Data and How Data Can Be Used: | | | |
| Page 2, end 1st P | Aurora Water | Add "Therefore, this data alone will not provide useful comparisons between utilities, but will greatly improve the data available for statewide water supply planning." | |
| Page 2, bold note | Aurora Water | Add "... should not be used to compare utilities or represent planning prepared by local entities ..." | |
| Page 2, 2nd full P & last sentence under "NOTE:" | Colo Springs Utilities | Should both be amended to state that "The statewide and basinwide planning efforts <i>shall not and will not replace</i> ..." | |
| Page 2, 1st or 2nd full P | Colo Springs Utilities | A statement needs to be added which specifically states that these data are to be used for statewide water supply planning purposes as put forth in this document and are not intended to be used to compare water providers in any way. | |



DRAFT 1051 REPORTING GUIDELINES

Section: Guidelines Document

| Data Category | Author | Comments | Response |
|------------------------------------|------------------------|--|--|
| Page 2, 1st sentence under "NOTE:" | Colo Springs Utilities | "NOTE:" needs to be amended to state that these data will only be made directly available to the public in an aggregated form in accordance with the SWSI planning process. | Technical Advisory Group agreed upon updated language regarding the Goals and Purpose section of the Guidelines on October 31, 2011 conference call. |
| General | Greeley | "... it is stated right up front that the State won't require data to be collected or savings to be calculated in a standardized manner. ... data collected will not be statistically sound. ... it is important that the State and other organization(s) do not use the data to compare water providers to one another." | |
| General | Thornton | Thornton is concerned about the ultimate use, dissemination and integrity of this data. Specifically, direct comparisons of data between water providers can easily be misinterpreted by the public, medial regulatory agencies and courts. Thornton echoes the comments of the Colorado Water Wise Council in urging the state to use caution in how it saves and disseminates data collected through HB-1051. It is critical that the relevancy and context of the data be preserved to prevent unintended uses or misuse of the data. | |
| General | Ft. Collins | Although the data collection will be valuable to track an individual entity's progress over time, Fort Collins Utilities is concerned about the data being compared between utilities. A direct comparison cannot fairly be made and is not a reliable measure of efficiency. ... We urge the State to be cautious in how they interpret and report each entity's data. | |



DRAFT 1051 REPORTING GUIDELINES

Section: Guidelines Document

| Data Category | Author | Comments | Response |
|---|------------------------|--|--|
| Broader Policy-Related Comments: | | | |
| General | Ute Water | When will the State or CWCB fund a position at each Utility to collect and report all the stupid data that these regulations require? | <p>In several locations, the statute states that the data is to be reported to the CWCB. Language specifying the intent for statewide planning purposes and not replacing local level planning is provided in several places of the Guidelines, specifically the Goals and Purposes section.</p> <p>The State used a public participation process with stakeholders from a broad geographic and demographic diversity to develop the Guidelines, including small, medium and large sized utilities, NGOs and water conservation professionals. Reporting requirements were driven by the legislation's focus on water use and conservation data to be used for statewide water supply planning, input from the advisory groups, and the recent SWSI 2010 Updated and SWSI Levels Analyses. Data that would otherwise be available through Water Conservation Plans (currently required by statute to be submitted to the State every 7 years) was strongly considered, and the data included in these Guidelines were specifically identified as being necessary or particularly useful on an annual basis.</p> <p>Data reporting will also help the CWCB in supporting covered entities seeking to develop and update water conservation and drought mitigation and response plans and to develop more targeted technical outreach efforts aimed at providing better local water conservation planning tools to covered entities throughout Colorado. The Water Efficiency Grant Program fund, created in 2004, provides funds to assist entities in implementing water conservation planning activities.</p> <p>Most participating covered entities indicated that the majority of the data is readily available and the reporting requirements are not overly onerous. The State is developing a reporting tool to facilitate the data reporting process.</p> |
| General | Ute Water | It is clear that these reporting requirements were written by Staff that has never run a water district. CWCB should start over and try for meaningful data and not a wish list from people who know nothing about running a water utility. | |
| General | Westminster | ...the City is concerned with the level of data requested and the intended scope of its use ... The resulting guidelines appear to be more far-reaching than what the original language described. Neither Westminster, nor do we believe the legislature, anticipated the full scope of data that would be requested. The level of detail required is very specific and in many ways already included in conservation plans currently required by the State ... We believe that a simpler approach might be to report a higher level of information. | |
| General | Westminster | Additionally, the City is concerned about the final use of the data provided to the CWCB, especially as it might relate to mandates or the removal of decision making ability at a local level. While those who have been involved in this discussion have an understanding of the limits and definition of the reported data, others may use this information to enforce or create regulations or laws without fully understanding the implications and consequences. The data must always be seen in context with the provider's long term goals, water portfolio, and the needs of the community. Providing detailed data without considering the overall context can invite comparisons without the benefit of the complete picture. To meet the needs of all parties, Westminster recommends an aggregation of the data into basin levels by a third party prior to reporting to CWCB, thus providing the data required for statewide water supply planning while limiting the unanticipated use. | |
| Page 3, general comment | Colo Springs Utilities | Colorado Springs Utilities believes, given that these data are to be used for statewide planning purposes and will thus be aggregated to county and basin levels, that too many data points are being requested many of which may be rendered meaningless or worse when aggregated at these levels. The effort to collect these data will be onerous for water providers and we suggest eliminating data which do not clearly represent value at county and basin levels. We will note data which could be eliminated under comments for Appendix C. | |
| General | Arvada | It would be helpful to understand the purpose/usefulness of the data that is being collected. Perhaps something about each section defining its relevance to furthering water conservation. | |



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Section: Guidelines Document

| Data Category | Author | Comments | Response |
|---------------|------------|---|------------------------|
| General | Longmont | What is the intent of collecting the data? How will it be used? Based on supporting documents that accompanied HB-1051, it appears that the data are intended to direct CWCB's conservation activities and programs. Is this the case? If so, what outcomes are expected that would not be possible without a mandated reporting requirement? | |
| General | Longmont | The CWCB's implementation of this Bill appears to contradict the Governor's executive order D 2011-005 signed on January 20, 2011, that provides for restrictions to and waivers of unfunded state mandates to local governments. A copy of that order is attached. If the CWCB moves forward with implementing the provisions of HB 10-1051, it needs to provide a rationale for why D 2011-005 does not apply or establish a funding mechanism to reimburse local water providers for the cost of complying with HB 10-1051. | |
| General | Longmont | The reporting requirement in HB-1051 is for an annual report that summarizes annual information. Why does the proposed reporting requirement ask for monthly data, such as number of taps per month? What State level policy decisions or water administration are contemplated that need this level of detail? We feel that a summary of data for the year would be adequate for CWCB's purpose. | See previous response. |
| General | Longmont | Not all entities have funding available or dedicated staff for water conservation programs, so some level of flexibility needs to be built into the reporting requirements to recognize those limitations. We also feel that a CWCB sponsored funding program needs to be established to reimburse the direct costs for preparation of these reports, especially for smaller communities. | |
| General | Broomfield | Section 4.5(a)(II) of the Act directs the CWCB to establish Guidelines that include a clear description of the categories of customers, uses, and measurements. However, some of the proposed reporting requirements are too detailed for statewide planning purposes. For example, the requirement to provide the number of active accounts and housing units in a consistent format is appropriate; however, reporting this information for each month of the year is unnecessary. An annual summary should be adequate, even for communities that are experiencing relatively high growth rates, since the data will not significantly change from month to month. | |



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|---------------|------------|--|------------------------|
| General | Broomfield | Section 4.5(a) of the Act states that covered entities shall report water use and conservation data, to be used for statewide water planning. However, most of the information listed in the draft Guidelines and reporting tool template (which is included as Appendix C to the draft Guidelines) focuses on policies and the implementation of those policies, rather than water use and conservation data. Of the 14 pages that make up the reporting template, only 4 to 5 pages cover water use data. The remainder is related to utility billing structure and rates, license/connection fees, point of sale controls, water loss characterization/water audits, ordinances, staffing levels, and operating expenses. | |
| General | Broomfield | Due to the repeated use of the word "shall," the draft document reads more like a regulation than a guideline. The reporting sheets (Appendix C) need to clearly differentiate between data that is required versus the information that is desired. Broomfield is supportive of providing data and information relating to the categories of customers, uses, and measurements as stated in Section 4.5(a)(II) of the Act; however, providing operating data or policy-related information was not cited as a requirement in the enacting legislation. | See previous response. |
| General | Broomfield | Recommend supporting limiting the data categories to the following items: General entity information; Types of distribution systems (i.e. raw, potable, reuse, etc.); Monthly water use by customer class; Total, year-end, connections for each customer class; How customer uses are measured/metered; and Annual savings from water conservation. All other remaining Data Categories included in the Draft Guidelines and in Appendix C should be optional or voluntary. | |
| General | Thornton | These reporting requirements place an unfunded burden on Thornton and other water providers. Thornton already collects and analyzes conservation data to evaluate its own programs; however, the Guidelines place additional data collocation and reporting demands on Thornton's conservation program. The resources that will be used to meet these reporting requirements will be diverted from Thornton's existing and planned conservation initiatives. | |



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| General | Loveland | It appears that that the reporting requirements will place a significant burden on water providers. We respectfully request that the required reporting formats be kept as direct, simple and to the point as possible, to minimize the efforts required. | |
| General | LAPLAWD | The primary motivation for HB10-1051 was to monitor water use per capita in the state to assess whether and to what amount water conservation may reduce water demand. With that in mind, there needs to be an explanation of how the data will be interpreted and used to assess statewide water use. Who is going to interpret the data that is provided? What variables are they going to consider when interpreting the data? How can you compare a system that uses a large portion of its average daily demand for outdoor use to a system that uses very little of its average daily demand for outdoor use? How do you compare a town with no or little livestock use to a rural district that may have a significant portion of its use for livestock watering? Will water users have an opportunity to "ground truth" the data? | |
| General | LAPLAWD | Much of the requested information seems to be geared towards developing a case for regulations that will dictate the means and methods of conservation. This can be very dangerous without taking into account the many differences that exist between systems. | See previous response. |
| General | LAPLAWD | In summary, the guidelines are extensive and burdensome, especially to smaller entities and it is not clear whether the proposed guidelines will be effective in meeting the goals of HB10-1051. We suggest they be significantly condensed and streamlined. | |