



DATE: July 20, 2021

TO: Mayor and City Council

FROM: Director of Public Works

SUBJECT: Urban Water Management Plan and Water Shortage Contingency Plan: Review and Adopt the 2020 Urban Water Management and 2020 Water Shortage Contingency Plans

RECOMMENDATION

That the City Council adopts two resolutions (Attachment II and Attachment III) approving the 2020 Urban Water Management Plan (UWMP) and the 2020 Water Shortage Contingency Plan (WSCP).

SUMMARY

All water agencies in California that deliver at least 3,000-acre feet of water each year and have 3,000 or more service connections, including Hayward, are required to prepare an UWMP and WSCP¹ every five years. The 2020 UWMP² outlines the City's water demands through 2040 to evaluate and develop a plan to ensure sufficient supplies for residents and businesses. Because Hayward relies exclusively on the San Francisco Public Utilities Commission (SFPUC) Regional Water System for potable water supply, available supplies from that source are critical to the City's planning. The WSCP provides guidance for managing water supply shortages in a proactive and methodical way.

The City worked with the Bay Area Water Supply and Conservation Agency (BAWSCA) to develop water demand projections using a consistent methodology. Water supply availability information was provided by SFPUC. In 2020, the SFPUC has incorporated certain flow assumptions based on the State Water Resources Control Board's Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (known as the Bay-Delta Plan). These

¹ <https://www.hayward-ca.gov/sites/default/files/Hayward%202020%20Water%20Shortage%20Contingency%20Plan%202021%20July%202021.pdf>

² <https://www.hayward-ca.gov/sites/default/files/Hayward%202020%20UWMP%20Public%20Release%202021%20July%202021.pdf>

assumptions significantly limit supplies in the event of a multiple-year drought, as documented in the UWMP and discussed in this report.

Although the WSCP is appended to the UWMP, staff recommends that the two documents be adopted separately so that Council has the ability to amend the WSCP as needed to meet supply conditions without amending the UWMP.

BACKGROUND

The 1983 Urban Water Management Planning Act and subsequent additional legislation requires all California water agencies that supply 3,000 or more-acre feet of water per year, or have 3,000 or more service connections, to prepare an UWMP every five years. With about 36,000 service connections and annual deliveries of over 15,000-acre feet of water last year, Hayward is subject to the provisions of the Act. In general, UWMPs are intended to document water supply planning and management, including projected water demand, water supplies, drought reliability, and water conservation. They also connect water supplies to land use planning, as well as climate change and other relevant issues. The Council adopted the 2015 UWMP in June 2016.

State of California Department of Water Resources (DWR) held workshops in late 2020 and early 2021, and issued a guidance document in April 2021 to help agencies ensure that all required UWMP elements are addressed. DWR has also continued to standardize the organization of the document and data tables in order to provide consistency among agencies and to facilitate State-wide compilation of the data. Staff utilized the services of a consultant firm, Maddaus Water Management, to support preparation of the draft 2020 UWMP in accordance with DWR guidance.

A number of new requirements have been added to the 2020 UWMPs. Among the more significant changes are:

- Five consecutive dry-year water reliability assessments to analyze water supplies over an extended drought period;
- Drought risk assessment to document water supplies over extended near-term drought conditions;
- Seismic risk assessments to address the vulnerability of water system facilities in the event of an earthquake; and
- Water Shortage Contingency Plans that include specific elements and more prescriptive water shortage responses.

In addition to the new requirements, the 2020 UWMP preparation was also extensively affected by the adoption at the State level of the 2018 Bay-Delta Plan, which impacts the reliability of supplies from Hayward's wholesale water supplier, SFPUC. While implementation of the Bay-Delta Plan is uncertain for various reasons, impacts related to water supply limitations in dry years needed to be considered, as do SFPUC's other 25 wholesale customers. Staff coordinated with the SFPUC on issues related to potable water

supply reliability. Staff also worked with BAWSCA staff on items of common interest among all SFPUC wholesale customers.

The 2020 UWMP was due to the State by July 1, 2021. However, given the increased complexity and new requirements, and the significant impact of the Bay-Delta Plan on the City's water supply in multiple dry years, staff needed additional time to ensure that the document is complete and accurate. There is no financial penalty for late submittal.

DISCUSSION

The 2020 UWMP addresses a range of issues related to water demand, supply reliability, and conservation. The following paragraphs highlight the information contained in the UWMP.

A note regarding units of measure: The UWMP, and thus this report, uses several different units of measure for water volume. DWR requires agencies to select a consistent unit of measure for reporting water volumes in UWMPs. Of the three available options for reporting annual quantities (hundred cubic feet (CCF), acre-feet (AF) and million gallons (MG)), staff believes that million gallons is the most easily understood by readers and thus selected it for the 2020 UWMP. When appropriate, this unit is used in the Council report to maintain consistency with the UWMP. However, in certain instances, units of million gallons per day (mgd) or gallons per day (gpd) are utilized to add clarity to the discussion. During the discussion of the Water Conservation Act of 2009, the measure used is gallons per capita per day (gpcd), which is a common measure of water use efficiency and utilized in the legislation.

Projected Water Demand and Water Supplies

Hayward's per-capita water use, the most effective measure of a community's water use efficiency, is one of the lowest among agencies that purchase water from the SFPUC and across the state, despite the presence of a state university, community college, a major hospital, and a vibrant industrial sector. Hayward has long maintained a relatively low per-capita usage, which decreased even further as a result of the community's response to drought conditions in the most recent drought. This section describes the basis and factors considered in developing future water use demand projections.

Projecting future water demand is more of an art than science, particularly looking beyond the next five to ten years. Water consumption varies from year to year, depending on precipitation, economic conditions, housing growth and other factors. Water use from 2014 to 2017 was significantly impacted by drought conditions, which prompted a directive from the State Water Resources Control Board to reduce state-wide water use by 25%. Given the City's already very low per capita water use, this resulted in an 8% reduction requirement for Hayward. Hayward customers far exceeded that mandated goal with peak savings of 23%. More recently, COVID-19 restrictions limited some economic activity. It is not yet known what portion, if any, of these impacts will be permanent and how much recovery will occur when weather conditions normalize and assuming that economic development rebounds. For the purpose of projecting water, staff conservatively assumed normal climate and economic conditions would exist during the UWMP planning period.

The demand projections were developed using a detailed model, which establishes base-year demand conditions and forecasted future water demand based on anticipated growth and accounting for Hayward-specific factors listed below. The model also incorporates water savings that could realistically be achieved with continued active water conservation programming and increasingly stringent plumbing code standards and market-driven water efficient appliances. In preparing the water demand projections, staff considered factors such as:

- Known potential residential and commercial development, particularly in the Priority Development Areas, such as Downtown, South Hayward BART Corridor, and Mission Corridor, and development opportunities in the Route 238 Right-of-Way Study Area
- Council priorities and General Plan policies and strategies to:
 - improve neighborhoods;
 - encourage home renovations, including installation of water efficient landscaping where little no landscaping currently exists; and
 - attract and retain industrial businesses, particularly manufacturing, green technology, and knowledge- and innovation-based technology.
- Population and job growth
- California State University and Chabot College Master Plans, which envision significant growth in student populations and facilities

Population Estimates

Estimating future population is a key factor in projecting water demand and staff gave considerable thought to how best to incorporate reasonable estimates into the model, while recognizing that population figures alone do not necessarily capture the entire potential water use. Based on the California Department of Finance's (DOF) estimate for January 1, 2020, residential population stood at just over 160,000. However, staff had concerns that currently available regional projections of future population, notably the Associated of Bay Area Governments (ABAG) *Projections 2040*, would not be truly representational of Hayward's potential growth and the transformation currently under way.

Staff determined that a Hayward-centric study would be more appropriate. Utilities master plan documents must account for all potential growth over a lengthy planning horizon to ensure that infrastructure will accommodate demand. One of the most recent such documents was the Wastewater Collection System Master Plan, prepared in 2014, which estimated that residential flow would increase by 2.2% per year. Staff recognizes that several factors can affect this flow increase, but population is one of the main drivers and thus considered this estimate to be a reasonable and appropriate means of forecasting future water demand. The Water Distribution System Master Plan, developed around the same time, was not used because it relied in part on demand projections included in the now very outdated 2010 UWMP. The selected methodology results in a projected population of 251,800 in 2040, which is considerably higher than found in other sources.

While the actual population growth may or may not reach the UWMP estimates, staff believes that they more accurately reflect changes in Hayward, including a higher amount of developable land, recent unprecedented housing and commercial development, and availability and affordability of older housing stock that will be rehabilitated, including installation of some drought tolerant landscaping where no landscaping currently exists. It is critical that water demand projections encompass the total potential usage to plan for sufficient supplies and reliable infrastructure.

That said, while Hayward’s population projections contained in the 2020 UWMP are based on reasonable assumptions given the available options, it is also true that soon-to-be-available data, including economic impacts from COVID-19 restrictions, updated ABAG projections, and release of the 2020 United States Census information, could impact water demand projections. For these reasons, staff plans to update the water demand study when additional population and job growth information is available, and depending on the outcome of this work, may recommend that the Council amend the 2020 UWMP before the next update is due.

While the vast majority of water demand will be met with potable water supplies from SFPUC, staff also factored recycled water into overall projections. As the Council is aware, recycled water deliveries of 73 MG per year, an average of 200,000 gallons per day, will begin later in 2021 to about 30 customers for irrigation use. Staff will be preparing a Recycled Water Master Plan to evaluate other potential uses of recycled water. Although the quantities of recycled water in the future will not be fully known until the planning is complete, staff is conservatively estimating annual deliveries of 110 MG, which equals an average of 300,000 gpd, in 2040.

Taking these factors into account, Hayward’s potable water use could increase to 7,561 MG in 2040, compared to 2020 deliveries of 5,082 MG. Recycled water could account for an additional 110 MG of water use by 2040. Table 1 summarizes projected water usage in five-year increments.

Table 1 – Projected Water Demand 2020 – 2040 (in MG)

Source	2020 (Actual)	2025	2030	2035	2040
Potable Water	5,082	6,490	6,789	7,174	7,561
Recycled Water	177 ⁽¹⁾	73	73	73	110
Total	5,259	6,563	6,862	7,247	7,671

(1) Secondary treated wastewater delivered to the Russell City Energy Center in 2020. Going forward, it is recommended that these deliveries no longer be considered recycled water. Recycled water deliveries in 2025 and forward are from Hayward’s Recycled Water Project. See Water Supply Sources section for discussion of this change.

It should be noted that these projections represent the maximum potential usage, which may or may not be realized depending upon a combination of factors. Whether Hayward actually reaches these levels, and how closely the increases align with the five-year increments, will

depend largely on economic activity, residential and industrial development, climate conditions, water pricing, and other factors over which the City has little control. However, the City needs to ensure that all possible use is documented in the UWMP to account for water supplies to accommodate both new development and community revitalization.

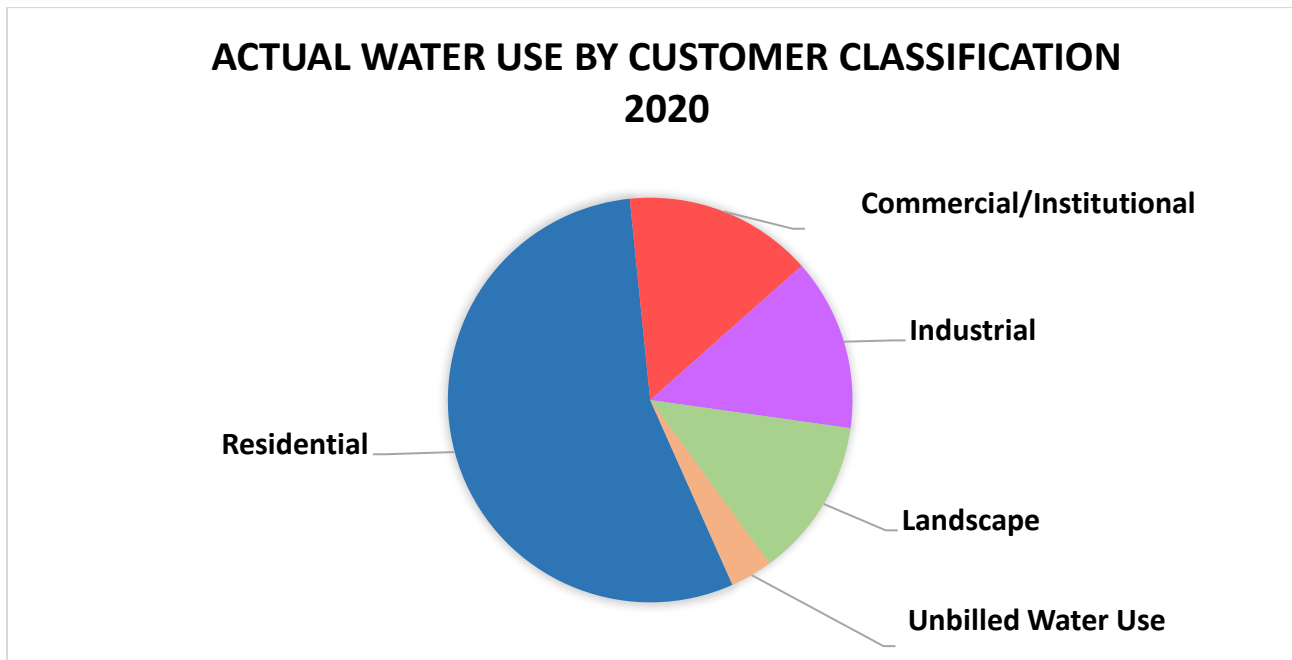
As noted earlier, Hayward's per capita water use is among the lowest in the state and a justifiable source of pride to the City. While it is true that the community as a whole is a good steward of water supply, it is also true that the low usage is due in part to a number of properties that have little or no landscaping, and as a result may contribute to blight. As neighborhood improvement strategies are implemented and as Hayward's relatively affordable homes come under new ownership, staff anticipates that outdoor residential water use will increase. Even with water efficient landscaping, water is needed for plant establishment and some water is also required for maintenance. And, although it is true that new and renovated homes benefit from the installation of low-flow fixtures and water efficient landscaping, there is also potential for higher water use due to the number of water using devices, increased landscaping, and amenities such as pools and spas. With the Council's desire to improve the overall appearance and livability of the City, residential water usage can reasonably be expected to increase accordingly.

There are other considerations that distinguish Hayward from some other Bay Area communities, including the expectation that Hayward will continue to grow in population and dwelling units. There is significant pressure on the City to construct housing all of types, including low-income housing, and Hayward's affordable and available developable and re-developable land continues to attract developers, and the UWMP must reflect this reality. The City's Strategic Roadmap includes measures that will impact water use, including strategies to produce housing and to become a more environmentally sustainable community, in part, by planting 1,000 trees in the City annually.

Regarding non-residential water use, it is important to consider the types of businesses that are expected to locate in Hayward. There is potential over the next twenty years for underutilized warehouses and distribution space to be converted to manufacturing and research uses, which typically use more water. Hayward offers relatively affordable space, Class A industrial structures, access to freeways, a qualified workforce, and public transportation. Industrial and commercial water use projections account realistically for these changes to the makeup of Hayward's business sector.

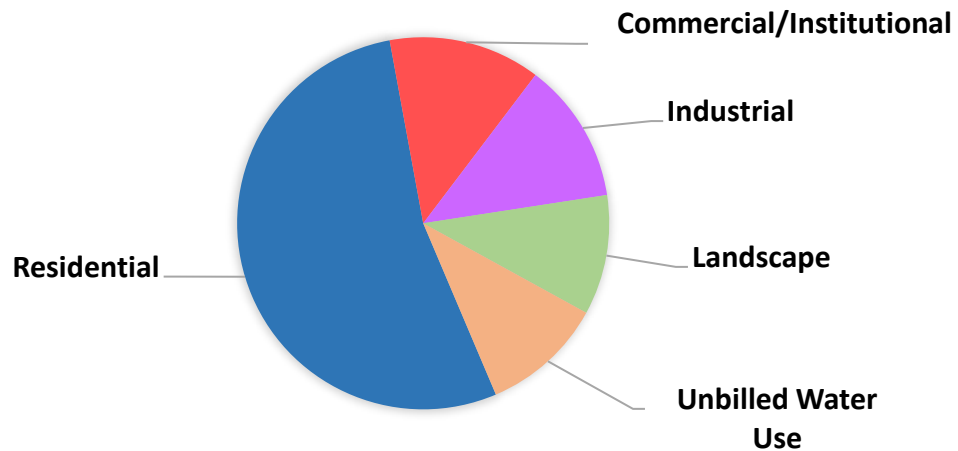
Non-residential water use is also affected by institutional development. Hayward is home to a state university and community college, both of which have developed master plans to accommodate substantial growth in student population and facilities, including, in the case of California State University, additional student housing.

The chart below illustrates the water use among various customer classes as a percentage of total usage in 2020. About 55% of all use is attributable to residential customers, with industrial and commercial/institutional use (including educational facilities) accounting for about 30%. Landscape irrigation accounts for about 15%, and the remainder is due to unbilled water due to system losses, firefighting, main flushing and other factors. Unbilled water as a percentage of the total was unusually low in 2020 and would be expected to increase.



The next chart indicates that water use among customer classes is expected to remain relatively stable in the future, suggesting that increases in water use are not related to one customer sector only but are balanced among residential and non-residential users. It is anticipated that residential use will continue to account for just above 50% of the total, with the percentage of use by non-residential sectors remaining fairly constant. Landscape use is expected to decrease slightly as irrigation systems become more efficient. As noted earlier, the percentage of unbilled water was unusually low in 2020 and is not sustainable in the long term. While unbilled water as a percentage of total SPFUC purchases is expected to increase, the City will maintain a proactive leak detection and repair program to minimize losses to the extent practicable.

PROJECTED WATER USE BY CUSTOMER CLASSIFICATION 2040



Water Supply Sources

As shown in the table in the previous section, projected demand is expected to be met through a combination of potable and recycled water, with potable water demand obtained from SFPUC.

Since 1963, the City has received its entire water supply exclusively from the SFPUC regional water system, based on an agreement between Hayward and SFPUC that provides Hayward with the water it needs as long as supplies are within SFPUC's ability to deliver, that is, as long as water supplies are normal. The SFPUC meets its water supply obligations with an integrated system of imported water from Hetch Hetchy and local watershed facilities. The City maintains the water distribution system, guided by the Water Distribution System Master Plan, in a manner to ensure reliable and well maintained infrastructure.

Recycled water is a drought-proof and reliable supply that is increasingly accepted, and in fact sought after, primarily for irrigation and some specific industrial purposes. Phase I of the Hayward Recycled Water Project has been completed, including connections to about 30 customers. The City is awaiting final approval from the State to deliver tertiary treated recycled water, which is expected later this summer or early fall. The initial phase will provide an average of 200,000 gpd, with peak usage in the summer, offsetting the demand for potable water for these uses. Staff will be initiating a Recycled Water Master Plan to evaluate opportunities to expand the use of recycled water.

The City also delivers secondary treated wastewater to the Russell City Energy Center, adjacent to the Water Pollution Control Facility, where it is further treated by the RCEC and used for cooling water. In 2020, an average of just under 500,000 gpd was delivered, well below the quantities anticipated when the facility was constructed. While the City has previously included this usage as recycled water, going forward, staff recommends that only

tertiary treated recycled water delivered to customers by the City be considered recycled water for the purposes of water supply planning. The RCEC use was never included in the City's potable water demand projections, so the secondary treated wastewater is not offsetting any potable demand and therefore inflates the quantity of recycled water without a benefit to potable water demand. Notes are included in the 2020 UWMP to explain this change.

While groundwater is currently used in the City as an emergency supply only, Hayward is the Groundwater Sustainability Agency (GSA) for the portion of the East Bay Plain Groundwater Subbasin that underlies the City. In cooperation with EBMUD, the GSA for the remainder of the Subbasin, Hayward is developing a Groundwater Sustainability Plan to manage the Subbasin in a sustainable manner. At this time there are no plans to utilize groundwater as a potable source; however, it is in Hayward's best interest to maintain authority over its groundwater supply.

Water Supply Reliability

SFPUC has verified its intent to deliver sufficient supplies to meet wholesale demands, including Hayward's projected usage, during years of normal precipitation, and is continuing to increase the reliability of the regional water system in both normal and drought years. However, under drought conditions, all purchasers of SFPUC water, including Hayward, are required to reduce usage. The extent of reductions would depend on available water supplies and seasonal usage by Hayward and other agencies. The Drought Implementation Plan, which the City Council approved in 2009, allocates available water among wholesale purchasers of SFPUC based on an agreed-to methodology for system-wide shortages of up to 20%.

The most critical issue affecting supply reliability at this time is the Bay-Delta Plan, which has been adopted by the State Water Resources Control Board, and which, if implemented, will have serious impacts for SFPUC and its wholesale customers during drought years. Links to two staff reports regarding this important subject are included below as summaries of information provided to the Council Sustainability Committee and the full City Council:

- Update on the 2020 Urban Water Management Plan – Council Sustainability Committee meeting – May 10, 2021³
- Presentation by Nicole Sandkulla, BAWSCA Chief Executive Officer and General Manager, and staff report related to Tuolumne River Voluntary Agreement as an Alternative to the Bay-Delta Plan – City Council Work Session – June 22, 2021⁴

For Hayward, as well as many of the other SFPUC wholesale customers and SFPUC itself, implementation of the Bay-Delta Plan could mean cutbacks of over 50% under certain

³ <https://hayward.legistar.com/LegislationDetail.aspx?ID=4938509&GUID=37E87B2E-CD59-4257-9806-1ED7C5D12586&Options=&Search=>

⁴ <https://hayward.legistar.com/LegislationDetail.aspx?ID=4992612&GUID=A890060A-04E6-46E8-B8D4-C379055B366D&Options=&Search=>

drought conditions by 2040. This would far exceed the supply reductions imposed during the last drought, in which Hayward successfully reduced usage by 23%. Further, for system-wide reductions greater than 20%, cutbacks are allocated equally among wholesale customers rather than in accordance with the Drought Implementation Plan. Therefore, the City’s past and ongoing conservation and low per-capita use would not be taken into consideration.

Table 2 illustrates the potential impacts during multiple year droughts:

Table 2 – Multiple Dry Years Supply and Demand Comparison (in MG)

		2025	2030	2035	2040
First year	Supply totals	4,220	4,397	4,630	4,909
	Demand totals	6,563	6,862	7,247	7,671
	Difference	(2,342)	(2,465)	(2,616)	(2,762)
	Percent Shortage	36%	36%	36%	36%
Second year	Supply totals	3,629	3,782	3,979	4,227
	Demand totals	6,563	6,862	7,247	7,671
	Difference	(2,934)	(3,080)	(3,268)	(3,444)
	Percent Shortage	45%	45%	45%	45%
Third year	Supply totals	3,629	3,782	3,979	4,227
	Demand totals	6,563	6,862	7,247	7,671
	Difference	(2,934)	(3,080)	(3,268)	(3,444)
	Percent Shortage	45%	45%	45%	45%
Fourth year	Supply totals	3,629	3,782	3,979	3,743
	Demand totals	6,563	6,862	7,247	7,671
	Difference	(2,934)	(3,080)	(3,268)	(3,928)
	Percent Shortage	45%	45%	45%	51%
Fifth year	Supply totals	3,629	3,782	3,653	3,743
	Demand totals	6,563	6,862	7,247	7,671
	Difference	(2,934)	(3,080)	(3,594)	(3,928)
	Percent Shortage	45%	45%	45%	51%

NOTE:
(a) Supply and demand include both potable water and recycled water.

While staff does not minimize the criticality of the potential cutbacks, it is important to put the reductions into perspective and consider that the supply shortfalls in the 2020 UWMP are based on worst-case scenarios from the SFPUC and assume full implementation of the Bay-Delta Plan as it currently stands. There are many uncertainties at play including:

- Ongoing negotiations regarding implementation of the Bay-Delta Plan and potential agreement regarding the Tuolumne River Voluntary Agreement
- Potential for increased supplies from SFPUC
- Revised and more equitable methodology for allocating available supplies among wholesale purchasers when cutbacks exceed 20%
- Potential changes in overall demand projections for the Regional Water System
- Uncertainty regarding the actual frequency and duration of cutbacks

Most significantly, negotiations regarding a Tuolumne River Voluntary Agreement (TRVA) are ongoing, and if agreement is reached, the dry year supply situation could improve significantly. As Council heard on June 22, BAWSCA is actively engaged with stakeholders and has provided encouraging updates. The City has been supportive of efforts to achieve agreement and will continue to be engaged in the discussions and keep the City Council apprised of progress.

Short term emergency supplies are available to Hayward through five wells, which can theoretically provide up to 13.6 mgd, as well as emergency interties with Alameda County Water District and East Bay Municipal Utility District. In addition to interties between Hayward and its neighboring agencies, a regional intertie, jointly owned by SFPUC and EBMUD, is located in Hayward and substantially relies on the Hayward distribution system for water delivery. This regional facility has a capacity of 30 mgd.

Water Shortage Contingency Plan

The City's proposed Water Shortage Contingency Plan (WSCP), which is included in the UWMP as Appendix M, is designed to guide the City's response to drought conditions based on the severity of the supply shortage. For 2020, water agencies are encouraged by DWR to adopt WSCP as stand-alone documents so modifications that may be needed to respond to supply conditions can be accomplished without amending the UWMP. Staff recommends this approach for Hayward as it will give the Council greater flexibility in implementing the Plan as water supply conditions change.

A new requirement for the 2020 WSCP is establishment of six prescribed levels of water supply shortage, along with water use reductions measures to be implemented at each level, and estimated savings for each. Hayward's current WSCP includes four such levels. Staff reviewed the City's current successful reduction strategies, along with the suggested actions developed by DWR, and selected measure for each shortage level that would be most effective in achieving the needed water savings. Both the residential and non-residential customers would be impacted. In the most severe shortage scenarios, Levels 5 and 6, it is proposed that the City adopt a moratorium or net zero demand limitation on new connections. Such drastic cutbacks would be very rare

The actions summarized in Table 3 document how the City could achieve target reductions in the event of a supply shortage. The Council would have an opportunity to modify the actions when it declares a water shortage as long as the estimated water savings meet the target

reductions. The Plan also gives Council the ability to implement other measures besides those listed in the Plan if needed to achieve water savings.

Section 11-2.47 of the Hayward Municipal Code, the Prohibition of Wasteful Water Practices Ordinance, already prohibits many water wasteful activities, regardless of water supply conditions, The Ordinance, which was most recently updated in 2017, makes permanent many of the actions that were prohibited during the last drought, such as only serving water in restaurants upon request, requiring automatic shut-off nozzles on hoses, and other such common-sense measures. Since these types of activities are already prohibited, they do not appear on the list below.

Table 3 summarizes the shortage levels and the recommended reduction measures. Note that the actions are cumulative; that is, the measures that would be implemented for a specific shortage level would include all measures up to and including that shortage level.

Table 3 – Summary of Water Shortage Levels and Demand Reduction Actions

Shortage Level	Percent Shortage	Demand Reduction Actions
1	Up to 10%	<ul style="list-style-type: none"> • Expand public education and community messaging • Prohibit irrigation between 9 am and 6 pm • Provide rebates for turf replace (either enhance or more aggressively promote existing program) • Require leaks and broken irrigation equipment be fixed within 5 days • Require that non-residential customers properly maintain water-using equipment
2	11% to 20%	<ul style="list-style-type: none"> • Prohibit non-essential water use for commercial and industrial purposes • Limit irrigation to 3 days per week • Require leaks and broken irrigation equipment be fixed within 4 days • Provide rebates on plumbing fixtures and devices • Prohibit refilling ornamental ponds with potable water • Decrease water line flushing • Require covers for pools and spas
3	21% to 30%	<ul style="list-style-type: none"> • Limit irrigation to 2 days per week • Require leaks and broken irrigation equipment be fixed within 3 days • Decorative water features that use potable water must be emptied and kept dry • Require construction contractors to show how impacts on water use will be mitigated, e.g., for dust control
4	31% to 40%	<ul style="list-style-type: none"> • Limit irrigation to 1 day per week

Shortage Level	Percent Shortage	Demand Reduction Actions
		<ul style="list-style-type: none"> Prohibit refilling of pools with potable water and no new pool permits to be issued
5	41% to 50%	<ul style="list-style-type: none"> Moratorium or Net Zero Demand Increase on new connections Reduce water allocations in all categories Prohibit watering of parks, school grounds and recreation fields.
6	Over 50%	<ul style="list-style-type: none"> Reduce water for commercial, manufacturing and processing Provide water use for public health and safety only, including customer rationing if necessary Prohibit all irrigation Authorize City to shut off non-essential water services

Demand Management

Demand management refers to the full range of efforts that an agency undertakes to control water demand, including water conservation. Hayward is among the lowest per-capita water use, compared to other agencies that purchase water from SFPUC, partially due to the fact that Hayward has long been committed to effective water conservation. The 2020 UWMP includes a full discussion of Hayward’s water conservation programs.

Hayward currently implements a variety of demand management measures, including:

- Customer rebates for replacement of lawns with water efficient landscaping
- Distribution of low-flow showerheads and faucet aerators at no cost to customers
- Public outreach and education, including very popular water efficient landscaping classes
- School education, including in-class curriculum and assembly programs
- Assessment and repair of system leaks to address distribution system losses
- Landscape water budgets and bimonthly water use reports for selected customers with large landscaped areas
- Rain barrel rebates
- Water efficient
- Residential surveys to provide information and devices to single- and multi-family residences
- Conservation pricing to provide financial incentives for conservation
- Water efficient landscaping of City-owned sites and active irrigation management
- Water efficient landscaping ordinances and guidelines

Looking to the future, staff anticipates maintaining the existing programs, as long as they are cost effective, while continuing to evaluate and implement new efforts. Since adoption of the 2015 UWMP, Hayward has implemented an Advanced Metering Infrastructure (AMI) system to automatically transmit water consumption for billing purposes. This system also provides extensive data regarding customer use that will inform water conservation efforts and help the City target resources more effectively. In addition, the City will be launching the customer portal features of AMI in the near future, giving customer access to real-time information about their water consumption, potential leaks, and other data to help them manage water use.

Compliance with Water Conservation Act of 2009 (SB X7-7)

The Water Conservation Act of 2009, also referred to as SB X7-7, was enacted in November 2009 to reduce statewide urban per capita water use by 10% in 2015 and by 20% in 2020. To this end, retail agencies subject to the provisions of SB X7-7, including Hayward, were required to establish water use targets for 2015 and 2020, based on a selected methodology, and adopt the methodology as part of the 2010 UWMP. For the 2020 UWMP, agencies must verify whether they achieved their adopted water targets. It should be noted that per capita water use refers to *gross* water use by all customers: residential, commercial, institutional, and industrial. In essence, per capita water use means the total water consumed in the City divided by the number of residents.

As a brief background, the major provisions of SB X7-7 require water agencies to do the following:

1. Calculate ten-year base gross per capita water usage.
2. Determine per-capita water use targets for 2015 and 2020, using one of the four methods allowed by the legislation.
3. Compare the calculated per-capita water use targets to minimum reduction requirements.
4. Set interim and final water use targets at either the level calculated by the selected methodology or at the minimum reduction requirement, whichever is lower.
5. Document calculations in the 2010 UWMP and report on progress in the 2015 and 2020 UWMPs.

In 2010, the City selected a method by which water use reduction targets were set at 95% of the applicable hydrologic region target. This was the appropriate method for Hayward, given the City's already low water use and the fact that Hayward is located in the San Francisco Bay Area hydrologic region, distinguished by its moderate climate. Under this methodology, Hayward's final 2020 target is 124 gpcd.

Table 4 compares Hayward’s 2020 target with actual 2020 use. With gross per capita usage of 87 gpcd in 2020, Hayward is well in compliance with its target.

Table 4 – Comparison of 2020 Water Use Target and Actual 2020 Water Use (in gpcd)

2020 Target	Actual 2020 Water Use	Target Achieved?
128	89	Yes

ECONOMIC IMPACT

There are no direct economic impacts associated with the UWMP. It is a local planning document, and also serves to assist with state-wide water supply and reliability analysis.

FISCAL IMPACT

Other than staff time and the consultant costs of about \$140,000, there are no direct fiscal impacts. All costs are borne by the Water Enterprise Fund and there is no impact on the City’s General Fund. Future costs of implementing water conservation and water supply projects would be evaluated prior to implementation.

STRATEGIC ROADMAP

The 2020 UWMP supports the City’s Strategic Roadmap measures related to housing production and preservation, as well as the planting of additional trees to both combat climate change and beautify the City.

SUSTAINABILITY FEATURES

Hayward customers have long embraced water conservation and efficient use of this important natural resource, regardless of water supply conditions in a given year, as evidenced by the City’s overall low per capita usage and response to water conservation programs. The UWMP provides an opportunity for the City to further practice sustainable water management planning through integration of water supply and demand using a methodical process to addresses short- and long-term conditions. A realistic assessment of water supplies and reliability helps the City prepare for sustainable growth and challenges that may arise as climate and economic conditions change.

PUBLIC CONTACT

The public review draft of the UWMP was released on July 2 to give the public an opportunity to comment prior to City Council consideration. Staff will provide Council with an update on any comments received. Staff also released an announcement to the community by email, and published the public notice twice in the *Daily Review* on July 2 and 9.

NEXT STEPS

If the Council adopts the 2020 UWMP and WSCP, staff will work with the consultant to submit it to the State in a timely manner and utilize the Plans as needed to manage water supplies and respond to water shortages as needed. Also, as discussed in the report, staff will evaluate the benefit of reviewing water demands when more current information regarding population and economic indicators is available, and will return to Council to amend the UWMP if warranted.

Prepared by: Cheryl Muñoz, Water Resources Manager

Recommended by: Alex Ameri, Director of Public Works

Approved by:

A handwritten signature in black ink, appearing to read 'Kelly McAdoo', written in a cursive style.

Kelly McAdoo, City Manager