

WaterSense® Specification for Homes Version 2 Concept Paper

I. Introduction and Background

In February 2018, the U.S. Environmental Protection Agency's (EPA's) WaterSense program published a [*Notification of Intent \(NOI\) to Revise the Requirements and Certification of WaterSense Labeled Homes*](#)¹. EPA released the first version of its final specification for new homes in 2009 and has since issued two modifications, in 2012 and 2014.

In the NOI, WaterSense identified several desired outcomes and program priorities for the next iteration of the WaterSense labeled homes program. The primary goals of the revision are to add flexibility to the technical requirements and the certification system without sacrificing household water efficiency or the integrity of the WaterSense label. Since the release of the NOI, WaterSense has received public comments and additional feedback through public meetings, a structured workshop, and conversations with interested stakeholders. The feedback has helped WaterSense further assess priorities and potential options for Version 2 of the WaterSense labeled homes program. This report serves to update interested parties on activities to date and provide a summary of the program structure WaterSense has identified as the preferred path. The proposed structure includes broad requirements for efficiency, performance, and certification. However, it provides a great deal of flexibility that allows existing home certification and/or labeling programs to adapt to WaterSense requirements and offer the WaterSense label in ways conducive to their existing structures and the needs of their individual stakeholders.

WaterSense intends for its homes program structure to:

- Provide flexibility in the technical requirements without compromising overall water efficiency or performance.
- Ensure that WaterSense labeled homes are high performing with regard to water efficiency and homeowner satisfaction.
- Provide quantifiable potential water and cost savings.
- Improve regional applicability.
- Allow for certification of both single- and multifamily homes.
- Use existing infrastructure for certification and verification purposes.
- Use the WaterSense program's resources efficiently.

II. Proposed Structure for WaterSense Labeled Homes Technical and Certification Requirements

WaterSense has identified the general structure outlined below through the process of its research and stakeholder dialogue. It intends to follow this structure to create draft technical and certification requirements for homes.

Home Certification Organizations (HCOs), organizations that establish the specific methodology and oversee the certification and labeling of homes for WaterSense, are central to this structure. HCOs will be responsible for developing and administering a WaterSense Approved

¹ The NOI can be viewed on the WaterSense website at www.epa.gov/watersense/homes-specification#HomeNOI

Certification Method (WACM). A WACM refers to the methodology an HCO uses to measure whether or not a home meets the efficiency requirement set by WaterSense. Each WACM will be reviewed by EPA to evaluate the technical effectiveness of the methodology and verification protocol that enable homes to demonstrate adherence to WaterSense's technical requirements. WACMs that meet the requirements included in this document will be approved accordingly. Home builders can achieve certification through an HCO of their choosing, and candidate homes will be verified and certified in accordance with that HCO's WACM to earn the WaterSense label.

The program structure will have four primary components:

1. **Technical Requirements for Homes.** Performance and efficiency criteria that WaterSense labeled homes will have to meet. This includes a checklist of minimum mandatory features that a home must contain, as well an efficiency requirement.
2. **Standard Development Process.** Requirements for the process used in developing a WACM to ensure that it represents the needs of a broad set of stakeholders.
3. **WACM Technical Evaluation.** Method by which EPA determines that an HCO's WACM is capable of identifying homes that meet WaterSense's efficiency requirement.
4. **HCO Organizational Requirements.** Organizational requirements to ensure the HCO has the capability and competence to administer the WACM and authorize the use of the WaterSense label.

Prospective HCOs will be required to complete and submit a two-part application to EPA to be eligible to certify homes and issue the WaterSense label. WaterSense will assess the application for the following components: 1) development and technical efficacy of the WACM (components number 2 and 3 above), which outlines acceptable methods for homes to achieve WaterSense's technical requirements; and 2) the HCO's administrative capacity to oversee the certification process (component number 4 above). These items are described in more detail below.

1. Technical Requirements for Homes

Through a revised specification for homes, EPA intends to establish technical criteria that homes must meet to earn the WaterSense label. Under the revised program structure, EPA is considering requiring homes to:

1. Meet all measures outlined in a mandatory checklist, and
2. Be at least 30 percent more water efficient than typical new construction (based on national standards and requirements).

Mandatory Checklist

The mandatory checklist is intended to ensure that all WaterSense labeled homes, regardless of the HCO or WACM under which they are certified, contain a minimum set of features that assure quality performance (the degree to which a home meets the user's expectations relative to these features in typical new home construction) in addition to efficiency (the amount of water a home uses relative to comparable typical new home construction). Stakeholders have identified quality performance as a key concern in focusing on an overall reduction in household water use. EPA intends for the mandatory checklist to include only features that are incorporated into all homes and help ensure quality performance with regard to water use.

Table 1 includes the draft criteria EPA is considering including in the mandatory checklist. WaterSense labeled plumbing products are independently certified to perform as well as or better than standard models. Therefore, all homes seeking the WaterSense label for a home will be required to include WaterSense labeled toilets, bathroom sink faucets, and showerheads. This will ensure that these plumbing fixtures not only use less water, but also will meet performance requirements identified by the respective WaterSense specification.

In addition to WaterSense labeled plumbing products, WaterSense labeled homes will also be required to pass a pressure-loss test on all water supply lines, which indicates the absence of leaks. Labeled homes may not exhibit visible leaks from specified elements of the plumbing system, including the plumbing fixtures identified above along with other applicable systems and appliances. Leaks can adversely impact a home’s water use and quality performance.

Table 1. Draft Mandatory Checklist for WaterSense Labeled Homes.

Item	Requirements	Present
Leaks	Pressure-loss test on all water supplies detected no leaks	
	No visible leaks from hot water delivery system	
	No visible leaks from toilet(s)	
	No visible leaks from bathroom faucet(s)	
	No visible leaks from bathroom tub faucet(s) when showerhead(s) is activated	
	No visible leaks from kitchen and other sink faucet(s)	
	No visible leaks from showerhead(s)	
Toilets	WaterSense labeled	
Bathroom sink faucets	WaterSense labeled	
Showerheads	WaterSense labeled	

WaterSense intends for the mandatory checklist to set requirements for features that are applicable to all homes. EPA did not include WaterSense labeled irrigation products in the draft mandatory checklist for two reasons. First, not all homes have irrigation systems, nor are all WaterSense labeled irrigation products universally appropriate for all homes. Further, because of the wide variety of landscape settings and associated irrigation system designs, WaterSense has concluded that addressing outdoor water use is best accomplished by requiring WaterSense labeled homes to be 30 percent more water-efficient than typical new home construction, which is explained in more detail in the next section. This approach will provide designers and builders appropriate flexibility to effectively meet site specific conditions, while still achieving the requisite water efficiency and adjusting appropriately to local climate.

Efficiency Requirements

EPA intends to establish criteria requiring homes to be at least 30 percent more water-efficient than typical new home construction in order to earn the WaterSense label. Homes will demonstrate adherence to this efficiency criteria by certifying to an HCO's WACM.

As part of the approval process for HCOs, EPA will also independently assess each HCO's program requirements to determine if homes that are certified under the program will meet EPA's efficiency criteria (i.e., be at least 30 percent more water-efficient than typical new home construction). WaterSense is still developing the procedures that will be used to verify that each HCO's program meets the minimum percent increase in water efficiency. However, some considerations are outlined in the WACM Technical Evaluation section below. Once reviewed and approved by EPA, an HCO's certification program will become a WACM, indicating that the program can be used to meet the WaterSense efficiency requirement.

2. Standard Development Process

Standard development refers to the process used to develop the requirements, criteria, and/or calculation methodology the HCO proposes to use within its WACM to demonstrate compliance with the WaterSense efficiency requirement. EPA proposes the following requirements to ensure that the prospective WACM was developed using a process that represents the needs of a broad set of stakeholders and helps EPA conform to the requirements of the National Technology Transfer and Advancement Act (NTTAA).

EPA intends to offer three choices for how an HCO can demonstrate its program requirements were developed following an appropriate open and transparent process.

1. Utilize an American National Standards Institute (ANSI) Approved Standard.
OR
2. For public agencies, demonstrate compliance with the administrative and transparency requirements associated with standards and policy development of the jurisdiction having authority over the program.
OR
3. Provide written documentation demonstrating that the prospective WACM requirements were developed in accordance with the following criteria:
 - a. Openness
 - i. Participation shall be open to all persons who are directly and materially affected by the activity in question. There shall be no undue financial barriers to participation. Voting membership on the consensus body shall not be conditional upon membership in any organization, nor unreasonably restricted on the basis of technical qualifications or other such requirements.
 - ii. Timely and adequate notice of any action to create, revise, reaffirm, or withdraw a standard, and the establishment of a new consensus body shall be provided to all known directly and materially affected interests. Notice should include a clear and meaningful description of the purpose of the proposed activity and shall identify a readily available source for further information.
 - iii. Members should declare all Conflicts of Interest at the start of the process. The member's name (or if membership is by organization, the name of the organization with a point of contact), affiliation and interest category of each

- member of the consensus body shall be made available to interested parties upon request.
- b. Lack of dominance
 - i. The standards development process shall not be dominated by any single interest category, individual or organization. Dominance means a position or exercise of dominant authority, leadership, or influence by reason of superior leverage, strength, or representation to the exclusion of fair and equitable consideration of other viewpoints.
 - c. Balance
 - i. The standards development process should have a balance of interests. Participants from diverse interest categories shall be sought with the objective of achieving balance. If a consensus body lacks balance in accordance with the historical criteria for balance, outreach to achieve balance shall be undertaken.
 - ii. In defining interest categories appropriate, consideration should be given to at least the following:
 - o Builders
 - o Home certification community
 - o Manufacturers
 - o Utilities
 - o Municipalities
 - o General interest
 - d. Notification of standards development
 - i. Notification of standards activity shall be announced in suitable media as appropriate to demonstrate an opportunity for participation by all directly and materially affected persons.
 - ii. Public review is made available for a minimum of 30 days prior to the final publication of the standard.
 - e. Consideration of views and objections
 - i. Prompt consideration shall be given to the written views and objections of all participants.
 - f. Consensus vote
 - i. Evidence of consensus in accordance with these requirements and the procedures of the standards developer shall be documented.
 - g. Appeals
 - i. Written procedures shall contain an identifiable, realistic, and readily available appeals mechanism for the impartial handling of procedural appeals regarding any action or inaction. Procedural appeals include whether a technical issue was afforded due process.
 - ii. Persons who have directly and materially affected interests and who have been or will be adversely affected by any procedural action or inaction by a standards developer with regard to the standard in question (or the revision, reaffirmation, or withdrawal of the standard), have the right to appeal.

3. WACM Technical Evaluation

In addition to verifying that the standard associated with the prospective WACM was developed under an open and transparent process, WaterSense intends to evaluate how effectively the proposed WACM can differentiate homes that meet the efficiency requirement (i.e., be at least 30 percent more water-efficient than typical new home construction) from homes that do not.

Scope

Building eligibility (i.e., single-family, multifamily, new construction, significant rehab) and geographic scope for the WACM shall be determined by the HCO applying for consideration.

In instances where the HCO applicant has specified a specific scope, their rating system will be evaluated against the reference homes that reflect similar design features. For example, if the HCO applicant intends to label only multifamily buildings in the southwest region of the contiguous United States, its prospective WACM would be evaluated using the multifamily reference home designs with dry climate characteristics. However, once approved, the WACM will only be approved for use with the stated building type and region.

Reference Home Design

EPA plans to analyze the expected differences in water efficiency across a series of reference homes with similar structural designs and characteristics, but have unique features that are selected from the prospective rating system due to expected efficiency afforded. The series of basic representative designs of reference designs serve as baselines for evaluating water efficiency gains. The default combination of adjustable features is considered the “national reference design.”

The features included in the national reference design were identified from the U.S. Department of Housing and Urban Development (HUD) 2017 Survey of Construction, the 2009 Uniform Plumbing Code, and 2009 International Plumbing Code. The national reference standard for each plumbing code was utilized. Census data were reviewed to identify typical design features, such as number of bedrooms and bathrooms, which are not defined by code. EPA used this data to estimate the prevalence of the design features in single-family and multifamily construction.

EPA will compare the impact that specific design and feature adjustments should have on a home’s water efficiency over baseline levels, as well as the impact that those adjustments would have on the home’s scoring under the prospective WACM. This method will allow EPA to evaluate WACMs in a consistent and reliable manner.

Both single- and multifamily homes can vary significantly in size and structure; however, these elements may not significantly affect or directly influence the home’s annual water consumption. To avoid the need to develop an overly complex procedure to normalize all possible variations in the minimum rated features, EPA has identified configurations that, while in some ways may represent extreme examples relative to normal buildings practices, will help characterize the outer bounds of a home’s water efficiency.

The characteristics of the single-family reference homes are summarized in Table 2, and characteristics of the multifamily reference buildings are summarized in Table 3.

Table 2. Single-family Reference Homes

Feature	Small Footprint- Large Lot	Small Footprint- Small lot	Large Footprint- Large lot	Large Footprint- Small lot
Bedrooms	2	2	4	4
Footprint	1,000	1,000	2,500	2,500
Lot size	10,000	1,600	10,000	2,600
Landscaped area	9,000	600	7,500	100
# Faucets	2	2	5	5
# Toilets	1	1	3	3
# Showerheads	1	1	2	2
# Washing Machine	1	1	1	1
# Dish Washer	1	1	1	1
Irrigation season	90-365 Days OR Local Season	90-365 Days OR Local Season	90-365 Days OR Local Season	90-365 Days OR Local Season

Table 3. Multifamily Reference Buildings

Feature	Garden Style Small	Garden Style Large	Mid/High-Rise Multifamily
Bedrooms	16 units X 2.5 bedrooms/unit = 40	25 units X 2.7 bedrooms/unit = 67.5	300 units X 3 bedrooms/unit = 900
Footprint	N/A	N/A	N/A
Lot size	N/A	N/A	N/A
Landscaped area	75% of lot	25% of lot	15% of lot
# Faucets	16 units X 1 bathroom/unit= 16	25 units X 1 bathroom/unit= 25	300 units X 1.25 bathroom/unit= 375
# Toilets	16 units X 1 bathroom/unit= 16	25 units X 1 bathroom/unit= 25	300 units X 1.25 bathroom/unit= 375
# Showerheads	16 units X 1 bathroom/unit= 16	25 units X 1 bathroom/unit= 25	300 units X 1.25 bathroom/unit= 375
# Washing Machine	16 units X 1 machine/unit= 16	25 units X 1 machine/unit= 25	300 units X 1 machine/unit= 300
# Dish Washer	16 units X 1 machine/unit= 16	25 units X 1 machine/unit= 25	300 units X 1 machine/unit= 300
Irrigation season	90-365 Days OR Local Season	90-365 Days OR Local Season	90-365 Days OR Local Season

Minimum Features and Usage

WaterSense will use the best available data to estimate the predicted water consumption associated with each reference home. Minimum features refer to the fewest possible features needed to calculate a home or building’s water use. Table 4 includes a list of potential minimum features, the associated efficiency in the reference home, and a summary of the end water use calculation.

Table 4. Minimum Features and Efficiency

Metric	Sub-Variable	Savings Calculation	Daily Per Person Use	
			Uses	Reference Efficiency
Occupancy	#Bedrooms +1			
Household Water Use (Installed Daily Capacity)	Toilet(s)	#Flush x MaxOccupants x DailyUse	5 flushes	1.6 GPF
	Faucet(s)	MinutesUsed x MaxOccupants x DailyUse	0.1 minutes	2.2 GPM
	Showerhead(s)	MinutesUsed x MaxOccupants x DailyUse	10 minutes	2.5 GPM
	Dishwasher	#Cycles x MaxOccupants x DailyUse	0.5 cycles	4.5 Gal/Cycle
	Clothes Washer	#Cycles x MaxOccupants x DailyUse	0.25 cycles	9.5 Gal/ CuFt /cycle @ 2.5 CuFt
	Occupancy x ((#Faucettype x Efficiency x DailyUse) + (#WCType x Efficiency x DailyUse) + (#ShowerHead x Efficiency x DailyUse) + (#DishW x Efficiency x DailyUse) + (#ClothesW x Efficiency x DailyUse))			
Total Irrigation Demand	GallonsDay Demand	irrigated area x AvgNetET x Conversion	N/A	N/A
	AvgAnnNetPeak (inches)	Historic (ET - RF) for all watering months	N/A	N/A
	Adjustment Factor	15% ET adjustment factor	N/A	N/A
Max Annual Use	(Daily Household Water Use x 365days) + Total Irrigation Demand			

Geographic Considerations

Indoor water efficiency design features do not vary significantly (in terms of total use) based on climate zone. However, outdoor water use varies significantly and is influenced by both climate and market characteristics of the region.

When evaluating prospective WACMs, WaterSense will apply an outdoor water demand factor based on the average net annual evapotranspiration (30-year historic data adjusted to better reflect actual watering rates). When evaluating a prospective WACM with national or regional geographic scope, EPA will use a range representative of the applicable region(s). When evaluating a prospective WACM with a local geographic scope, WaterSense will use a net annual evapotranspiration value appropriate for that area.

Assessing Savings

EPA will use the process and assumptions outlined above and the requirements of the prospective WACM to estimate the amount of savings a home or building following the prospective requirements would realize.

Because the WaterSense efficiency requirement is to save at least 30 percent, EPA will attempt to identify the configuration with the lowest quantifiable water savings across all configurations and climate zones. A prospective WACM will not be approved unless it can demonstrate that minimum efficiency that could be attained in all the applicable reference homes represents at least a 30 percent reduction in total water use (the WaterSense efficiency requirement).

In addition, while identifying the lowest quantifiable configuration, WaterSense will not include poorly defined or supported credits in the quantifiable estimate. For example, the crediting of “smart controllers” is poorly defined and cannot be tied to credible water savings. As a result, WaterSense will only associate water savings with criteria that adequately defines these controllers or requires the use of WaterSense labeled, weather-based irrigation controllers.

4. HCO Organizational Requirements

WaterSense has identified six components of certification that ensure that an HCO has a structure in place to effectively administer its WACM and can retain the integrity of the WaterSense label by only certifying homes that meet the specification’s technical criteria. In its application, the HCO shall demonstrate to WaterSense that it has procedures in place to fully implement each certification requirement. Each of the certification components—*independent oversight, quality assurance, verifier training and authorization, inspection, impartiality, and messaging and reporting*—has its own requirements, as described in the subsequent sections.

HCOs will be permitted to delegate many of the responsibilities associated with the certification requirements to a designee(s). A designee can be a provider, certification body, or other organization capable of adhering to the certification requirements discussed below. The HCO will provide WaterSense with information about any use of designee(s) and will submit sufficient information on policies that it requires designee(s) to follow, so that WaterSense can evaluate whether the designee(s) can successfully fulfill WaterSense’s certification requirement(s). If the HCO plans to use designee(s), the HCO will also submit a description of its plan to oversee the designee(s) and the fulfillment of their responsibilities.

Component 1: Independent Oversight

HCOs are required to establish independent oversight procedures to ensure that the WACM is governed in a fair and impartial manner. By adopting practices aligned with independent oversight, an HCO can operate in the best interest of the program.

- Requirements:
 - **Creation of an independent oversight committee(s).** The HCO shall establish an independent oversight committee(s) or governing board of directors that supervises the WACM while exercising independent, professional judgement. The committee(s) shall be composed of at least three individuals with varying backgrounds representative of different program stakeholders. Employees of the HCO shall hold no more than one-third of the positions on the oversight committee(s). The

committee(s) shall exercise independent judgement and oversight of the implementation of the WACM.

Component 2: Quality Assurance

Quality assurance ensures that inspections and certifications are conducted in a consistent, accurate, and appropriate manner. WaterSense requires HCOs to have quality assurance/quality control procedures in place to ensure that verification protocols are followed and homes are inspected and verified consistently within the HCO's WACM. Quality assurance is necessary to maintain the integrity of the WaterSense label and ensure that anticipated water savings and home performance are being realized. Quality assurance also provides a mechanism for identifying and rectifying issues.

- **Requirements:** An HCO or its designee(s) are responsible for facilitating and executing home verification and quality assurance services. Each HCO shall provide documentation of its policies and procedures related to quality assurance, including processes for overseeing verifiers who are authorized to conduct home inspections and for addressing verifiers who do not follow quality assurance procedures. If an HCO assigns a designee(s) to fulfill some or all quality assurance services, the designee(s) shall follow the quality assurance procedures established by the HCO through its WACM. In addition, the HCO shall develop a monitoring plan to ensure that the designee(s) continues to meet the quality assurance requirements of the WACM.

Quality assurance shall be executed and documented by the approved HCO. The HCO is responsible for the following components of quality assurance:

- **Auditing of WaterSense labeled homes.** The HCO or designee(s) shall employ an audit protocol (as stipulated in the WACM) to ensure that homes receiving the WaterSense label meet all requirements of the WACM. Protocols shall include selection of representative sample of certified homes, be sufficiently random, and demonstrate the capacity to identify erroneous certifications.
- **Administer verifier activities.** The HCO or designee(s) shall ensure that the WaterSense label is issued in accordance with the requirements of the WACM and that only verifiers in good standing with all training, continuing education, and impartiality requirements provide verification services.
- **Verifier discipline.** The HCO or designee(s) shall maintain and enforce disciplinary procedures for verifiers.
- **Complaint resolution process.** The HCO or designee(s) shall maintain and execute procedures to respond to and resolve complaints involving home inspection and/or certification. This includes investigating failures impacting the water efficiency of certified homes.
- **Documentation.** The HCO or designee(s) shall maintain thorough documentation of verifier training records, verifier discipline, complaints, and homes that have received certification.

Component 3: Verifier Training and Authorization

Training and inspection protocols facilitate accurate identification of WaterSense labeled homes, thereby maintaining the reputation and efficacy of the WaterSense homes program. Well-trained

verifiers should be prepared to inspect a home and determine whether it meets the requirements of the WACM.

Training shall prepare verifiers to conduct accurate and consistent home inspections (based on the relevant WACM), complete necessary paperwork, and comply with the quality assurance standards of the HCO.

- Requirements: HCOs shall adhere to the following training requirements:
 - **General verifier training.** The HCO shall have procedures in place for training verifiers to inspect homes for the quality performance and water efficiency criteria per the WACM. WaterSense will supply each HCO with required training materials for the *WaterSense Specification for Homes, Version 2* (hereafter referred to as WaterSense program-specific training requirements). The HCO shall supplement this training with additional information needed for the verifiers to understand and administer the HCO's WACM.
 - **Verifier training reciprocity.** The HCO shall have procedures in place to waive the WaterSense program-specific training requirements for potential new verifiers, provided that the verifier has completed the WaterSense program-specific training requirements within the past two years (for example, as part of training under another HCO). Additionally, HCOs that utilize designees for quality assurance shall have procedures in place to facilitate transferability from one designee to another.
 - **Verifier documentation training.** The HCO shall have procedures in place for training verifiers to properly document home inspections and to complete all inspection, reporting, and quality assurance submissions required by the HCO and WaterSense.
 - **Formal authorization of verifiers.** The HCO shall have procedures in place for formally authorizing verifiers to inspect homes in accordance with the HCO's WACM. The requirements for verifier authorization shall at a minimum include: successful completion of training; and disclosure and resolution of conflict of interest (COI), as outlined in the impartiality section of this document.
 - **Integrating updates.** In the event of modifications to the WaterSense specification or the HCO's WACM, the HCO shall have procedures in place for retraining verifiers on the new program requirements before the verifier inspects additional homes. The HCO shall maintain documentation of all verifiers who have fulfilled additional training requirements.

Component 4: Inspection

Verifiers conduct home inspections or ratings to determine whether homes meet all WaterSense requirements under the HCO's WACM. Home inspections or ratings therefore serve an important function for consumers, since accurate inspections identify homes that meet WaterSense/WACM criteria for water efficiency and performance.

- Requirements: The HCO shall have procedures in place for the following inspection requirements:
 - **Adherence to the WACM.** The HCO shall have a procedure in place requiring verifiers to conduct inspections in accordance with the HCO's WACM.
 - **Documentation of inspection.** The HCO shall have a procedure in place to obtain home inspection documentation (e.g., checklists, scorecards) from verifiers. At a minimum, the paperwork shall include:

- Builder partner contact information;
 - Address or lot number of the inspected home (and address or lot number of any homes covered by a relevant sampling protocol);
 - Documentation of inspection results sufficient to recreate the inspection, including completed mandatory performance checklist;
 - Name and contact information for the verifier; and
 - Inspection date(s).
- **Sampling protocol.** If desired, the HCO may offer builder partners and verifiers the opportunity to participate in a sampling protocol if a builder partner intends to certify multiple homes within the same subdivision, planned community, or multifamily building. Sampling protocols could allow a builder to seek the WaterSense label for a group of homes based on pre-analysis of building plans and subsequent inspections of a sample set of the homes. The protocol shall outline eligibility requirements for a builder partner to participate in the sampling protocol and ensure that inspection occurs on a representative sample of homes constructed by the builder partner. The protocol shall also establish processes for revoking eligibility within the sampling protocol based on failure to meet certification and quality assurance requirements.
 - **Verification of builder partnership agreement with EPA.** The HCO shall verify that any builder seeking home certification under the HCO's WACM has a signed WaterSense partnership agreement. The partnership agreement must be in place between the builder and WaterSense before issuing the WaterSense label and associated certification documentation. To verify the partnership agreement, the HCO should check the WaterSense website for a current list of builder partners. If the builder is not listed on the WaterSense website, the HCO can verify the partnership agreement by contacting the WaterSense Helpline at (866) WTRSENS (987-7367) or watersense@epa.gov.

Component 5: Impartiality

It is important that HCOs have a systematic method for ensuring financial, legal, and ethical impartiality as it pertains to verifying a home's compliance with the WACM or issuing the certification decision and ultimately the WaterSense label. Impartiality means that Conflicts of Interest (COI) do not exist or have been resolved. COI can compromise an HCO's objectivity and hinder its ability to accurately inspect and verify homes. Conversely, policies that eliminate COI help ensure the integrity of an HCO and its verifiers. As a result, WaterSense requires that HCOs identify and resolve risks to impartiality throughout its verification protocols. Impartiality management strategies should be transparent, thorough, and well-documented.

- Requirements. HCOs are responsible for developing and implementing a strategy to minimize risks to impartiality. The impartiality management strategy shall account for both organizational and individual COI. Organizational COI pertains to the organization(s) responsible for various aspects of home verification and certification, whereas individual COI pertains to a specific person involved in the verification or certification decision. Examples of COI include, but are not limited to, an organization or individual:
 - Providing consulting or design services for a home.
 - Acting as the seller of the home or the seller's agent.
 - Acting as the lender for some portion of the financed payments on the home.
 - Selling, supplying, or installing products to facilitate the home meeting the specification criteria.

- Participating in both verification and sales or marketing activities of the HCO.
- An HCO shall implement a verifier COI strategy that includes the following:
 - **Verifier COI disclosure.** The HCO shall have procedures in place requiring current or prospective verifiers to disclose any potential or existing COI.
 - **Written verifier COI policy.** The HCO shall have written guidance that describes procedures for evaluating and resolving potential COI disclosed by its verifiers. HCOs must also outline procedures to be enacted in the event that COI cannot be satisfactorily resolved.
- If the HCO intends for its employees to directly inspect homes or issue the WaterSense label, it shall submit a written request to WaterSense explaining how any incentive to falsely certify homes is removed and/or mitigated. Unless written approval has been received from WaterSense, the HCO shall not permit its employees to directly inspect and or certify homes in accordance with its WACM.
- In the event that the HCO is delegating responsibilities related to verification and/or certification, the designee, rather than the HCO, is responsible for implementing procedures related to verifier COI disclosure and for preparing a written verifier COI policy, as described above. The HCO shall instead implement a designee COI strategy that includes the following:
 - **Designee COI disclosure.** The HCO shall have procedures in place requiring current or prospective designees to disclose any potential or existing COI as it relates to homes it may verify or certify.
 - **Written designee COI policy.** The HCO shall have written guidance that describes procedures for evaluating and resolving COI presented by a designee. HCOs must also outline procedures to be enacted in the event that COI cannot be satisfactorily resolved.

Component 6: Messaging and Reporting

Messaging and reporting create a link between WaterSense and HCOs. Through clear channels of communication, WaterSense can relay key program information to stakeholders (such as the availability of approved verifiers) and track key program outputs (such as the certification of WaterSense labeled homes).

In this context, messaging refers to information flow from WaterSense to HCOs, whereas reporting refers to information flow from HCOs to WaterSense. For both messaging and reporting, HCOs serve as intermediaries between WaterSense and designees (if applicable), builders, and verifiers.

WaterSense occasionally needs to distribute program information or updates to stakeholders. HCOs are responsible for disseminating that information to relevant parties through clear and consistent messaging. Messaging prepares stakeholders to fulfill their responsibilities in accordance with the most current information.

HCOs submit data and program information to WaterSense through the reporting process. WaterSense uses reported data to effectively administer the program by evaluating trends in WaterSense labeled homes and identifying areas of potential improvement. Satisfactory reporting is thorough, accurate, and timely.

- Requirements: HCOs shall have procedures in place for the following messaging and reporting requirements:
 - **Centralized messaging structure.** HCOs shall have a structure that enables them to disseminate information from WaterSense to relevant stakeholders. Stakeholders can include designees, verifiers, and/or builders. Messaging shall be complete, clear, and timely.
 - **Inquiry response system.** HCOs shall have procedures for stakeholders to submit questions about implementing the WACM. HCOs shall have a means of providing accurate and timely responses to these inquiries.
 - **Routine reporting to WaterSense.** HCOs shall have procedures for reporting home certification information to WaterSense at least quarterly. At minimum, HCOs shall provide the following information:
 - Builder
 - Number of certified homes
 - Location of certified home(s), including development (if applicable), city, and state
 - **Requests for reporting program information.** HCOs shall be able to provide program information to WaterSense in a timely manner, as requested. On occasion, WaterSense may request information about topics including, but not limited to:
 - Mandatory performance checklist for specific homes
 - Promotional materials created by the HCO and/or its designee(s)
 - Common non-conformities or issues encountered during the past quarter
 - **Collecting information from designee(s) and verifiers.** HCOs shall have a procedure for collecting data needed to satisfy WaterSense reporting requirements from its designees (if applicable) and verifiers.
 - **Maintain information about trained verifiers and report to WaterSense.** HCOs shall maintain basic contact and business information about trained verifiers in a publicly accessible online format, such as a list, searchable directory, etc. In addition, HCOs shall report information about their trained verifiers to WaterSense at least quarterly. WaterSense shall provide all HCOs with a standardized format for reporting, at a minimum, the following information for each trained verifier:
 - Name
 - Employer (or company name if self-employed)
 - Phone number
 - Email address (if available)
 - Website URL (if available)
 - State(s) where verification services are offered
 - WACM under which the verifier is trained

III. Additional Questions and Considerations

WaterSense intends to use the structure outlined above as the basis for draft technical and certification requirements. In this process, WaterSense intends to consider several additional areas.

- What is the regional market feasibility of the proposed structure in different regions of the country?
- Who will be allowed and/or required to formally partner with WaterSense to participate? Under the current structure, licensed certification providers and builders both partner

with WaterSense, while water efficiency inspectors (or raters, as they are commonly called) do not.

- In what ways should WaterSense reinforce or augment its existing technical materials on water-efficient practices and technologies for the building industry, including (but not limited to) areas that are currently explicit requirements in the specification?

Interested parties can provide input to WaterSense regarding any of the issues presented in this concept paper by submitting written comments to watersense-programs@epa.com. Comments and information on the issues presented in this document are welcome and will be taken into consideration as WaterSense develops the draft technical and certification requirements for Version 2.0.