2016 Best Practices Framework Guidance

Prepared for: International Bottled Water Association

Introduction

In July 2016, the International Bottled Water Association (IBWA) distributed a water stewardship and best practices survey to all members with the intent of developing a best practices framework. The survey participants provided examples of best practices in addition to identifying other common water stewardship opportunities at a facility and community level.

To develop the best practices framework, IBWA combined information from three resources: consolidated best practices from the member surveys, key points from Ceres Aqua Gauge™ framework[1], and common best practice examples from beverage industry subject matter experts.

The best practices framework is designed for all IBWA members to use, regardless of production size, location, and/or development stage of their water stewardship program (e.g., some who may be getting started in this space, while others may have more formal practices in place). To broaden application, key aspects of each best practice were divided into three approach categories: *initial, advanced, and leading*. Categories are designed as "checklists" for users to evaluate their current state of operations and identify opportunities for implementation.

These practices do not need to be completed in sequence – e.g., a user does not need to fulfill all aspects of the Initial category before moving on to Advanced. Members are encouraged to work through the categories with current operations in mind, and to select practices that are a best fit for their operations today and in the future.

The Best Practices Framework is presented in five topic categories, presented on the next page.

(1) Ceres Aqua Gauge: *A Framework for 21st Century Water Risk Management*. https://www.ceres.org/issues/water/corporate-water-stewardship/aqua-gauge/aqua-gauge

Best Practice Framework

BEST PRACTICES

- Equipment Check/Process Controls
- Meter Use/Water Mapping
- Water Recycling/Reuse
- Training/Education
- Supply Monitoring/Management

Using the Best Practices Framework

The best practices framework is intended for IBWA members to reference when evaluating current water management practices at each facility. This tool will help members identify currently used best practices, opportunities for improvement, and offer a glimpse into water stewardship activities throughout the bottled water industry. To most effectively use the framework, the following guidelines are recommended:

1. To get started, consider the broad question(s) at the top of each best practices chart.

2. Read through each "droplet" in all categories (*initial, leading, and advanced*) of the best practice topic.

3. After evaluating the options in each category, check mark all aspects the facility currently practices under each category.

4. Next, identify opportunities for additional best practice implementation.

5. Evaluate next steps for implementing the best practice at the facility using available resources to redefine or expand water management practices (e.g., collaboration with IBWA members, use of water tools, outreach to vendors, etc.).

Equipment Checks/Process Controls

Begin by asking…

Does the facility have a process in place for tracking equipment use and efficiency?
Does the facility have written SOPs that promote/improve water use efficiency?

Initial Steps — EQUIPMENT CHECKS AND IDENTIFY OPPORTUNITIES		Advanced — PROCESS IMPROVEMENT AND WATER REDUCTION MEASURES TAKEN		Leading Practice — EQUIPMENT EFFICIENCY AND KPI TARGETS	
○	**1.** Equipment checks monthly	○	**1.** Equipment checks weekly	○	**1.** Equipment checks daily
○	**2.** Minimize changeovers	○	**2.** Filler flush target control	○	**2.** Monitor bottle fill/overflow
○	**3**. Efficient cleaning cycles	○	**3.** Leak repair process	○	**3.** Test equipment function (proactive leak testing)
○	**4.** Identify opportunity to improve efficiency	○	**4.** Implement process efficiency improvements	○	**4.** High-efficiency water fixtures
○	**5.** Standard operating procedures in place	○	**5.** Standard procedures in place and trained on	○	**5.** Standard procedures in place and trained on, improved
○	**6.** Continuous Improvement team	○	**6.** Continuous improvement goals	○	**6.** Water KPI measurements
		○	**7.** Monthly CIP Validation	○	**7.** Monthly CIP Validation
				○	**8.** Packaging equipment maintenance

Metering/Water Mapping

Begin by asking…

Has the facility mapped water use for all processes "in and out" of the facility?

Leading Practice
DETAILED WATER MAPPING; IDENTIFY OPPORTUNITIES TO REDUCE WATER USE

⬮	**1.** Automated metering incoming and major processes
⬮	**2.** Indirect water/sewer metering
⬮	**3.** Daily readings and evaluation for trends
⬮	**4.** Detailed factory water mapping (in & out)
⬮	**5.** Identify opportunities within operations
⬮	**6.** Water use data assurance
⬮	**7.** Regular audits for inefficiencies
⬮	**8.** Peer/community benchmarking

Advanced
REVIEW AND AUDIT WATER USE; MAP PROCESSES

⬮	**1.** Automated metering incoming and select processes
⬮	**2.** Indirect water/sewer metering
⬮	**3.** Weekly data readings and evaluation for trends
⬮	**4.** Water mapping for most processes
⬮	**5.** Occasional audits for inefficiencies

Initial Steps
RECORD INCOMING WATER USE

⬮	**1.** Direct use metering of incoming water only
⬮	**2.** Monthly readings recorded
⬮	**3**. Monitoring of rinse volumes
⬮	**4.** Basic water mapping into the facility

Water Recycling/Reuse

Begin by asking...

Does the facility consider water reuse opportunities at all operational levels?

Leading Practice
EVALUATE AND IMPROVE RECYCLING PROCESS

	1. Track and monitor wastewater recycling
	2. Utilize reverse osmosis
	3. Water recycling and reuse for cooling towers
	4. Peer/community benchmarking

Advanced
IMPLEMENT REUSE PROJECT

	1. Implement wastewater reuse project
	2. Utilize reverse osmosis
	3. Water recycling and reuse for cooling towers

Initial Steps
IDENTIFY REUSE OPPORTUNITIES

	1. Investigate waste water use for internal operations
	2. Wash water recycling
	3. Wastewater streams put through reverse osmosis

Training/Education

Begin by asking...

Are water-efficiency topics a regular part of employee meetings?

Initial Steps		Advanced		Leading Practice	
EDUCATE EMPLOYEES		**ENGAGE EMPLOYEES AND CUSTOMERS**		**INCENTIVIZE EMPLOYEES**	
	1. Educate employees on water issues		**1.** Program to engage and educate employees on water issues		**1.** Program to engage and educate employees on water issues
			2. Daily discussions (planning/logistics)		**2.** Provide incentives to reduce personal water footprint
					3. Regularly communicate goals and status
					4. Engage and educate customers

Supply Monitoring/Management

Begin by asking…

Do you know where your water comes from, beyond the tap?

Initial Steps

IDENTIFY SUPPLIER SOURCE/TREATMENT

💧	**1.** Monthly supplier water treatment reports
💧	**2.** Raw quality monitoring
💧	**3**. Supplier water management evaluation

Advanced

EVALUATE SUPPLIER SOURCE/TREATMENT

💧	**1.** Identify all material suppliers and sources in water risk areas
💧	**2.** Monthly supplier water treatment reports
💧	**3.** Raw quality monitoring
💧	**4.** Assess risks associated with supplier/source water

Leading Practice

UNDERSTAND AND ACT WITH SUPPLIERS

💧	**1.** Use all data to understand current and future water risks
💧	**2.** Work with suppliers to improve their water management
💧	**3.** Work with industry associations and NGOs to improve water management

Resources: Water Tools and Reports

The **Ceres' Aqua Gauge** offers a comprehensive overview of water management practices at the corporate-level.

https://www.ceres.org/issues/water/corporate-water-stewardship/aqua-gauge

The **Beverage Industry Environmental Roundtable (BIER) True Cost of Water Toolkit** provides facilities with calculation worksheets to support estimating the true cost of water at defined "pinch points" within a typical beverage facility.
http://www.bieroundtable.com/blank-c13xc

The **GEMI Local Water Tool™(LWT)** is a free tool for companies and organizations to evaluate the external impacts, business risks, opportunities and management plans related to water use and discharge at a specific site or operation.
http://gemi.org/localwatertool/

The **Aqueduct Water Risk Atlas** is an online mapping tool that lets users combine 12 key indicators of water risk to create global overall water risk maps.
http://www.wri.org/our-work/project/aqueduct

Resources: Water Tools and Reports

The **CEO Water Mandate Corporate Water Accounting Report,** released in 2010, is a stocktaking and assessment of existing and emerging water accounting methods and tools being used in the private sector. It provides an understanding of what is most valuable to account for and assess regarding water management, what tools are available to execute such accounting, and the various strengths and weaknesses of each approach. http://ceowatermandate.org/accounting/

The **Water Risk Monetizer** estimates the value of water scarcity in monetary terms. It looks at the amount of water available at a specific location, the amount of water used/needed by a facility, additional demands on the supply of water and the impact of a facility's water use on the watershed. The result is a water risk premium that quantifies the full value of water scarcity to a facility in monetary terms. http://waterriskmonetizer.com/

Online Publically Available Case Studies, including project analyses. For example, a wide range of resources have been developed as part of Water Research Foundation research projects, to support the understanding and application of their work. Many resources are available on their website, including detailed reports, case studies, webcasts, tools, guides, and more. http://www.waterrf.org/resources/Pages/default.aspx