



Cascade Water Alliance Shortage Management Plan

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1.0 Introduction and Purpose

Municipal water suppliers must be prepared for water shortages in order to minimize effects on the communities they serve. This Shortage Management Plan (“SMP”) outlines how Cascade Water Alliance (“Cascade”) will respond to a water supply shortage affecting its regional water supply.

At the present time, Cascade purchases all of its water from Seattle Public Utilities (“SPU” or “Seattle”). Various events could cause a shortage in the SPU water supply system. These include reduced snowpack in the Tolt or Cedar River Watersheds due to a dry winter or early spring melt; an earthquake or other event that damages reservoirs, treatment facilities, or transmission lines; water quality problems; or intentional destructive acts. These different kinds of events may cause shortages with different characteristics in terms of advance warning, severity, and duration. The SMP offers flexibility for a range of appropriate responses.

As required under Washington State Department of Health (“DOH”) regulations, SPU and each Member of Cascade has its own shortage management plan to guide water system operations and interaction with end-use customers in each community during a water shortage. Cascade's SMP complements the SPU and Member SMPs.

Cascade's primary role in the event of a water shortage is to coordinate responses among the Cascade Member water systems that receive water from the regional supply and SPU, as the source of the regional supply. Therefore, this SMP focuses on the communication and coordination activities to be carried out by Cascade staff during a water shortage.

2.0 Related Agreements and Water Rights

2.1 Cascade Joint Municipal Utilities Authority Agreement

The Cascade Water Alliance Joint Municipal Utilities Authority Agreement (“2012 Joint Agreement”) established Cascade as a municipal corporation and provides the agreement of the Cascade Members on operations. Section 7.3 of the 2012 Joint Agreement provides (emphasis added):

7.3 Shortages and emergency.

A. Shortages. Members must respond to water shortages in a collective, shared fashion under a Cascade Shortage Management Plan adopted by the Board. Resources must be shared in a manner that reduces the risk of severe shortages to each Member. **Cascade’s Shortage Management Plan may include without limitation, a definition and classification of shortages, a shortage contingency plan including mandatory programmatic actions among all Members in the event of shortages, allocation of authority for determining and responding to shortages, and a communications and outreach program for the public.** Members are not required to implement Cascade’s Shortage Management Plan in areas not served by Cascade.

In the event of shortages, Cascade shall reduce or halt Interruptible Supply before invoking the Shortage Management Plan with respect to all Members with a Full Supply Commitment. However, the Board may, by 65% Dual Majority Vote, continue service in the amounts it deems appropriate to one or more Members receiving Interruptible Supply.

The Board may require that Members failing to comply with mandatory shortage management programs implemented under Cascade’s Shortage Management Plan assume a disproportionate reduction in supply or pay penalty charges, or both.

In the event of a Cascade-wide water shortage, Members with Independent Supply may, without penalty, decline to participate in the shortage management program for that shortage by foregoing all supply from Cascade for the duration of the emergency or shortage.

To avoid shortages resulting from emergencies or the inability to develop sufficient supplies, **the Board may, by 65% Dual Majority Vote, establish moratoria on connections or additional commitments for future water services by the Members.** A moratorium may be discontinued by a Dual Majority Vote of the Board.

B. Emergency. The Board shall include in Cascade’s Shortage Management Plan policies and procedures for addressing short-term disruptions of water supply.

Section 7.5 of the 2012 Joint Agreement also provides Cascade with the authority to impose minimum demand charges on Members (which Cascade has implemented in certain instances) as follows:

A Member shall be assigned a Demand Share based on the Board’s best estimate of capacity to be used by that Member. The Demand Share shall be established based on an audit of that Member’s past three (3) years of water use. After three (3) years as a Member, the baseline demand and capacity obligation for that Member shall be fixed based on actual experience as a Member. **A specific Demand Share may be set by the Board to account for circumstances, such as (by way of example and not by limitation) costs of extending the Supply System to a Member, or when Independent Supplies affect regional demand patterns.**

2.2 Seattle Block Contract

The 2013 2nd Amended and Restated Declining Block Water Supply Agreement Between the City of Seattle and Cascade Water Alliance (“Block Contract”) provides for shortage management. Section 7.2 provides:

Cascade and Seattle shall coordinate the development, adoption and implementation of their respective Water Shortage Management Plans. Before invoking its Water Shortage Management Plan, the Parties shall communicate with each other concerning current and projected water supply conditions.

Section 12.1 of the Block Contract recognizes unilateral actions by Seattle may be needed at times due to unforeseen and unavoidable events, including water shortages. It provides (emphasis added):

The Parties recognize that unforeseen and unavoidable events may occur which would require Seattle to act unilaterally for what it deems to be in the best interest of the general public served by the Seattle Water System; including water shortages resulting from drought circumstances and temporary reduction in water supply associated with turbidity events. **Upon the occurrence of an unforeseen or unavoidable event, Seattle shall, to the extent practicable, treat its wholesale and retail customers equally and any curtailment of supply shall be imposed proportionately among these customers.** This authority to act unilaterally carries with it a unilateral responsibility of Seattle to restore, expeditiously, the Seattle Water System to its pre-emergency capability to supply the region.

As a separate matter, Section 7.3 of the Block Contract provides that if water use restrictions are imposed on SPU by the terms of its agreements with Federal and State agencies and Tribes, such restrictions will be borne proportionally by SPU and its other wholesale customers, and by Cascade with respect only to the size of the Cascade Block at the time curtailment is required. In this event, Cascade and its Members will need to review the restrictions and determine appropriate short-term or long-term actions.

2.3 Tacoma Public Utilities Water Supply Agreements

In March 2025, Cascade entered into two separate and complementary agreements with Tacoma Public Utilities (TPU): the Agreement for Market-Priced Wholesale Water Supply (2025 Market-Priced Agreement) and the Wholesale Water Supply Agreement (2025 Wholesale Agreement). These agreements replaced the 2012 Agreement for the Sale of Wholesale Water in 2005 with TPU. Although TPU supply is available to Cascade starting in 2026, Cascade does not plan to take delivery of TPU water until 2041. Shortage management will be addressed in a future management agreement between Cascade and TPU.

2.4 White River – Lake Tapps Reservoir Water Rights

The Water Right Permit No. S2-29920(A), initially issued in 2010, and updated in 2022, to Cascade for the withdrawal or diversion of water from the White River into the Lake Tapps Reservoir for municipal purposes, is subject to conditions including the maintenance of minimum flows in the White River and the maintenance of specified lake levels during a specified recreational period. These conditions are not considered in the SMP at this time for the following reasons: Cascade is not currently using the Lake Tapps Reservoir for municipal supply, and Cascade's current planning anticipates the Lake Tapps Reservoir will not be in use until the early 2060s. Cascade will update the SMP to include reservoir-level triggers at such time as the Lake Tapps Reservoir is brought online for municipal supply purposes.

2.5 Member Water Audit Agreements

Each Member has executed a water audit agreement with Cascade. For those Members with independent supply, the agreement defines and quantifies independent supplies, documents member utilization of those supplies, and establishes production requirements imposed on Members as related to those supplies.

3.0 Plan Activation and Applicability to Cascade Members

3.1 Activation of SMP

Cascade may activate its SMP under the following circumstances:

- 1) When SPU activates its Water Shortage Contingency Plan (WSCP), the Cascade CEO may activate the SMP and determine the appropriate stage of curtailment and, at its next meeting, the Cascade Board will take action to end or continue activation at the appropriate stage of curtailment;
- 2) In the event a supply shortage or threat of a supply shortage requires immediate action to prevent risks to public health and safety, the Cascade CEO may declare an emergency and activate the SMP and determine the appropriate stage of curtailment and, at its next meeting, the Cascade Board will take action to end or continue activation at the appropriate stage of curtailment; or
- 3) For any other reason through action of the Cascade Board.

Unless otherwise directed by the Cascade Board, the Cascade CEO, in consultation with the Water Shortage Management Committee (Section 3.2 below), may elevate or diminish the stage of curtailment from one stage to another as appropriate.

3.2 Water Shortage Management Committee

The Cascade CEO shall designate a Water Shortage Management Committee consisting of Cascade staff and Member staff to advise the Cascade CEO on implementation of the SMP. The Water Shortage Management Committee may be designated at any time, but no later than immediately following SMP activation, and shall exist the duration of the water shortage. The existing Member staff committee may be designated as the Water Shortage Management Committee. The Cascade CEO may consult with the Water Shortage Management Committee by any means including in-person, by phone, video conferencing, or by email.

3.3 Coordination with SPU and Members

As provided in the Block Contract with SPU, Cascade will coordinate and communicate closely with SPU regarding activation of the SMP and a change in the stage of shortage as indicated in Section 4.

Cascade and its Members have a key role in the communications strategy during a regional water shortage. It is anticipated SPU will communicate with its own retail customers, wholesale customers, large retail customers, regional stakeholders, state/federal resource agencies, and regional media. Cascade encourages its Members to communicate with retail customers, wholesale customers, and local stakeholders. Cascade will help to coordinate and facilitate communications among the Members and between the regional level and the local level.

Cascade will strive to make its public messaging at each stage of curtailment consistent with SPU's messaging during the shortage event.

Cascade will maintain a current copy of SPU's WSCP on file and encourages Members that receive water from Cascade's regional water supply system maintain a copy of both the Cascade SMP and SPU WSCP readily available with their own Member SMP.

In addition, the Block Contract with SPU contains provisions related to SPU's supply commitment and Cascade's participation in shortages. These include financial provisions that, in the event of a voluntary or mandatory curtailment, require revision to the cost borne by Cascade. Whenever SPU moves a shortage to the voluntary, mandatory, or emergency stage, Cascade will initiate discussion with SPU regarding adjustments to the supply commitment and payments due from Cascade. Cascade will inform the Members of any proposed financial treatment regarding SPU charges occurring as a result of the shortage and these discussions.

3.4 Applicability to Cascade Members

Consistent with the Section 7.3 of the 2012 Joint Agreement, activation of the SMP applies to Cascade Members as follows:

- **Members receiving all of their water supply from Cascade:** Required to comply with Cascade's SMP.
- **Members receiving partial supply from Cascade:** Required to comply, in portions of their service areas that receive regional supply; *or* to discontinue use of Cascade supply during the water shortage.
- **Members with interruptible supply.** *None at this time.*

3.5 Member Shortage Response Plans

DOH regulations in WAC 246-290-100(4)(f) require utilities to have their own water shortage response plans. These are typically submitted to the DOH every ten years with their comprehensive water system plans. Cascade recommends Members review and revise their shortage response plans to ensure the Members use similar stages of curtailment as listed in the Cascade SMP and provisions in the Member plans support effective coordination with SPU and Cascade during a water shortage.

3.6 Communications During Water Shortages

In addition to the communication actions listed for each curtailment stage in Section 4, in the event of a water shortage that requires this SMP to be activated, Cascade will coordinate closely with its Members and SPU regarding public communications. SPU will take the lead on communications involving regional media such as major radio, television, social media, and newspaper outlets. Members will have the primary responsibility for communicating directly with their own customers and local communities. Cascade will coordinate communications among Members and SPU, and it will assist Members to issue consistent and effective communications to the communities they serve.

3.7 Relief of Conflicting Obligations During Water Shortages

When the SMP is activated, and with each stage of curtailment, Cascade will review and adjust production requirements and minimum demand shares to avoid potentially contradictory obligations of members. Since minimum production requirements may be inconsistent with desired or mandated demand reductions, and since minimum demand shares provide financial disincentives to demand reduction, Cascade will determine necessary and appropriate adjustments to provide for consistent incentives and impacts among members. Specifically:

- The Cascade CEO, in consultation with the Water Shortage Management Committee and each affected Member, will recommend to the Board to amend or suspend production requirements so demand reduction and supply production objectives are not in conflict, while recognizing that increased reliance on independent supplies is a desirable outcome when addressing a shortage from Cascade's regional sources.
- The Cascade CEO, in consultation with the Water Shortage Management Committee and each affected Member, will recommend to the Board to amend or suspend minimum demand shares in order to encourage reduced demand on impacted regional sources.
- In the event a shortage is caused by a shortage in independent supply resulting in a shortage that Cascade chooses to share in, the Cascade CEO, in consultation with the Water Shortage Management Committee and each affected Member, will recommend to the Board to make adjustments that are specific to each Member to reflect the unique circumstance of the shortage.

The recommended adjustments will be taken to the Board for approval or adjustment.

4.0 Stages of Water Use Curtailment

Cascade's SMP has four stages of curtailment that coincide with the stages of curtailment in SPU's WSCP:

1. Advisory Stage
2. Voluntary Stage
3. Mandatory Stage
4. Emergency Stage

These four stages are designed for progressive implementation during a drought or other long-range disruption of water supply. However, any of the four stages can be activated from the outset of the event as appropriate, and the stage of curtailment may be elevated or diminished from one stage to another as appropriate.

Sections 4.1 - 4.4 provide details in each of the four stages of curtailment. Table 1 provides a summary of the triggers of each stage, and Table 2 provides a summary of actions to be taken in each stage.

4.1 Advisory Stage

This stage is advisory only, internally focused, and does not require outreach to customers or curtailment actions by water users.

4.1.1 Objectives of Advisory Stage

- Prepare Cascade and Members for a potential water shortage, thereby allowing for adequate planning and coordination in the event there is a need to move to the Voluntary Stage.
- Support distribution system management actions by Cascade Members that can help to forestall or minimize the need for more stringent demand or supply management actions.

4.1.2 Triggers of Advisory Stage

SPU will enter the Advisory Stage of their WSCP if supply conditions and supply forecasts raise significant concerns about SPU's ability to meet demand later in the year. Upon notice from SPU that it has activated the Advisory Stage, the Cascade CEO may activate the SMP and the Advisory Stage.

4.1.3 Communication Actions During Advisory Stage

Once the Advisory Stage has been activated by Cascade, Cascade will:

- Advise Cascade Members to activate their Advisory Stage (or equivalent actions per each Member's individual SMP) in a manner that is consistent with Cascade's SMP. This will not apply

to Cascade Members exempted per Section 3.4 of this SMP.

- Establish a regular communication mechanism to keep Cascade Members and the Cascade Board informed regarding stages of curtailment; water supply conditions; and actions taken by Cascade Members and others in the region.
- Request Cascade Members carry out supply-side management actions they will take during the Advisory Stage to reduce use of water for local water distribution system operations and compile information on the actions taken. For Members that have independent supply, this may include relying more heavily on these supplies where feasible, to reduce pressure on the Cascade regional supply.
- If requested by SPU, participate on SPU's Water Shortage Advisory Group to help identify potential customer demand reduction strategies and an outreach strategy and materials.

4.1.5 Operating Actions of Advisory Stage

- Cascade will initiate planning and preparation for actions under an elevated stage of curtailment, including an assessment of potential staffing impacts, training needs, and communications strategies.
- Cascade will assist Members plan specific actions under an elevated stage of curtailment, including distribution system actions by the Member and voluntary water use curtailment actions Members can suggest to their end-use customers if the elevated stage of curtailment is activated.

4.2 Voluntary Stage

If supply conditions have not improved or have worsened, and/or demand levels need to be reduced, the SMP moves to the Voluntary Stage, which relies on voluntary cooperation and support of customers to meet demand reduction goals. During this stage, specific voluntary actions are suggested for residential and commercial customers.

4.2.1 Objectives of Voluntary Stage

- Encourage Members to take distribution system management actions to further stretch available supply.
- Encourage customer voluntary actions to maintain or reduce demand to meet demand reduction goals.
- Forestall or minimize need for later more stringent demand or supply management actions.
- Maintain drinking water quality at acceptable levels throughout the shortage.

- Promote equity among Cascade Members in responding to the supply shortage.

4.2.2 Triggers of Voluntary Stage

- 1) Upon notice from SPU that it has activated the Voluntary Stage of their WSCP, the Cascade CEO may activate the Voluntary Stage and, at its next meeting, the Cascade Board will take action to end or continue activation; or
- 2) In the event a supply shortage or threat of a supply shortage requires immediate action to prevent risks to public health and safety, the Cascade CEO may declare an emergency and activate the Voluntary Stage and, at its next meeting, the Cascade Board will take action to end or continue activation; or
- 3) The Cascade Board may authorize activation of Cascade's Voluntary Stage.

4.2.3 Communication Actions of Voluntary Stage

Once the Voluntary Stage has been activated by Cascade, Cascade will:

- Inform Cascade Members they are required to activate their Voluntary Stage (or equivalent actions per each Member's individual SMP) in a manner that is consistent with Cascade's SMP. This will not apply to Cascade Members exempted per Section 3.4 of this SMP.
- Request Cascade Members report to Cascade regarding supply-side management actions they will take during the Voluntary Stage. For Members that have independent supply, this may include relying more heavily on these supplies where feasible, to reduce pressure on the Cascade regional supply.
- Communicate regularly with Cascade Members regarding information that should be communicated to the public, local parks departments, large customers, landscape industry professionals, and others. At the Voluntary Stage, this will include specific recommendations on how customers can reduce water consumption, including links to the *cascadewater.org* website or equivalent information resources.
- If requested by SPU, participate on SPU's Water Shortage Advisory Group to provide input on implementation of customer demand reduction aspects of the Voluntary Stage, as well as input on planning for the customer demand reduction aspects of the Mandatory Stage.
- Assist Cascade Members to acquire and distribute public information materials. Review information from SPU, including materials in the Water Shortage Contingency Plan, regarding actions customers can take to reduce their water consumption. As appropriate, post information for Cascade Members and their customers on Cascade's website regarding the Voluntary Stage.

Appendix A provides examples of water saving actions customers can take during the Voluntary Stage.

4.2.4 Operating Actions in Voluntary Stage

- Cascade will assess revenue implications and potential remedies and report to the Cascade Board.
- Cascade will initiate planning and preparation for actions under an elevated stage of curtailment, including an assessment of potential staffing impacts, training needs, and communications strategies. Cascade will assist Cascade Members to identify mandatory restrictions that may apply during the Mandatory Stage, if this is needed.

4.3 Mandatory Stage

If supply conditions have not improved or have worsened, and/or demand levels need to be further reduced, the Mandatory Stage would be implemented. This stage prohibits or limits certain water actions. Cascade will rely on its Members to enforce mandatory actions, using techniques as appropriate to each service area or jurisdiction.

4.3.1 Objectives of Mandatory Stage

- Achieve demand reduction goals by restricting certain water uses. Goals will be determined in consultation with SPU, based on the characteristics and severity of the water shortage.
- Ensure adequate water supply will be available for the duration of the supply shortage.
- Minimize the disruption to customers' lives and businesses while meeting demand reduction goals.
- Maintain drinking water quality at acceptable levels throughout the shortage.
- Promote equity among Cascade Members in responding to the supply shortage.

4.3.2 Triggers of Mandatory Stage

- 1) Upon notice from SPU that it has activated the Mandatory Stage of their WSCP, the Cascade Board will consider activation of the Mandatory Stage; or
- 2) In the event a supply shortage or threat of a supply shortage requires immediate action to prevent risks to public health and safety, the Cascade CEO may declare an emergency and activate the Mandatory Stage, and, at its next meeting, the Cascade Board will take action to end or continue activation; or

- 3) The Cascade Board may authorize activation of Cascade's Mandatory Stage.

4.3.3 Communication Actions of Mandatory Stage

Once the Mandatory Stage has been activated by Cascade, Cascade will:

- Inform Cascade Members they are required to activate their Mandatory Stage (or equivalent actions per each Member's individual SMP), in a manner that is consistent with Cascade's SMP. This will not apply to Cascade Members exempted per Section 3.4 of this SMP. Enforcement actions may be needed in the Mandatory Stage. Cascade expects each Member to enforce restrictions in a manner suitable to the local service area or to work with other local governments having enforcement powers to do so.
- Gather information from SPU regarding any water quality or water pressure problems, if any, that are identified or may possibly occur at the mandatory stage, and communicate these to Cascade Members' management, operations staff, and communications staff.
- Continue communication actions from the Voluntary Stage, with modifications as appropriate for the Mandatory Stage (as determined in consultation with SPU and Cascade Members).

4.3.4 Operating Actions of Mandatory Stage

- Cascade will continue operating actions from the previous stages.
- Cascade will initiate planning and preparation for Emergency Stage actions, including an assessment of potential staffing impacts, training needs, and communications strategies. Cascade will assist Members to plan specific actions that may be needed if the Emergency Stage is activated.
- If necessary, the Board will consider enforcement actions against any Members who do not comply with Mandatory Stage actions, as allowed under the 2012 Joint Agreement.

4.4 Emergency Stage

At this stage, Cascade and Members recognize a critical water situation exists and, without additional significant curtailment actions, a shortage of water for public health, safety, and fire protection is imminent. This would be used as the last stage of a progressive drought or similar situation, or to address an immediate crisis such as a disruption to water sources, treatment, or transmission facilities. This type of situation has never occurred in Cascade's history but could occur during a very severe drought or under emergency conditions such as a major earthquake that ruptures transmission pipelines.

4.4.1 Objectives of Emergency Stage

- Strive to meet the demand reduction goals established for this stage, recognizing that customers' lives and businesses may be significantly impacted in order to achieve necessary water savings. Goals will be determined in consultation with SPU based on the characteristics and severity of the water shortage.
- Promote equity among Cascade Members in responding to the supply shortage.

4.4.2 Triggers of Emergency Stage

- 1) Upon notice from SPU that it has activated the Emergency Stage of their WSCP, the Cascade Board will consider activation of the Emergency Stage; or
- 2) In the event a supply shortage or threat of a supply shortage requires immediate action to prevent risks to public health and safety, the Cascade CEO may declare an emergency and activate the Emergency Stage, and, at its next meeting, the Cascade Board will take action to end or continue activation; or
- 3) The Cascade Board may authorize activation of Cascade's Emergency Stage.

If SPU activates its Emergency Stage, Cascade anticipates Section 12.1 (Emergency Events) of the Block Contract would also be triggered. This section permits SPU to curtail supplies to Cascade, on a proportional basis with its retail customers and other wholesale customers.

4.4.3 Communication Actions of Emergency Stage

Once the Emergency Stage has been activated by Cascade, Cascade will:

- Inform Cascade Members they are required to activate their Emergency Stage (or equivalent actions per each Member's individual SMP), in a manner that is consistent with Cascade's SMP. This will not apply to Cascade Members exempted per Section 3.4 of this SMP. Enforcement actions may be needed in the Emergency Stage. Cascade anticipates each Member will enforce restrictions in a manner suitable to the local service area or will work with other local governments having enforcement powers to do so.
- Continue and intensify communication actions from the previous stages, with modifications as appropriate for the Emergency Stage (as determined in consultation with SPU and Cascade Members). This includes, but is not limited to, Cascade's role in supporting effective communications among individual Cascade Members and SPU.
- For Members that have independent supply, request they rely as much as possible on these supplies, to reduce pressure on the Cascade regional supply.

- Alert Members of particular operational problems that may occur with system-wide reduced water consumption and communicate these to Cascade Members' management, operations staff, and communications staff and on the Cascade website. These could include, for example, taste and odor problems and reduced pressures in Member distribution systems.
- Assist Cascade Members to define and communicate exemptions for medical facilities and other facilities having key responsibilities for public health and safety.

4.4.5 Operating Actions of Emergency Stage

- Cascade will continue to monitor staffing impacts, training needs, and communications strategies and make adjustments where feasible to enhance effectiveness of the regional water shortage response.
- If feasible and applicable, Cascade will make staff resources available to Cascade Members to assist them in the water shortage response. This may include temporary reassignment of Cascade staff and/or outsourcing of specialized functions or additional staffing resources that could provide assistance to Cascade Members.
- If volunteer services are available and deemed valuable to the water shortage response, and if desired by the Members, Cascade will coordinate volunteers on behalf of its Members.
- If necessary, the Board will consider enforcement actions against any Members who do not comply with Emergency Stage actions, as allowed under the 2012 Joint Agreement.

TABLE 1. Triggers for Plan Activation and of Curtailment Stages

TRIGGERS	CASCADE SMP/Stage	MEMBERS
SPU activates to Advisory Stage	Advisory Stage	Cascade will inform and advise Members
SPU activates to Voluntary Stage <u>plus</u> CEO activation (Board confirmation at next meeting); or CEO declaration of emergency (Board confirmation at next meeting); or Board Action	Voluntary Stage	Member compliance required
SPU activates to Mandatory Stage <u>plus</u> Board Action; or CEO declaration of emergency (Board confirmation at next meeting); or Board Action	Mandatory Stage	Member compliance required
SPU activates to Emergency Stage <u>plus</u> Board Action; or CEO declaration of emergency (Board confirmation at next meeting); or Board Action	Emergency Stage	Member compliance required

Table 2. Four Stages of Curtailment

	Advisory	Voluntary	Mandatory	Emergency
Theme of Public Messages from SPU		A shortage has occurred. We are requesting voluntary curtailment to reduce demand.	A severe shortage has occurred. Mandatory curtailment is necessary and specific uses of water are restricted.	An emergency shortage has occurred. Mandatory curtailment is necessary and public health and safety uses are the priority.
Cascade Communication Actions	<ul style="list-style-type: none"> • Advise Cascade Members to activate their Advisory Stage. • Establish a regular communication mechanism with Members. • Request Cascade Members carry out supply-side management actions. • Participate on SPU's Water Shortage Advisory Group. 	<ul style="list-style-type: none"> • Inform Cascade Members they are required to activate their Voluntary Stage. • Request Cascade Members report to Cascade regarding supply-side management actions. For Members that have independent supply, this may include relying more heavily on these supplies. • Communicate regularly with Cascade Members. • Participate on SPU's Water Shortage Advisory Group. • Assist Cascade Members to acquire and distribute public information materials. 	<ul style="list-style-type: none"> • Inform Cascade Members they are required to activate their Mandatory Stage, including enforcement as appropriate. • Gather information from SPU on water quality or pressure problems and communicate these to Members. • Continue communication actions from the Voluntary Stage, with modifications as appropriate for the Mandatory Stage. 	<ul style="list-style-type: none"> • Inform Cascade Members they are required to activate their Emergency Stage, including enforcement as appropriate. • Continue and intensify communication actions from the Mandatory Stage. • For Members that have independent supply, request they rely as much as possible on these supplies. • Alert Members of particular operational problems that may occur with system-wide reduced water consumption. • Assist Cascade Members to define and communicate exemptions for public health and safety.
Cascade Operating Actions	<ul style="list-style-type: none"> • Initiate preparation for Voluntary Stage. 	<ul style="list-style-type: none"> • Assess revenue implications remedies. • Initiate preparation for Mandatory Stage. 	<ul style="list-style-type: none"> • Continue operating actions from the Voluntary Stage • Initiate preparation for Emergency Stage. • If necessary, consider enforcement actions against any non-complying Member. 	<ul style="list-style-type: none"> • Continue operating actions from Mandatory Stage. • Make staff resources available to Cascade Members. • Coordinate volunteers on behalf of Members.

APPENDIX A

POSSIBLE VOLUNTARY STAGE CUSTOMER WATER SAVING ACTIONS (Adapted from SPU's 2019 Water Shortage Contingency Plan)

Potential Customer Demand Reduction Actions ¹									
(See the footnotes to understand how to use this list)									
#	End Use ²	Behavior vs Hardware ³	SMP Stage ⁴	Indoor vs Outdoor ⁵	Season ⁶	Sector ⁷	Demand Reduction Action ⁸	Enforce ⁹	Potential Exemption ¹⁰
1	Clothes Washing	Behavior	N/A - Conservation	Indoor	Year Round	NR	Towels On Request: Provide new towels only on request.	No	
2	Clothes Washing	Hardware	N/A - Conservation	Indoor	Year Round	SF & MF	Efficient Clotheswashers: If buying a new clotheswasher, select a water-efficient model. Clotheswashers are the second largest water users in homes.	No	
3	Clothes Washing & Dish Washing	Behavior	N/A - Conservation	Indoor	Year Round	All	Wash Full Loads: Wash only full loads of laundry and dishes.	No	
4	Cooling Towers	Behavior	N/A - Conservation	Indoor	Year Round	NR	Check Cooling Towers: Check cooling towers for overflow and excessive blow down.	No	
5	Dish Washing	Behavior	N/A - Conservation	Indoor	Year Round	SF & MF	Don't Pre-Rinse Dishes: Don't pre-rinse dishes unless heavily soiled. Most new dishwashers don't require pre-rinsing.	No	
6	Faucets	Behavior	N/A - Conservation	Indoor	Year Round	SF & MF	Turn Off Tap: Turn off the tap while brushing your teeth or shaving.	No	
7	Faucets	Behavior	N/A - Conservation	Indoor	Year Round	All	Minimize Garbage Disposal: Put food waste in your compost bin, rather than using your garbage	No	
8	Faucets	Behavior	N/A - Conservation	Indoor	Year Round	NR	Thaw in Fridge: Thaw frozen food in the refrigerator, rather than under running water.	No	
9	Faucets	Hardware	N/A - Conservation	Indoor	Year Round	SF & MF	Efficient Faucets: Replace older bathroom faucet aerators with WaterSense models, which use far less water. <i>(Note: There are different flow rates for residential vs non-residential. This is the residential version.)</i>	No	

Potential Customer Demand Reduction Actions¹

(See the footnotes to understand how to use this list)

#	End Use ²	Behavior vs Hardware ³	SMP Stage ⁴	Indoor vs Outdoor ⁵	Season ⁶	Sector ⁷	Demand Reduction Action ⁸	Enforce ⁹	Potential Exemption ¹⁰
10	Faucets	Hardware	N/A - Conservation	Indoor	Year Round	NR	Efficient Faucets: Replace older bathroom faucet aerators with newer, more-efficient models that use 0.5/1.0 gallon per minute or less. (Note: There are different flow rates for residential vs non-residential. This is the non-residential version.)	No	
11	Faucets	Behavior	Voluntary	Indoor	Year Round	NR	Water On Request: Serve water only on request, and then ask before refilling.	No	
12	Fire Lines	Behavior	Mandatory	Indoor	Year Round	NR	No Fire Line Testing: Fire line testing within buildings is prohibited. (Note: Confirm w/ Fire Department this is reasonable.)	No	Yes
13	Hose	Behavior	N/A - Conservation	Outdoor	Year Round	All	Use a Broom Not Hose: Use a broom, rather than a hose, to clean sidewalks, driveways, and	No	
14	Hose	Behavior	N/A - Conservation	Outdoor	Year Round	All	Hose Shut-Offs: Never leave a hose running; always use a shut-off nozzle.	No	
15	Hose	Behavior	Mandatory	Outdoor	Year Round	All	No Hose Washing: Using a hose to clean sidewalks, driveways, and patios is prohibited. Use a broom instead.	Yes	Yes
16	Irrigation - Frequency	Behavior	N/A - Conservation	Outdoor	Summer	All	Water Deeply, But Infrequently: It's better to have one or two deep waterings, rather than several shallow waterings.	No	
17	Irrigation - Frequency	Behavior	Voluntary	Outdoor	Summer	All	Eliminate One Watering Day: Cut one day from your typical weekly watering schedule (except for young trees as noted elsewhere). (Note: The similar "Water X Times A Week Maximum" series might be preferred wording, but this is included as an	No	
18	Irrigation - Frequency	Behavior	Voluntary	Outdoor	Summer	All	Eliminate Two Watering Days: Cut two days from your typical weekly watering schedule (except for young trees as noted elsewhere). (Note: The similar "Water X Times A Week Maximum" series might be preferred wording, but this is included as an	No	
19	Irrigation - Frequency	Behavior	Voluntary	Outdoor	Summer	All	Eliminate Three Watering Days: Cut three days from your typical weekly watering schedule (except for young trees as noted elsewhere). (Note: The similar "Water X Times A Week Maximum" series might be preferred wording, but this is included as an	No	
20	Irrigation - Frequency	Behavior	Voluntary	Outdoor	Summer	All	Water Twice A Week Maximum: Limit plant watering to twice a week.	No	

Potential Customer Demand Reduction Actions¹

(See the footnotes to understand how to use this list)

#	End Use ²	Behavior vs Hardware ³	SMP Stage ⁴	Indoor vs Outdoor ⁵	Season ⁶	Sector ⁷	Demand Reduction Action ⁸	Enforce ⁹	Potential Exemption ¹⁰
21	Irrigation - Frequency	Behavior	Voluntary	Outdoor	Summer	All	Water Once A Week Maximum: Limit plant watering to once a week (except for young trees as noted elsewhere).	No	
22	Irrigation - Frequency	Behavior	Mandatory	Outdoor	Summer	All	Water Twice A Week Maximum: Plant watering is only allowed twice a week, in accordance with the published schedule by	Yes	
23	Irrigation - Frequency	Behavior	Mandatory	Outdoor	Summer	All	Water Once A Week Maximum: Plant watering is only allowed once a week, in accordance with the published schedule by address.	Yes	
24	Irrigation - Method	Behavior	N/A - Conservation	Outdoor	Summer	All	Tune Up Automatic Systems: Do an efficiency tune up of your automatic irrigation system such as fixing overspray onto sidewalks and ensuring sprinkler heads reach adjacent sprinkler	No	
25	Irrigation - Method	Behavior	N/A - Conservation	Outdoor	Summer	All	Get Water to the Roots: Use soaker hoses, drip irrigation, or watering wands to deliver water where it's needed.	No	
26	Irrigation - Method	Behavior	N/A - Conservation	Outdoor	Summer	All	Water Young Trees Efficiently: Water young trees efficiently using a water bag. Trees planted 5 or fewer years ago need 15-20 gallons of water twice a week to thrive.	No	
27	Irrigation - Method	Behavior	Voluntary	Outdoor	Summer	All	Water Young Trees Efficiently: Water young trees efficiently using a water bag. Trees planted 5 or fewer years ago need 15-20 gallons of water once a week to survive. (Note: This is only appropriate if the maximum temperatures are in the low 70s w/ occasional showers and not peak daylight hours.)	No	
28	Irrigation - Method	Hardware	N/A - Conservation	Outdoor	Summer	All	Upgrade Automatic Systems: Consider efficiency upgrades to your automatic irrigation system such as weather-based or soil-based	No	
29	Irrigation - Method	Behavior	Mandatory	Outdoor	Summer	All	No Automatic Irrigation: Use of automatic irrigation systems is prohibited. Watering by hand, soaker hose, and/or drip irrigation is allowed.	Yes	Yes
30	Irrigation - Other	Hardware	N/A - Conservation	Outdoor	Summer	All	2 Inches of Mulch: Put 2 inches of mulch on planting beds and around trees, which reduces evaporation. Keep the mulch a hands-width away	No	
31	Irrigation - Other	Behavior	Mandatory	Outdoor	Summer	All	No Irrigation: Irrigation is prohibited.	Yes	Yes

Potential Customer Demand Reduction Actions¹

(See the footnotes to understand how to use this list)

#	End Use ²	Behavior vs Hardware ³	SMP Stage ⁴	Indoor vs Outdoor ⁵	Season ⁶	Sector ⁷	Demand Reduction Action ⁸	Enforce ⁹	Potential Exemption ¹⁰
32	Irrigation - Plant Material	Behavior	N/A - Conservation	Outdoor	Summer	All	Mow High: Set your lawn mower blade to cut grass 2 inches high, which reduces evaporation.	No	
33	Irrigation - Plant Material	Behavior	Voluntary	Outdoor	Summer	SF & MF	Let Lawn Go Dormant: If your lawn isn't already dormant (brown), let it go dormant until the fall rains return. Just water deeply once each month to keep roots alive.	No	
34	Irrigation - Plant Material	Hardware	Voluntary	Outdoor	Summer	All	Plant in Fall: Consider delaying new plantings. Fall is the best time for planting new trees, shrubs and perennials, since rain provides natural irrigation.	No	
35	Irrigation - Plant Material	Behavior	Mandatory	Outdoor	Summer	All	No Lawn Watering: Watering of lawns is prohibited.	Yes	Yes
36	Irrigation - Timing	Behavior	N/A - Conservation	Outdoor	Summer	All	Water Early or Late: Water before 8am or after 7pm, which reduces evaporation.	No	
37	Irrigation - Timing	Behavior	Mandatory	Outdoor	Summer	All	Water Early or Late: Watering between 8am and 7pm is prohibited, due to high evaporation.	Yes	
38	Kitchen	Hardware	N/A - Conservation	Indoor	Year Round	NR	Commercial Kitchen Equipment: If buying new food steamers, dishwashers, or ice machines, select water-efficient models.	No	
39	Leaks	Behavior	N/A - Conservation	Outdoor	Summer	All	Fix Leaks: Check for and fix outdoor leaks, such as at hose bibs, spray heads, valves, and broken	No	
40	Leaks	Behavior	N/A - Conservation	Indoor	Year Round	SF & MF	Fix Leaks: Check for and fix indoor leaks, such as at faucets. Also, check your toilets for silent leaks. Put several drops of food coloring in your toilet tank. After 10 minutes, if you have color in the toilet bowl, you have a flapper leak. <i>(Note: For the non-residential sector, specify for "tank" toilets for the</i>	No	
41	Other	Behavior	N/A - Conservation	Indoor	Year Round	NR	Equipment Not in Use: Turn off water-using equipment when not in use, including dishwashers, garbage disposals, and food troughs.	No	
42	Other	Behavior	N/A - Conservation	Both	Year Round	NR	Employee Awareness: Increase employee awareness about using water wisely and encourage their suggestions.	No	
43	Other	Hardware	N/A - Conservation	Indoor	Year Round	NR	Other Water-Using Equipment: Consider upgrading any other water-using equipment to models that are more efficient.	No	

Potential Customer Demand Reduction Actions¹

(See the footnotes to understand how to use this list)

#	End Use ²	Behavior vs Hardware ³	SMP Stage ⁴	Indoor vs Outdoor ⁵	Season ⁶	Sector ⁷	Demand Reduction Action ⁸	Enforce ⁹	Potential Exemption ¹⁰
44	Pools & Hot Tubs	Behavior	N/A - Conservation	Outdoor	Year Round	All	Pool & Hot Tub Covers: Use covers on swimming pools and hot tubs when not in use to	No	
45	Pools & Hot Tubs	Behavior	Voluntary	Outdoor	Year Round	All	Minimize Filling Pools & Hot Tubs: Minimize refilling swimming pools and hot tubs.	No	
46	Pools & Hot Tubs	Behavior	Mandatory	Outdoor	Year Round	All	No Pools & Hot Tubs: Filling swimming pools and hot tubs is prohibited. <i>(Note: Add a statement about safety around empty pools/tubs.)</i>	Yes	Yes
47	Pressure Washing	Behavior	Voluntary	Outdoor	Year Round	All	Minimize Pressure Washing: Do only essential pressure washing.	No	
48	Pressure Washing	Behavior	Mandatory	Outdoor	Year Round	All	No Pressure Washing: Pressure washing is prohibited.	Yes	Yes
49	Showers	Hardware	N/A - Conservation	Indoor	Year Round	All	Efficient Showerheads: Replace older showerheads with WaterSense models, which use	No	
50	Showers	Behavior	Voluntary	Indoor	Year Round	SF & MF	Shorter Showers (a): Reduce your showering	No	
51	Showers	Behavior	Voluntary	Indoor	Year Round	SF & MF	Shorter Showers (b): Reduce your showering time by one minute.	No	
52	Showers	Behavior	Voluntary	Indoor	Year Round	SF & MF	Shorter Showers (c): Reduce your showering time, by two minutes.	No	
53	Showers	Behavior	Voluntary	Indoor	Year Round	SF & MF	Shorter Showers (d): Limit showers to five minutes or less.	No	
54	Toilets	Hardware	N/A - Conservation	Indoor	Year Round	All	Efficient Toilets: If buying a new toilet, look for a WaterSense or Premium WaterSense model, which use far less water than older models. Toilets are the largest water users in homes. <i>(Note: For the non-residential sector, add urinals.)</i>	No	
55	Toilets	Behavior	Mandatory	Indoor	Year Round	SF & MF	Less Toilet Flushing: Flush your toilet less often. As the saying goes, "If it's yellow, let it mellow." Toilet flushing is the largest water use	No	
56	Vehicle Washing	Behavior	N/A - Conservation	Outdoor	Year Round	All	Wash Vehicles Wisely: Wash your vehicle(s) at locations that recycle the water.	No	
57	Vehicle Washing	Behavior	Voluntary	Outdoor	Year Round	All	Minimize Vehicle Washing: Reduce the frequency of, or eliminate, washing vehicles.	No	
58	Vehicle Washing	Behavior	Mandatory	Outdoor	Year Round	All	No Vehicle Washing: Washing of vehicles is prohibited, unless at a location that recycles the	Yes	Yes
59	Water Feature	Behavior	Voluntary	Outdoor	Year Round	All	Turn Off Water Features (a): Turn off non-recirculating water features such as fountains.	No	
60	Water Feature	Behavior	Voluntary	Outdoor	Year Round	All	Turn Off Water Features (b): Turn off all water features such as fountains.	No	

Potential Customer Demand Reduction Actions¹

(See the footnotes to understand how to use this list)

#	End Use ²	Behavior vs Hardware ³	SMP Stage ⁴	Indoor vs Outdoor ⁵	Season ⁶	Sector ⁷	Demand Reduction Action ⁸	Enforce ⁹	Potential Exemption ¹⁰
61	Water Feature	Behavior	Mandatory	Outdoor	Year Round	All	No Water Features (a): Use of non-recirculating decorative water features such as fountains is prohibited.	Yes	
62	Water Feature	Behavior	Mandatory	Outdoor	Year Round	All	No Water Features (b): Use of decorative water features such as fountains is prohibited.	Yes	

1. This is a list of potential actions that customers can take to reduce their water use. The actual actions requested/required for each stage will depend on the severity, likely duration, and timing of the shortage, as well as the demand reduction needed. The list is in Excel, to allow for sorting and filtering, which should help develop the actual list of actions to be implemented. The list is sorted by 1) end use, 2) behavior vs hardware, 3) SMP stage.

2. The end use is how the water is being used and is typically a type of water-using fixture/equipment (e.g., showers).

3. The requested/required list of actions should include both hardware and behavior actions in order to: 1) increase the demand reduction potential, 2) ensure every customer type has actions they can do, and 3) minimize the cost to participate. For example, since some customers do not have control over their water-using hardware, it is important to make sure they have behavior actions. Similarly, since behavior actions are typically free, it is important to include many of them.

4. The stage designation is a suggestion, but may be appropriate to change due to circumstances of a particular shortage. Note the following about the stage designations:

- **N/A - Conservation:** None of the actions are designated as Advisory since that stage is internally focused and is not intended to include outreach to customers. However, some actions are identified as Conservation for two reasons. First, if the public/press become aware that Cascade has activated the SMP (at the Advisory Stage level), Cascade may be asked to provide suggested customer actions. In that case, the Conservation actions (things Cascade recommends continually and do not involve customer sacrifice) would be appropriate. Second, many of the Conservation actions can be promoted in the higher stages since some customers may choose not to follow these recommendations and, thus, while technically conservation actions, can be used as curtailment actions.
- **Voluntary/Mandatory:** The Voluntary and Mandatory actions are true curtailment.
- **Emergency:** No Emergency actions are identified, however they would likely be the Mandatory actions, without most exemptions.

5. The requested/required list of actions should include both indoor and outdoor actions in order to: 1) increase the demand reduction potential, and 2) ensure every customer type has actions they can do. For example, since apartment dwellers won't be able to implement most outdoor actions, it is important to make sure there is a sufficient number of indoor actions for them.

6. The seasonality of the action is important to consider in regards to the timing of the shortage. For example, if the shortage does not occur during the summer, it is unlikely that the Summer actions (mostly irrigation-related) would be useful.

7. SF = single family; MF = multifamily; NR = non-residential (commercial, industrial, institutional). The requested/required list of actions should include options for all sectors in order to: 1) increase the demand reduction potential, and 2) ensure every customer type has actions they can do.

8. The specific language for each measure has been carefully crafted, based on previous implementations of the SMP. However, the language is still just a suggestion and can be edited for many reasons including length. Note that some end uses have several, similar sounding actions. In some cases, it is to provide options for the team to consider (e.g., the number of days to restrict irrigation to). In other cases, it is to provide actions for several stages (e.g., minimize vehicle washing for voluntary and prohibit vehicle washing in mandatory.)

9. The column indicates whether Cascade would likely enforce the action. Enforcement is only applicable to the Mandatory (and the eventual Emergency) actions. Outdoor actions are typically stronger candidates for enforcement, compared to indoor actions, since Cascade staff can more readily see outdoor water uses (e.g., irrigation, hose use, car washing, etc.).

10. Some Mandatory (and the eventual Emergency) actions will have exemptions associated with them, such as for irrigation restrictions. This column indicates a **potential** exemption. See a separate appendix for more details regarding exemptions.

For more water conservation tips, visit cascadewater.org.

APPENDIX B

CUSTOMER OUTREACH CHECKLIST

This checklist is intended to be used by all Cascade Members during implementation of the Shortage Management Plan. The checklist differentiates among actions that Seattle Public Utilities (SPU) will perform, actions that Cascade will perform on behalf of its Members, and actions that each Member is responsible for performing.

Customer Outreach Actions	
SPU Is Responsible For:	
	Coordinating with Ecology, Health, and Governor's Office.
	Coordinating with Tacoma and Everett as needed.
	Issuing regional press releases to major media outlets (& conduct subsequent media interviews).
	Purchasing regional traditional media ads such as tv, radio, print, as appropriate.
Cascade Is Responsible For:	
	Coordinating outreach communications with SPU.
	Coordinating outreach communications with Members.
	Creating a flyer that helps customers understand there is a shortage situation and understand how to reduce their water use.
	Providing outreach to key landscaping and irrigation contacts including local nurseries (e.g., Bellevue Nursery, Grey Barn, Squak Mountain), industry organizations (WALP, WSNLA), and large landscape and irrigation firms.
	Providing drought information on Cascade's website and social media platforms.
	Providing drought information at Cascade Gardener classes.
	Providing drought information at community events at which Cascade participates.
Members Are Responsible For:	
	Posting drought information on the Member's utility website homepage.
	Making the flyer that Cascade created readily available (e.g., on utility website, in utility lobby and/or City Hall, distribute in public areas such as community centers, libraries, etc.).
	Including drought messages in existing utility publications such as bills, bill inserts, newsletters, etc.
	Including drought messages in any social media platforms used by the Member.
	Posting signage in appropriate locations (e.g., at utility buildings, on utility vehicles, in key locations in service area).
	Briefing utility staff regarding the drought.
	Highlighting the drought message at any community events at which the Member is participating.