Point-of-Use Reverse Osmosis Systems: Specification Overview and Certification Process

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Housekeeping

- All attendees are muted to minimize background noise.
- Please type questions into the Zoom chat. We will have a dedicated time for Q&A at the end of each section and at the end of the presentation as time allows.
- This PowerPoint presentation will be posted on the partner website following the call.
- All questions, comments, and concerns are welcome!

Agenda

- Intro to WaterSense
- Why an RO Specification?
- Specification Overview
  - Scope
  - Water efficiency criteria
  - Performance criteria
  - Packaging and documentation requirements
- Certification and Labeling
- Reporting and Awards
- Other WaterSense Resources

Poll Question

Question: Please tell us who you are:

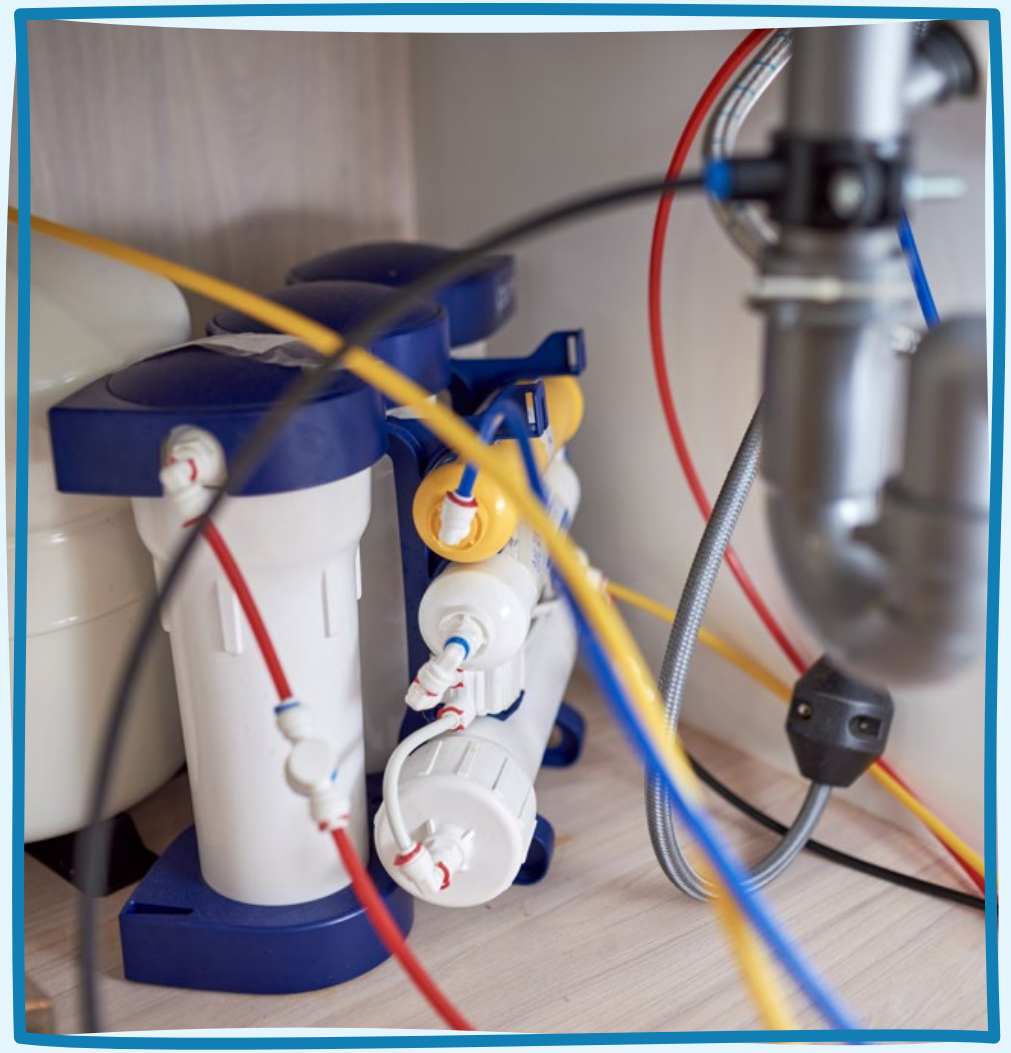
- RO System and/or RO Membrane Manufacturer
- Retailer
- Installer/Service Provider
- Water and/or Energy Utility
- Certifying Body
- Other

What Is WaterSense?

WaterSense is a voluntary partnership program launched by EPA in 2006 that provides a simple way to identify water-efficient:

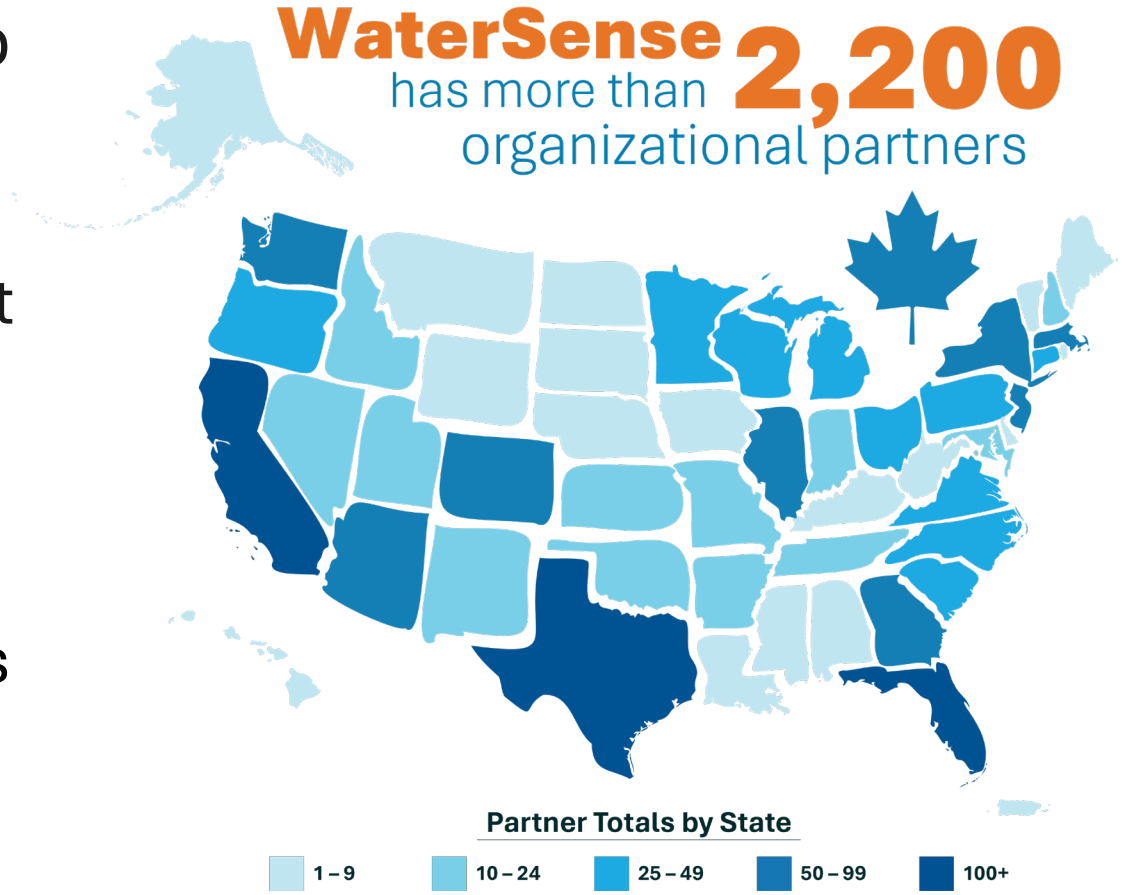
- Products
- Programs
- Homes

Products are independently certified for water efficiency **and** performance



WaterSense Partnership Program

- WaterSense is a voluntary partnership program to:
  - Share resources
  - Encourage adoption of water-efficient products and actions
- Partnering with WaterSense is free
  - Messaging and facts
  - Other consumer education resources
  - Other partners promote labeled products



Manufacturer Partnership

Partnership Background

- RO system manufacturers are eligible to partner with WaterSense
- Manufacturer partners must have a signed agreement with EPA to label products
- Component manufacturers are NOT eligible for partnership

Partnership Requirements

- Commit to having at least one labeled product within 12 months of the final specification
- Follow the *WaterSense Program Mark Guidelines*
  - Include label on product packaging, spec sheets, product web pages
- Submit annual data on WaterSense labeled products

www.epa.gov/watersense/join-watersense#Manufacturers

Why Become a Partner?

Partner Benefits

- Participate in a national water efficiency brand
- Reduce research costs, increase consumer confidence
- Promote your water-efficiency leadership
- Collaborate with utilities, builders, retailers, and others
- Access free promotional tools to post, share, or customize
- Associate with a national brand that means water, energy, and utility bill savings
- Gain recognition from EPA with a WaterSense Partner of the Year Award or case study
- Join peers in partners-only webinars and get ideas for further promotion

Expanding Influence

- Standards from ASABE, ASME, CSA, IAPMO, ICC, NSF
- ISO 31600: 2022 Water Efficiency Labelling Programmes
- States and municipalities (CA, CO, GA, NY, Chicago)
- Utility incentives for WaterSense labeled products
- Other green standards and programs

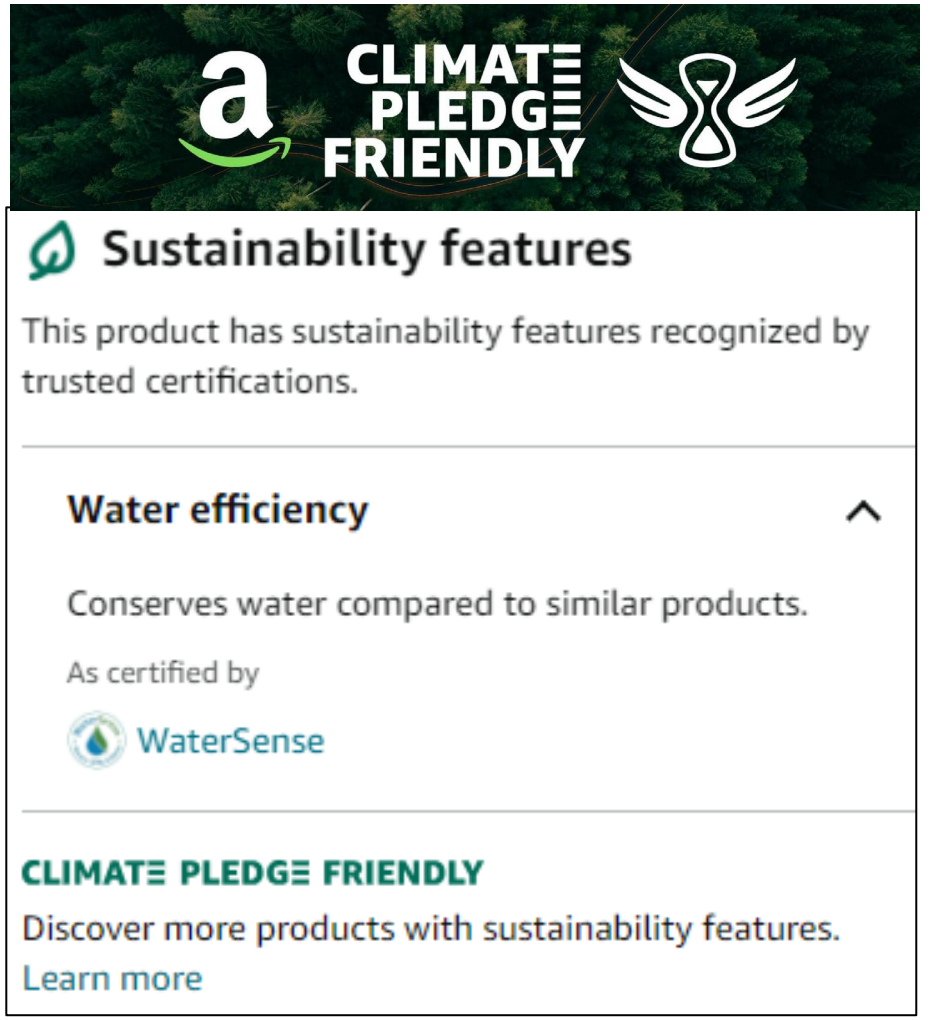
Partner Incentives and Rebates

- Many of WaterSense's utility and promotional partners incentivize WaterSense labeled products through rebates or other methods
- Currently nearly 200 offerings listed on WaterSense's Rebate Finder, although there are many more available
- Rebates for RO systems do not currently exist but may in the future as partners become more familiar with product category

www.epa.gov/watersense/rebate-finder

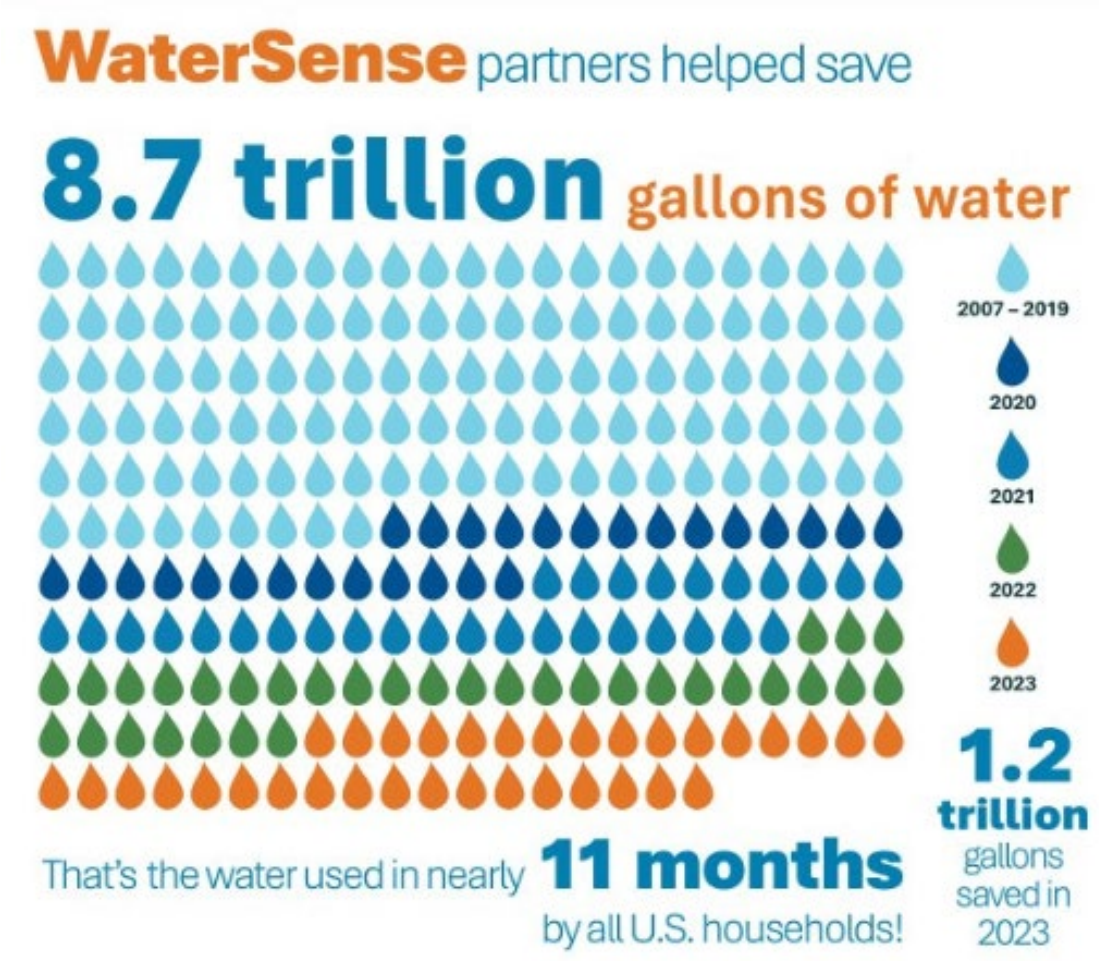
Amazon Climate Pledge Friendly

- WaterSense labeled models are eligible to be designated with Amazon's Climate Pledge Friendly badge
- Manufacturers must submit UPCs associated with a labeled product through their licensed certifying body
- EPA submits new UPCs to Amazon monthly
- Submission of UPC data is voluntary – manufacturers may want to prioritize UPCs associated with certain products (e.g., models in commerce, top sellers)



Thanks a Trillion!

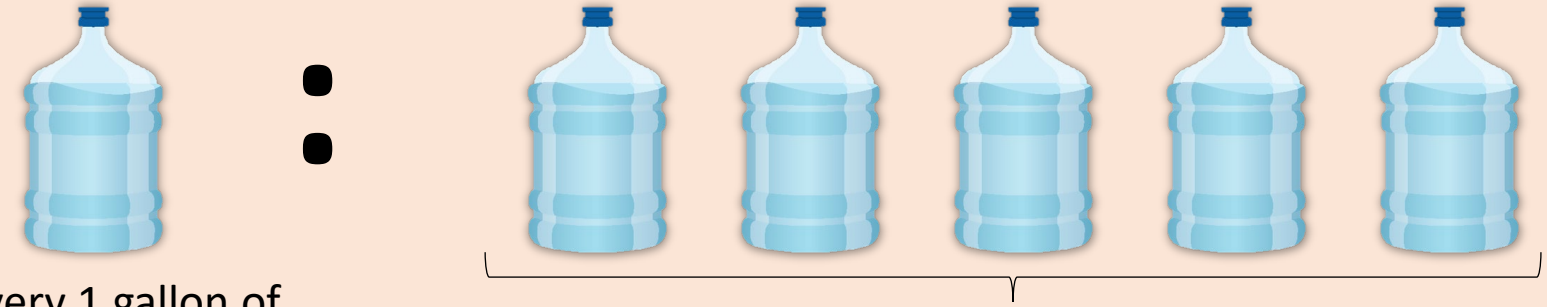
- WaterSense was launched 18 years ago
- Thanks to our partners, WaterSense has helped Americans save 8.7 trillion gallons of water between 2006 and 2023



Why An RO System Specification?

Can We Reduce Waste?

- A typical residential POU RO system will generate **five or more gallons of concentrate for every gallon of permeate** produced



- In recent years, membrane technology has improved, and some POU RO systems have been designed to operate more efficiently
- A WaterSense specification will help consumers distinguish RO systems that operate with greater water efficiency, while still providing the water treatment that consumers expect

Additional Concerns

Confusing Consumer information

- When researching products for this specification, EPA identified several systems that either:
  - Did not advertise or offer any information about water use, or
  - Advertised water efficiency rates that did not appear to be backed by NSF/ANSI 58 certification data
- Additionally, NSF/ANSI 58 does not specifically require product packaging or point-of-purchase documentation (e.g., web page listings) to include this information

Contaminants of Concern

- EPA also recognized increasing concern for emerging contaminants and other common contaminants of concern among consumers (e.g., PFAS, lead, arsenic)
- A WaterSense label can help consumers find RO systems that reduce contaminants of concern while generating less waste than a typical system

Existing Standards and Test Methodologies for POU Systems

NSF/ANSI 58-2023 *Reverse Osmosis Drinking Water Treatment Systems*

Scope/Application

POU RO drinking water treatment systems designed to be used for the reduction of specific substances that may be present in drinking water (public or private) considered to be microbiologically safe and of known quality.

- Materials
- Structural performance
- Performance, including flow control, connections, and storage capacity
- TDS reduction by 75 percent
- Verification of other chemical and mechanical reduction claims
- Verification of recovery and efficiency rating claims

ASSE 1086-2020 *Performance Requirements for Reverse Osmosis Water Efficiency—Drinking Water*

Scope/Application

Residential RO systems used to treat drinking water. RO water treatment equipment reduces total dissolved solids, heavy metals, inorganics, and organics water contaminants.

Through reference to NSF/ANSI 58, this standard is intended for residential POU systems, not POE.

- Requires compliance with NSF/ANSI 58
- Membrane life test for high-efficiency membrane systems
- Minimum system percent recovery (which impacts water efficiency) of 40 percent, tested in accordance with NSF/ANSI 58

Specification Development Process

Product Research
- Evaluates product differentiation in the marketplace, availability of performance standards/specifications, water, energy, and cost savings potential, stakeholder support

Notice of Intent
- Identifies a potential path forward and outstanding data gaps and research needs
- Invites participation and requests feedback/data from stakeholders

Draft Spec
- Invites public comment on proposed water efficiency and performance criteria for products that will be eligible for the WaterSense label

Final Spec
- Provides final water efficiency and performance criteria for eligible WaterSense labeled products
- Establishes third-party infrastructure for certifying products

We are here

Questions?

WaterSense Specification

What Is an RO System?

Reverse Osmosis (RO) System:

A system that incorporates a water treatment process that removes undesirable materials from water by using pressure to force the water molecules through a semipermeable membrane.

RO system applications:

- Drinking water treatment
- Wastewater treatment
- Desalination

The WaterSense specification focuses on RO systems intended to treat drinking water.

Types of RO Systems

Point-of-Use (POU)

A plumbed-in or faucet-mounted RO system used to treat the drinking and/or cooking water at a single tap

Aquasana

Under-sink

RKIN

Reservoir-Type Countertop

APEC Water Systems

Faucet-Mounted Countertop

Point-of-Entry (POE)

An RO system used to treat the water supply at the entry of a building or facility for drinking and for washing, flushing, or other non-consumption use

Westfair Water Systems

Whole house

Apex Water Filters

Commercial POE system

Specification Scope

- The specification applies to point-of-use RO systems as applicable under NSF/ANSI 58
- EPA defines POU RO systems as:
    - **Point-of-use reverse osmosis system:** A plumbed-in or faucet-mounted RO system used to treat the drinking and/or cooking water at a single tap or multiple taps, but not used to treat the majority of water used for washing and flushing or other non-consumption purposes at a building or facility. Any batch RO system or device not connected to the plumbing system is considered a point-of-use RO system.

Specification Scope

- Additional definitions included by reference to NSF/ANSI 330:
  - **Point-of-entry RO system:** An RO system used to treat the water supply at the entry of a building or facility for drinking and for washing, flushing, or other non-consumption use. A point-of-entry RO system has a minimum initial clean-system flow rate of not less than 15 liters per minute at 103 kilopascals pressure drop and 18 ± 5 °C water temperature (not less than 4.0 gallons per minute at 15 pounds per square inch gauge pressure drop and 65 ± 10 °F water temperature).
  - **Shut-off device:** A device that prevents reject water from being discharged from an RO system when the system is not treating water.
  - **Waste-to-product ratio:** A ratio that expresses the number of gallons of water an RO system wastes for every gallon of treated water it produces. Can be expressed as a full ratio (i.e., 2.3:1) or a single value (e.g., 2.3).

Specification Scope

This specification applies to:

- Under-sink and countertop POU systems
- Commercial and residential POU systems
- Systems that combine multiple treatment technologies

This specification <u>does not</u> apply to:

- Components (e.g., replacement filters, membranes)
- POE systems
- RO system add-on devices, accessories, or aftermarket companion products (e.g., permeate pump)

General Requirements

WaterSense Specification Criteria:

2.1 The RO system shall be certified to NSF/ANSI 58.

2.2 The RO system shall be equipped with an automatic shut-off device.

General Requirements

NSF/ANSI 58 Requirements

- NSF/ANSI 58 includes requirements related to materials, structural performance, chemical and mechanical reduction claims, and packaging and marking
- Requires minimum 75 percent TDS reduction

Automatic Shut-off Device

- Important water saving component
- Prevents reject water when the system is not treating water
- Required by ASSE 1086 and other green/water efficiency building standards (e.g., International Green Construction Code, IAPMO WE•Stand)

Questions?

Water Efficiency Criteria

NSF/ANSI 58 uses two metrics to define RO system water use:

Recovery Rating

- Percentage of the influent water to the RO membrane that becomes available to the user as RO treated water when the system is operated **without a storage tank**, or when the storage tank is bypassed and the permeate is open to the atmosphere
- All products have a recovery rating
- Does not incorporate backpressure from tank and therefore will always be higher than efficiency rating

Efficiency Rating

- Percentage of the influent water to the system that becomes available to the user as RO treated water under operating conditions that approximate typical daily usage
- Only systems equipped with an automatic shutoff valve and a pressurized or non-pressurized tank will have an efficiency rating
- Incorporates backpressure from tank and therefore will always be lower than recovery rating

Water Efficiency Criteria

For the purposes of the specification, the calculations for both efficiency rating and recovery rating can be simplified as:

$$\textit{Recovery rating and efficiency rating} = \frac{permeate\ volume}{concentrate\ volume + permeate\ volume} * 100\%$$

For example, a system (with a storage tank) that generates 2.3 gallons of concentrate for every 1 gallon of permeate produced would have an efficiency rating of 30 percent:

$$Efficiency\ rating = \frac{1\ gallon\ permeate}{2.3\ gallons\ concentrate + 1\ gallon\ permeate} * 100\% = 30\%$$

Water Efficiency Criteria

- The term “recovery rating” is confusing and can be misleading when applied to systems with a storage tank
- The NSF Joint Committee on Drinking Water Treatment Units established a task group to revise NSF/ANSI 58 to eliminate the term “recovery rating” from the standard
- In anticipation of the task group revisions, EPA chose to exclude “recovery rating” claims from the specification and instead uses “efficiency rating” to describe RO system water use.

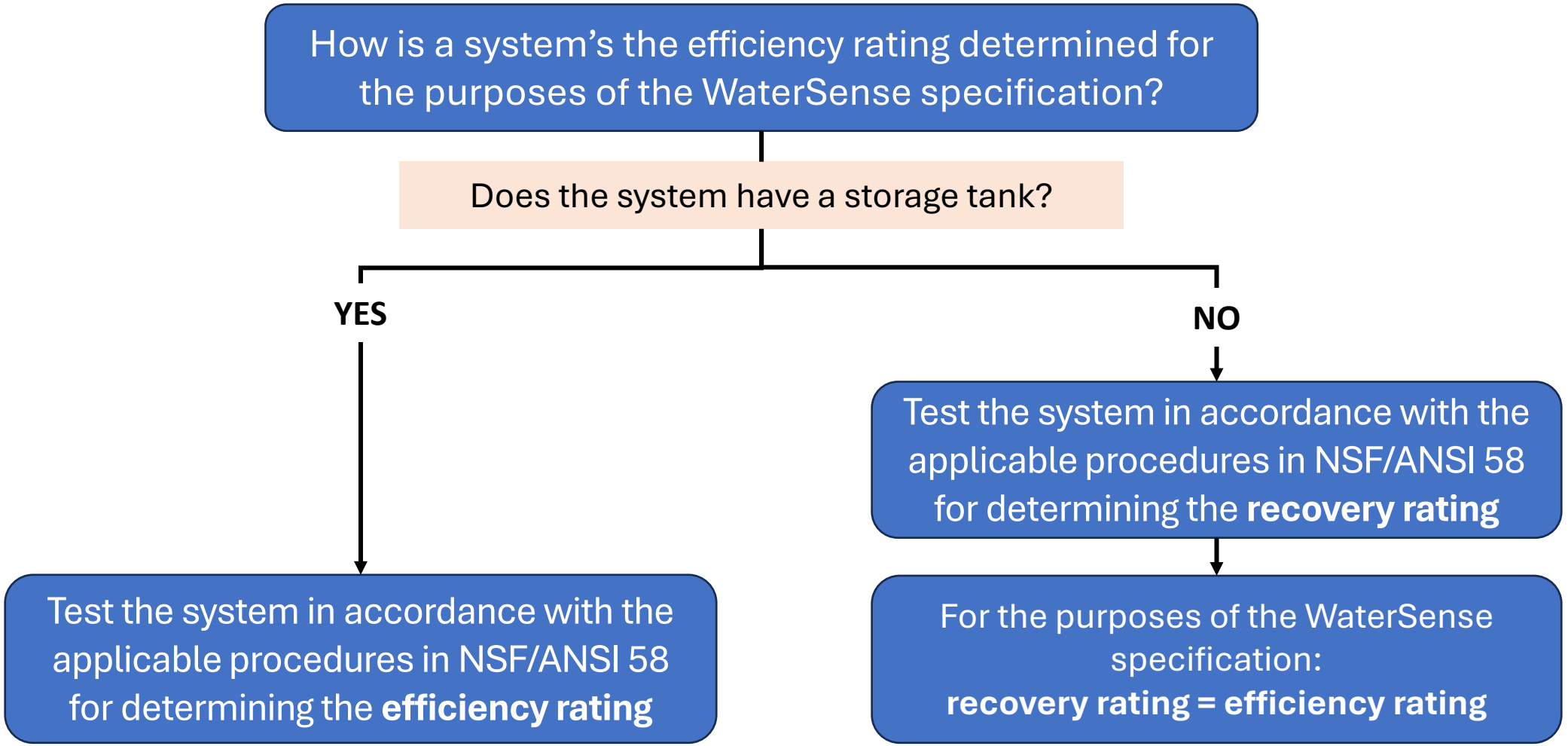
Water Efficiency Criteria

WaterSense Specification Criteria:

3.1 For systems **with** a storage tank, the efficiency rating of the RO system shall be verified in accordance with the applicable procedures in NSF/ANSI 58 for determining the **efficiency rating**, as modified by Section 3.3 of this specification (if applicable).

3.2 For systems **without** a storage tank, the recovery rating of the RO system shall be verified in accordance with the applicable procedures in NSF/ANSI 58 for determining the **recovery rating**, as modified by Section 3.3 of this specification (if applicable). **For the purposes of this specification, the recovery rating of an RO system without a storage tank shall be considered the system's efficiency rating.**

Water Efficiency Criteria



Water Efficiency Criteria

- Some systems require a periodic “flush” to prevent total dissolved solids (TDS) creep
- TDS creep occurs when an RO system sits idle and contaminants gradually “creep” into the treated side of the membrane
- Systems with an automatic flush will send water through the treatment system and directly down the drain for a specified period to flush out the TDS creep
- The NSF/ANSI 58 procedures do not currently account for the volume of water used during this flush
- The NSF task group intends to revise NSF/ANSI 58 to address this

Water Efficiency Criteria

- The specification introduces procedures in Section 3.3 that require systems with automatic flushing to be tested for efficiency rating with water use from the flushing scheme taken into consideration
- These procedures align with the proposed NSF task group revisions
- This will ensure that water lost due to flushing is captured during efficiency rating calculations
- If the system has multiple flush schemes, it must be tested for efficiency rating using the lowest and highest flush settings

Water Efficiency Criteria

WaterSense Specification Criteria:

3.3 If a system operates with automatic flushing and the flushing is not adjustable by the owner, the efficiency rating shall be determined during testing with that flushing scheme only. If the system has multiple flush schemes, the efficiency rating shall be determined during testing at the lowest and highest flush settings.

3.4 The efficiency rating tested in accordance with the requirements in this section shall be a minimum of 30 percent. If a system operates with automatic flushing and the system has multiple flush schemes, the efficiency rating must be a minimum of 30 percent for the lowest and highest flush settings.

Ongoing Collaboration

NSF RO Efficiency Task Group

- The NSF Joint Committee on Drinking Water Treatment Units established a task group to revise NSF/ANSI 58 to:
  - Eliminate the “recovery rating” testing and claims from the standard
  - Incorporate water consumed from automatic flushing into the efficiency rating test procedures
- EPA is participating in this task group
- EPA will evaluate whether the WaterSense specification language needs to be clarified or modified once the revisions from the task group are published

Performance Criteria

- From a consumer's perspective, the ideal RO system can substantially **reduce drinking water contaminants** and is **easy to maintain**
- These qualities provide convenience for the consumer and assurance that their drinking water is adequately treated
- The specification includes three performance criteria that address:
  - Membrane life
  - Mandatory TDS reduction
  - Elective contaminant reduction claims

Performance Criteria

Membrane Life

- Membrane replacement is an essential part of RO system maintenance
- Higher efficiency systems can cause the membrane to foul more quickly, which requires more frequent membrane replacements
- More frequent membrane replacement may be costly and burdensome for consumers
- To ensure a minimum membrane lifespan, WaterSense is adopting the ASSE 1086 membrane life test

Performance Criteria

ASSE 1086 Membrane Life Test

- Performed over a minimum of 20 days
- Produces a total product volume of at least 1,000 gallons
  - Representative of about 1-year's worth of treated water
- Difficult challenge water
- *Percent recovery* $= \frac{100\ mL\ permeate}{reject\ volume + 100\ mL\ permeate} * 100\%$

Performance Criteria

WaterSense Specification Criteria:

4.1 Membrane Life: The system shall be tested in accordance with the Membrane Life Test for High Efficiency Membrane Systems procedures of ASSE 1086 and shall meet the following criteria:

- **4.1.1** The percent TDS reduction shall be a minimum of 75 percent each day.
- **4.1.2** The flow rate shall not decrease by more than 50 percent of the Day 1 reading throughout the test.
- **4.1.3** The percent recovery, as calculated according to the ASSE 1086 testing procedures, shall be on average a minimum of 30 percent. One tenth of the sample readings may be less than 30 percent but no less than 23 percent. The final percent recovery measurement shall be at a minimum of 30 percent.

Performance Criteria

TDS Reduction

- TDS include dissolved solids such as minerals, salts, metals, and organic matter in water
- TDS is a common indicator used to determine the general quality of drinking water
- TDS reduction is an important performance metric for quantifying a system's contaminant removal capabilities
- The WaterSense specification has adopted the current NSF/ANSI 58 TDS removal requirement
- NSF/ANSI 58 requires all systems to be tested for TDS reduction and reduce an influent challenge level of TDS by at least 75 percent

Performance Criteria

Contaminant Reduction

- Verifying contaminant reduction claims is important for ensuring adequate system performance
- NSF/ANSI 58 requires manufacturers to verify their reduction claims via testing and certification
- There are concerns about tradeoffs between water efficiency and contaminant reduction
- WaterSense chose to model NSF/ANSI 58 framework by requiring manufacturers to verify any reduction claims through testing

Performance Criteria

WaterSense Specification Criteria:

4.2 TDS Reduction: The RO system shall be tested in accordance with the NSF/ANSI 58 testing procedures for verifying TDS reduction claims and shall reduce the influent challenge level of TDS by at least 75 percent.

4.3 Elective Performance Claims: The manufacturer's elective performance (chemical reduction and mechanical filtration) claims for the RO system shall be verified according to the applicable test methods and requirements of NSF/ANSI 58.

Questions?

Packaging and Documentation

The specification includes packaging and documentation criteria that address:

- Adherence to NSF/ANSI 58 requirements
- Water efficiency marking
- Contaminant reduction marking

Packaging and Documentation

NSF/ANSI 58 Requirements

Section 8 of NSF/ANSI 58 includes packaging and documentation requirements for certified RO systems that cover:

- Installation and operation manual requirements
- Product data plates
- Performance data sheets

Packaging and Documentation

WaterSense Specification Criteria:

5.1 The RO system shall conform to applicable instructions and information requirements in NSF/ANSI 58, in addition to the requirements included in [the Packaging and Documentation section of the WaterSense specification].

Packaging and Documentation

Water Efficiency Markings

- In the current market, EPA observed water efficiency displayed as a percentage, ratio, or not displayed at all

- To increase consumer comprehension, the specification requires product documentation to include **both** the efficiency rating (as a percentage) and the waste-to-product ratio

Packaging and Documentation

WaterSense Specification Criteria:

5.1 The RO system's packaging (where product packaging contains information for the prospective purchaser) and/or other point-of-purchase documentation (e.g., specification sheet, manufacturer web page, distributor brochure) shall, at a minimum, include the following information and messaging:

- **5.2.1** A statement indicating the following: "This system has a [XX] percent efficiency rating in the production of treated water. Efficiency rating means the percentage of the water going into the system that is available to the user as RO treated water. This means that the system will send [Y.Y gallons or liters] of water down the drain for every [gallon or liter] of treated water it produces."

Packaging and Documentation

WaterSense Specification Criteria:

*"This system has a [**XX**] percent efficiency rating in the production of treated water. Efficiency rating means the percentage of the water going into the system that is available to the user as RO treated water. This means that the system will send [**Y.Y** gallons or liters] of water down the drain for every [gallon or liter] of treated water it produces."*

Where:

- **XX** percent is the system's efficiency rating in two- or three-digit resolution (e.g., 30 percent or 30.0 percent) as verified by testing in accordance with NSF/ANSI 58, with the modifications for determining efficiency rating provided in this specification; and
- **Y.Y** is the system's waste-to-product ratio (also referred to as the waste-to-treated water ratio) expressed in at least two-digit resolution (e.g., 2.3 gallons or 2.3 liters) and calculated based on:

$$Waste - to - product\ ratio\ (Y.Y) = \frac{100\%}{verified\ efficiency\ rating} - 1$$

Packaging and Documentation

Contaminant Reduction Claim Markings

- EPA wants to make it easy for consumers to identify whether a system is certified to remove a specific contaminant
- WaterSense identified the following priority drinking water contaminants in consultation with the EPA Office of Ground Water and Drinking Water:
  - Arsenic (pentavalent)
  - Nitrate/nitrite
  - Lead
  - Hexavalent Chromium
  - Trivalent Chromium
  - Total per- and polyfluoroalkyl substances (PFAS)

Packaging and Documentation

WaterSense Specification Criteria:

Packaging shall include:

5.2.2 The contaminant removal rates, as verified according to NSF/ANSI 58, for the following contaminants:

- TDS
- Arsenic (pentavalent) at a concentration of 50 or 300 ppb
- Chromium (hexavalent)
- Chromium (trivalent)
- Lead
- Nitrate/Nitrite
- Total per- and polyfluoroalkyl substances (PFAS)

Packaging and Documentation

WaterSense Specification Criteria:

5.2.2 (continued) If the system does not have verified reduction claims for any of the above contaminants, the packaging and documentation shall clearly indicate that the product has not been certified to remove these contaminants. All systems must report verified TDS removal at a minimum. Manufacturers may choose to also list verified reduction claims for additional contaminants besides those listed above.

5.2.3 The information required in Sections 5.2.1 and 5.2.2 shall be marked on system packaging and/or on documentation at the point-of-purchase in a manner consistent with Table 1 [on the next slide]. Bracketed text (e.g., [Y.Y gallons]) within the table is indicative of placeholder information that should be completed based on system-specific testing and performance claims.

Water Efficiency and Performance at a Glance

This system has been tested according to NSF/ANSI 58 for daily production rate, efficiency, and contaminant reduction. A system without verified reduction claims for a listed contaminant has not been verified to remove that contaminant under NSF/ANSI 58.

Daily Production Rate (DPR)

[DPR Placeholder in gallons per day or liters per day]

Efficiency and Water Use

This system has a [XX] percent efficiency rating in the production of treated water. Efficiency rating means the percentage of the water going into the system that becomes available to the user as reverse osmosis treated water. This means that the system will send [Y.Y gallons or liters] of water down the drain for every [gallon or liter] of treated water it produces.	[Y.Y]:1 Waste-to-Treated Water Ratio

Contaminant Reduction

Contaminant	Is this system verified to remove the listed contaminant? YES	If yes, what is the verified reduction?	NO
Total Dissolved Solids (TDS)	✓	[% Reduction]	
Arsenic (Pentavalent) at [50 or 300 parts per billion]	[✓] or [Blank]	[% Reduction] or [Blank]	[✓] or [Blank]
Chromium (Hexavalent)	[✓] or [Blank]	[% Reduction] or [Blank]	[✓] or [Blank]
Chromium (Trivalent)	[✓] or [Blank]	[% Reduction] or [Blank]	[✓] or [Blank]
Lead	[✓] or [Blank]	[% Reduction] or [Blank]	[✓] or [Blank]
Nitrate/nitrite	[✓] or [Blank]	[% Reduction] or [Blank]	[✓] or [Blank]
Total Per- and Polyfluoroalkyl Substances (PFAS)	[✓] or [Blank]	[% Reduction] or [Blank]	[✓] or [Blank]

More Information on System Claims

All contaminants reduced by this system are listed in the performance data sheet. Scan the QR code or visit [manufacturer website or product URL] to view the system's performance data sheet.

Placeholder for optional QR code to performance data sheet.

Ongoing Collaboration

NSF RO Efficiency Task Group

- EPA is aware that the NSF task group is interested in refining NSF/ANSI 58 documentation requirements to clarify system efficiency and contaminant removal claims
- EPA is coordinating with the NSF task group on this effort
- EPA is open to modifying the specification requirements if the task group's revised NSF/ANSI 58 requirements still align with EPA's goal to standardize information and make product information clearer to consumers

Packaging and Documentation

WaterSense Specification Criteria:

5.3 For a system with multiple flush schemes, the manufacturer must report the efficiency rating determined when tested at the highest flush scheme (i.e., the lowest efficiency). The manufacturer may also report the efficiency rating determined when tested at the lowest flush scheme (i.e., the highest efficiency).

5.4 If a system requires the use of components or companion products (e.g., a permeate pump) to meet the requirements of this specification, all components and/or companion products shall be packaged and sold along with the system.

Packaging and Documentation

WaterSense Specification Criteria:

5.5 Within the installation, operation, and maintenance instructions, the manufacturer shall specify replacement parts for all system components the consumer is expected to replace during the life of the system (e.g., RO membrane, pre-filters, post-filters, shutoff valve, storage tank) along with their recommended replacement frequencies.

5.6 A system shall not be packaged, marked, nor provided with instructions directing the user to an operational setting that would override the system's efficiency, as established by this specification and verified through testing. Any instruction related to the maintenance of the system shall direct the user on how to maintain the system's efficiency.

Questions?

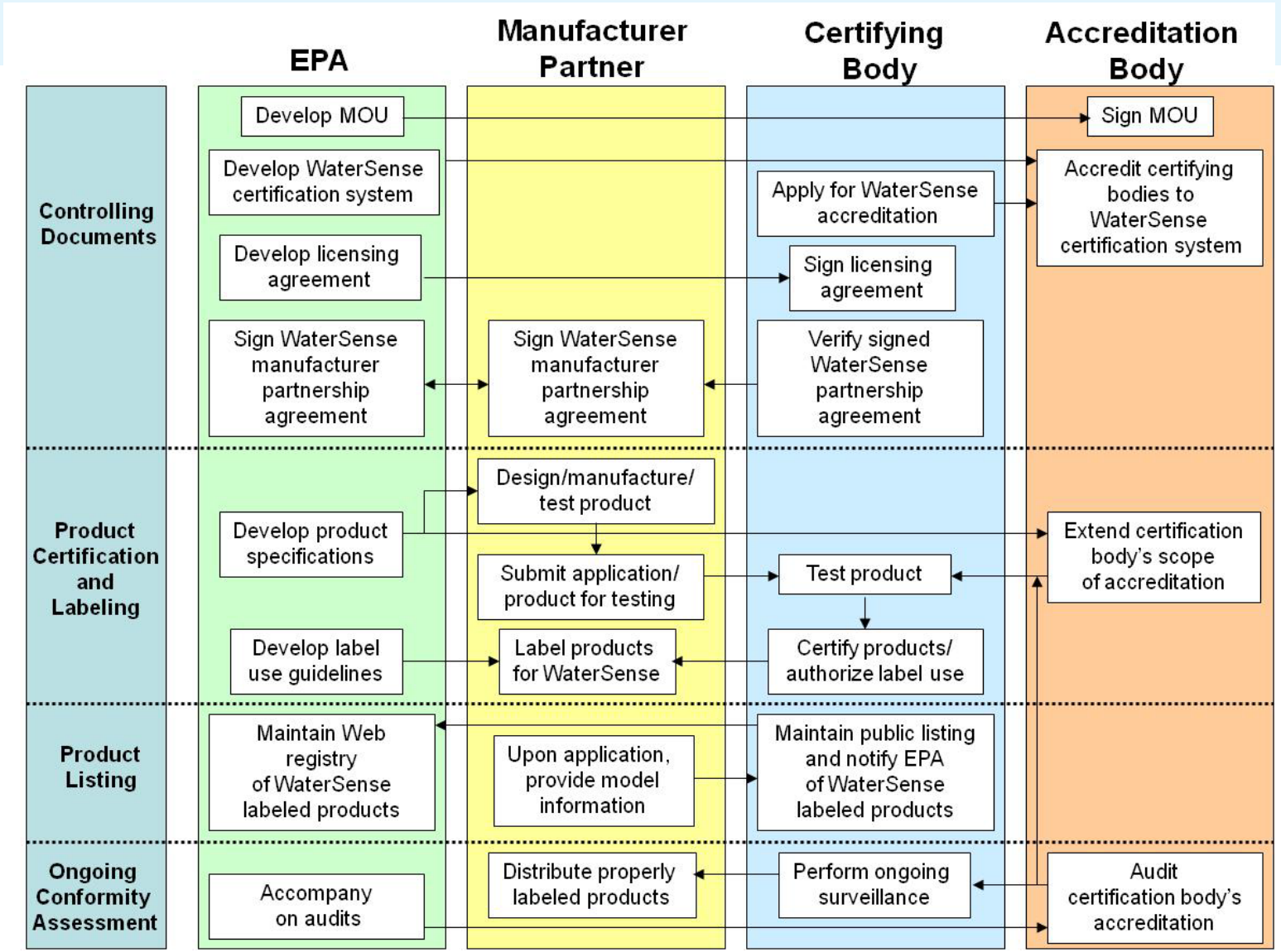
Certification and Labeling

WaterSense Product Certification

Independent third-party certification is the key to bringing labeled products to market and ensuring confidence in the WaterSense brand

- EPA established the *WaterSense Product Certification System* in March 2009 (revised most recently in 2016)
- The system guides certification and labeling for all WaterSense labeled products and includes:
  - Eligibility and requirements for accreditation bodies and product certifying bodies
  - Production inspection and testing requirements
  - Requirements for issuing the WaterSense label
  - Requirements for ongoing surveillance of labeled products
  - Procedures for handling label misuse

Product Certification Overview



Product Certification

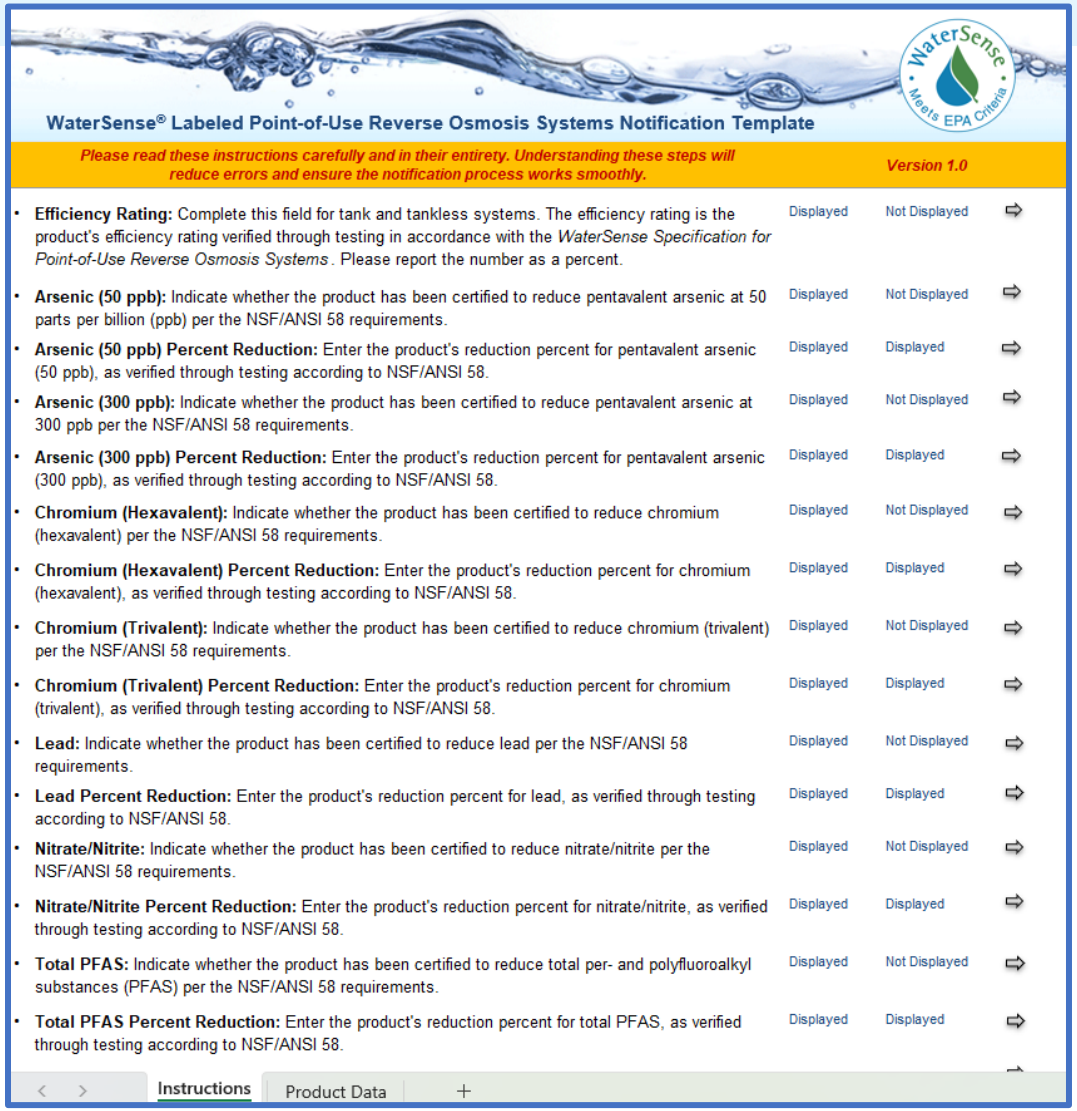
- Conformance to the specification must be certified by a LCB accredited in accordance with the *WaterSense Product Certification System*
- Information about LCBs can be found here: www.epa.gov/watersense/accreditation-licensed-certifying-bodies
- CSA Group, IAPMO R&T, NSF, and the Water Quality Association have all been approved to issue the WaterSense label for RO systems
- The LCB will test the product and, if it meets the specification criteria, will authorize the manufacturer to use the WaterSense label on the product
- The LCB will maintain a certification listing of all products that meet the specification and report it to EPA
- The WaterSense Product Search Tool (www.epa.gov/watersense/product-search) is an up-to-date list of all available WaterSense labeled products on the market

Testing and Certification Clarifications

- As discussed in Appendix A of the specification, testing and certification of a RO system to ASSE 1086 can satisfy the requirements of some parts of the WaterSense Specification
  - Section 2.0 (General Requirements)
  - Section 3.0 (Water Efficiency Criteria)
  - Section 4.0 (Performance Criteria)
- RO systems are permitted to achieve verified contaminant reduction claims using the treatment train option prescribed in NSF/ANSI 58 Normative Annex 2 (Evaluation methods for systems with multiple technologies—Treatment train)

Product Notification Template

- Used by LCBs to report certified products to WaterSense
- Populates the product registry on WaterSense website
- Includes product attributes that will be helpful to consumers
  - Product name and model
  - Efficiency rating
  - Contaminant removal claims



WaterSense® Labeled Point-of-Use Reverse Osmosis Systems Notification Template

Please read these instructions carefully and in their entirety. Understanding these steps will reduce errors and ensure the notification process works smoothly.

Version 1.0

Efficiency Rating: Complete this field for tank and tankless systems. The efficiency rating is the product's efficiency rating verified through testing in accordance with the *WaterSense Specification for Point-of-Use Reverse Osmosis Systems*. Please report the number as a percent.	Displayed	Not Displayed
Arsenic (50 ppb): Indicate whether the product has been certified to reduce pentavalent arsenic at 50 parts per billion (ppb) per the NSF/ANSI 58 requirements.	Displayed	Not Displayed
Arsenic (50 ppb) Percent Reduction: Enter the product's reduction percent for pentavalent arsenic (50 ppb), as verified through testing according to NSF/ANSI 58.	Displayed	Displayed
Arsenic (300 ppb): Indicate whether the product has been certified to reduce pentavalent arsenic at 300 ppb per the NSF/ANSI 58 requirements.	Displayed	Not Displayed
Arsenic (300 ppb) Percent Reduction: Enter the product's reduction percent for pentavalent arsenic (300 ppb), as verified through testing according to NSF/ANSI 58.	Displayed	Displayed
Chromium (Hexavalent): Indicate whether the product has been certified to reduce chromium (hexavalent) per the NSF/ANSI 58 requirements.	Displayed	Not Displayed
Chromium (Hexavalent) Percent Reduction: Enter the product's reduction percent for chromium (hexavalent), as verified through testing according to NSF/ANSI 58.	Displayed	Displayed
Chromium (Trivalent): Indicate whether the product has been certified to reduce chromium (trivalent) per the NSF/ANSI 58 requirements.	Displayed	Not Displayed
Chromium (Trivalent) Percent Reduction: Enter the product's reduction percent for chromium (trivalent), as verified through testing according to NSF/ANSI 58.	Displayed	Displayed
Lead: Indicate whether the product has been certified to reduce lead per the NSF/ANSI 58 requirements.	Displayed	Not Displayed
Lead Percent Reduction: Enter the product's reduction percent for lead, as verified through testing according to NSF/ANSI 58.	Displayed	Displayed
Nitrate/Nitrite: Indicate whether the product has been certified to reduce nitrate/nitrite per the NSF/ANSI 58 requirements.	Displayed	Not Displayed
Nitrate/Nitrite Percent Reduction: Enter the product's reduction percent for nitrate/nitrite, as verified through testing according to NSF/ANSI 58.	Displayed	Displayed
Total PFAS: Indicate whether the product has been certified to reduce total per- and polyfluoroalkyl substances (PFAS) per the NSF/ANSI 58 requirements.	Displayed	Not Displayed
Total PFAS Percent Reduction: Enter the product's reduction percent for total PFAS, as verified through testing according to NSF/ANSI 58.	Displayed	Displayed

Instructions | Product Data

PNT Common Errors

Discrepancy between certification file and PNT
Marketing information doesn't match certification file and/or PNT
Certification file and/or PNT contains potential duplicates
Account name on certification file does not match name in WaterSense records

- Depending on the error, products cannot be added to the Product Search Tool (www.epa.gov/watersense/product-search) until the issue is resolved.
- Consumers and rebate providers use the Product Search Tool to easily identify WaterSense labeled products. PNT errors prevent users from confirming a product's WaterSense labeled status and compromise data quality.

WaterSense Label Use

- LCB will provide WaterSense Label Use Guidelines along with label artwork
- WaterSense label use is required on:
  - Print and online specification sheets
  - Product packaging
- WaterSense label use is encouraged on:
  - Websites
  - Promotional brochures

Certified by
[Certifying Body]

- **Label use must only be in association with a labeled product**
- *Program Mark Guidelines*: www.epa.gov/watersense/program-guidelines

WaterSense Label Use

Do:

- Obtain label artwork from licensed certifying body (available in approved colors and black & white)
- Include the label on product packaging and specification sheets
- Include the label on product web pages
- Associate the label with a specific certified product on web pages, brochures, and marketing materials
- Contact the WaterSense Helpline for assistance prior to printing or publishing
- Consider using the “look for” promotional label or partner logo when otherwise promoting program involvement

Do Not:

- Distort or alter the label artwork’s colors, scale, resolution, or other graphical elements
- Use the label without the licensed certifying body’s name
- Use the label to imply that products are endorsed by EPA
- Use the label on non-certified models
- Use the label on promotional materials about water efficiency in general

WaterSense Label Use Violations

Common Label Use Violations
Label used with non-labeled product
Label not associated with any product
Language used with non-labeled product
Label distorted and/or altered
Label doesn't list certifying body name

Questions?

Annual Reporting and Partner Awards

Annual Reporting

Why Report?

- Reporting is a requirement of WaterSense partnership
- Helps EPA
  - Estimate water and energy savings and GHG reductions associated with WaterSense labeled products
  - Understand how the specification has helped transform marketplace
- Allows manufacturers to be eligible for awards

What Is Requested?

- Shipment data of WaterSense labeled and non-labeled models of RO systems
- Activities and feedback

RO system manufacturers will be asked to begin reporting in early 2026!

Partner of the Year Awards

WaterSense partners are eligible for annual recognition from EPA

Manufacturer evaluation criteria typically includes:

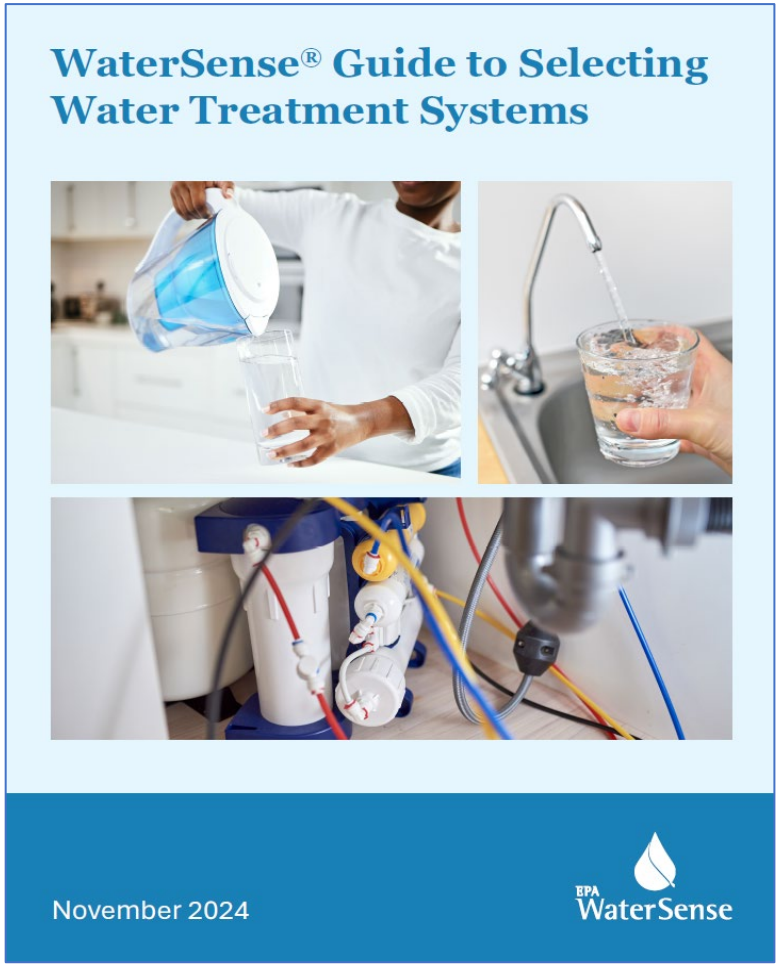
- Increasing visibility of labeled products
- Public and corporate relations activities
- Strategic or research collaboration
- Retailer and distributor outreach/training
- WaterSense labeled product models

Other WaterSense Resources

Other WaterSense Resources

WaterSense Guide to Selecting Water Treatment Systems

- EPA is aware of concerns that the WaterSense label could encourage consumers who would not otherwise purchase an RO system to buy one
- EPA published a guide on the WaterSense website explaining different water treatment technologies available to consumers
- The guide includes information on each technology, including potential water use, to enable consumers to select the least water-intensive technology that can meet their treatment needs
- In cases where RO is the most appropriate treatment option, the guide encourages consumers to select a WaterSense labeled RO system that is certified to reduce contaminant(s) of concern

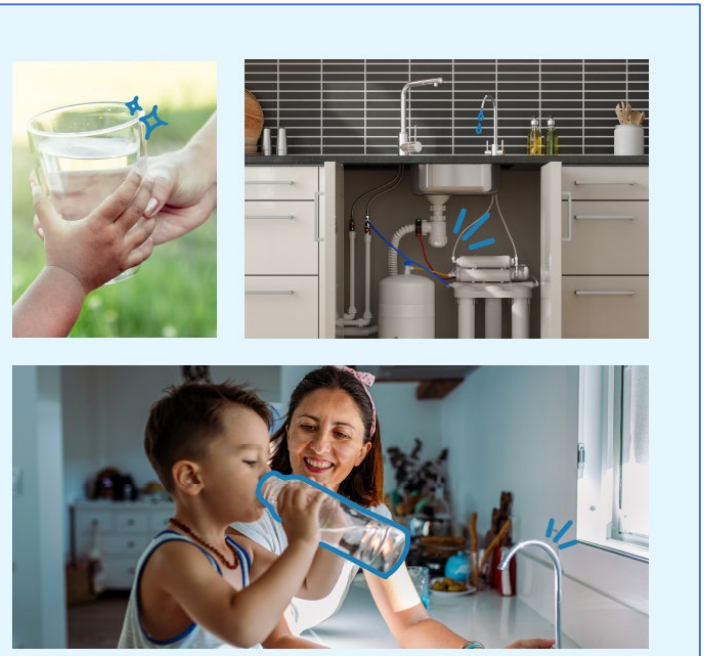


www.epa.gov/system/files/documents/2024-11/ws-products-home-water-treatment-guide_508.pdf

Other WaterSense Resources

Treating Water With Less Waste

- EPA published an RO systems mini report to help potential buyers make an informed RO system purchase
- The mini report covers:
  - How RO systems work
  - Why WaterSense labeled systems are different
  - How to identify contaminant reduction claims, water efficiency, and daily production rate
  - RO system use and maintenance tips



www.epa.gov/system/files/documents/2024-11/ws-products-ro-systems-mini-report.pdf

Questions?

Contact Us

General E-mail: watersense@epa.gov

Website: www.epa.gov/watersense

Helpline: (866) WTR-SENS (987-7367)