

Chapter 6

Water Shortage Contingency Plan

This Water Shortage Contingency Plan (WSCP) addresses the requirements in Water Code Section 10632 of the Urban Water Management Planning Act (The Act). The WSCP is incorporated into the 2020 Urban Water Management Plan (UWMP) and is used by the Hi-Desert Water District (HDWD or “the District”) to respond to water shortage contingencies as they may arise. The WSCP addresses possible conditions in which the water supply available to customers of the District is insufficient to meet the normally expected customer water use at a given point in time due to drought, regulatory action constraints, and natural and man-made disasters. This WSCP describes the District’s strategy for allocating water during such water supply shortages, while assuring customers that at all times it will meet the minimum health and safety requirements of a drinking water purveyor.

This WSCP consists of the following required elements:

1. An analysis of water supply reliability.
2. Procedures for conducting an annual water supply and demand assessment.
3. Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage.
4. Shortage response actions that align with the defined shortage levels.
5. Communication protocols and procedures.
6. Customer compliance, enforcement, appeal, and exemption procedures.
7. A description of legal authorities.
8. A description of financial consequences.
9. Monitoring and reporting requirements.
10. Reevaluation and improvement procedures.
11. Special Water Feature Distinction.
12. Plan Adoption, Submittal, and Availability.

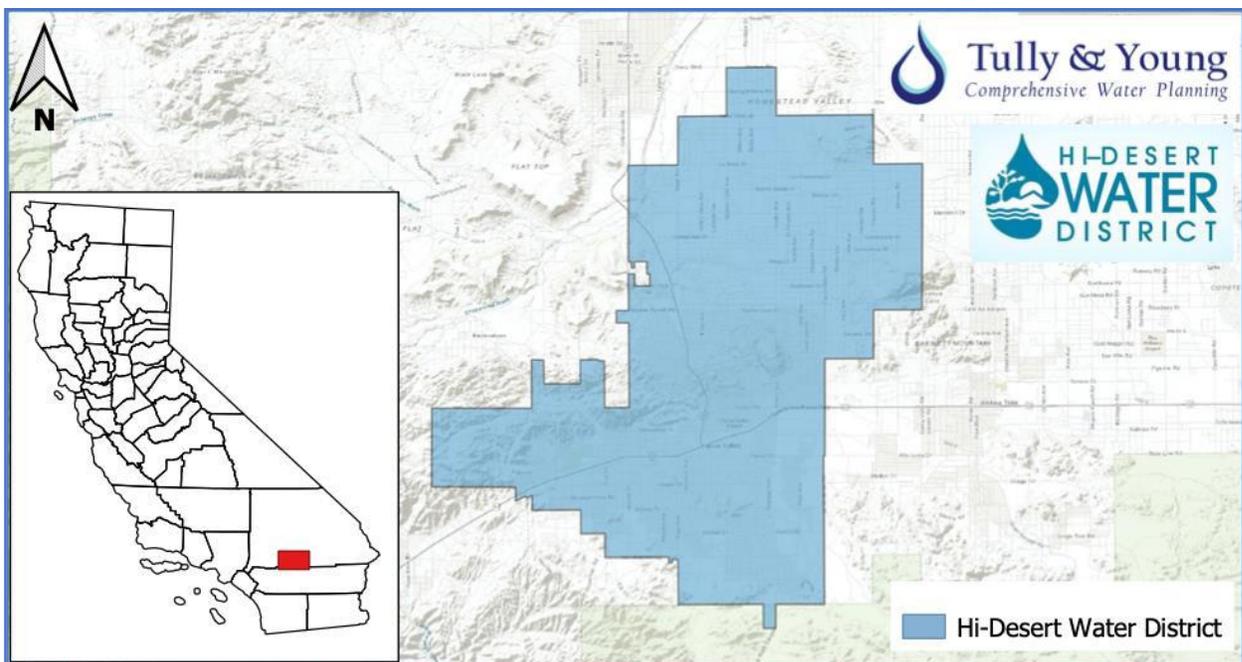
The Act contains specific requirements for each of these elements.³⁸ As required by Water Code Section 10632 this WSCP is incorporated into the UWMP, yet it is also a stand-alone plan that is adopted independently from the UWMP and may be amended or refined and readopted over coming months and years as needed (see subsection 6.12 Plan Adoption, Submittal, and Availability, below).

The District has enacted Chapter 5.70 Water Use Restrictions Ordinance to address water shortages.³⁹ These local rules were developed to help manage water shortage conditions in the event of drought, catastrophic outage, or regulatory mandate requiring statewide reduction in water use.

6.1 Water Supply Reliability Analysis

HDWD delivers quality, reliable water and sewer service to about 24,000 people (over 10,500 active water service connections) within a 57-square mile service area that includes the Town of Yucca Valley and unincorporated areas within the County of San Bernardino. The service area for HDWD is shown on Figure 6-1.

Figure 6-1: High-Desert Water District Service Area



HDWD primarily relies on three sources of water: Warren Valley Groundwater Basin, Ames/Reche Valley Groundwater Basin, and imported water which it receives from Mojave Water Agency (MWA), the wholesale water supplier of this area. Imported water is used to recharge the Warren Valley Groundwater Basin. Groundwater sources are subject to management in compliance with the applicable adjudications.

³⁸ California Water Code Section 10632, available at: https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=WAT§ionNum=10632

³⁹ Hi-Desert Water District Municipal Code Chapter 5.70 Water Use Restrictions Ordinance
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The District’s water supply sources may be impacted by climate factors, catastrophic events, and regulatory measures – all of which are considered in the supply analysis in Chapter 3 and the reliability assessment in Chapter 5. The District regularly evaluates its overall water supply reliability through its Urban Water Management Plan and through regional planning efforts in coordination with MWA and other neighboring water purveyors, including Joshua Basin Water District, Bighorn-Desert View Water Agency, and Twentynine Palms Water District.

As described in Chapter 5 of this UWMP, the District has a reliable water supply in normal, single dry and five consecutive dry years through 2045.

Although the District has a secure water supply, this WSCP serves as a roadmap to help the District meet the challenges that may arise from future droughts, regulatory actions, and unforeseen man-made and natural disasters.

6.2 Annual Water Supply and Demand Assessment Procedures

The WSCP describes the District’s procedural methodology for managing shortages and conducting its required Annual Water Supply and Demand Assessment (Annual Assessment). The Annual Assessment is to be submitted to California Department of Water Resources (DWR) by July 1 each year with the first Annual Assessment due July 1, 2022. The Annual Assessment examines the District’s anticipated water reliability for the current year and one additional dry year. The Annual Assessment will be prepared at the beginning of each calendar year to evaluate near-term water supply reliability and determine what, if any, water shortages stages may be triggered during the required period. The Annual Assessment will be used by HDWD decision-makers to prepare for and initiate implementation of any needed response actions, as well as to inform customers, the general public, interested parties, and local, regional, and state governmental entities to prepare for such required actions.

6.2.1 Analytical and Decision-making Processes

HDWD plans to conduct its Annual Assessment according to the following timeline and process:

- By February 1** Initial data collection and analysis
- By March 1** Preliminary Draft Annual Assessment internal review and revisions
- By April 1** Draft Annual Assessment and results briefing for HDWD decision-makers
- By May 1** Public Notification and Release of Draft Annual Assessment
- By June 1** Approval of Annual Assessment by HDWD Decision-makers
- By June 15** Submit Annual Assessment to DWR in advance of July 1 deadline

The District will prepare its Annual Assessment using the following key data and analytical procedures (which may be modified as needed):

- ◆ Prepare supply estimates for each water source on a monthly basis for the analysis period.
- ◆ Update unconstrained customer demand and estimate anticipated actual water use on a monthly basis for the analysis period.
- ◆ Update infrastructure assessment, including estimated water supply production capability on a monthly basis for the analysis period.
- ◆ Identify and quantify any locally applicable factors that may influence or disrupt supplies during the analysis period.
- ◆ Refine the definition of “dry year” as relevant to dry conditions like water year 2015 and 2021.
- ◆ Identify any shortfall between projected supply and anticipated demand.
- ◆ Identify and incorporate any applicable constraints (infrastructure, regulatory, etc.).
- ◆ Develop, analyze, and propose water resource management strategies to address any shortfall between projected supply and anticipated demand with reference to the water shortage stages identified in this WSCP.
- ◆ Present the Annual Assessment (and resulting water shortage stage declaration, if applicable) to the District decision-makers.

If the results of the Annual Assessment indicate the need for any alternative water shortage response actions which may be addition to those specified in Section 6.4, below, the alternative response actions will be described and submitted in the Annual Assessment, as specified in CWC 10632.2.

6.2.2 Submittal Procedure

The District will submit its Annual Assessment to the DWR via email by June 15 each year, but in no case later than July 1 each year. At the time of DWR submittal, HDWD will also notify the Town of Yucca Valley, MWA, Joshua Basin Water District, Bighorn-Desert View Water Agency, Twentynine Palms Water District, San Bernardino County, the public, and other stakeholders concerning the results of the Annual Assessment and where it is available for review.

6.3 Six Standard Water Shortage Stages and Triggers

New state requirements for the WSCP require water suppliers to adopt six water shortage stages, which correspond to progressively severe water shortage conditions (up to 10%, 20%, 30%, 40%, 50%, and greater than 50% percent shortage), as compared to the normal service reliability condition. The District has adopted the six standard water shortage stages as shown in Tables 6-1 through 6-6 and which are included in Section 5.70.010 of Municipal Code Chapter 5.70 Water Use Restrictions Ordinance. Each stage corresponds to a range of reduction in anticipated water supply availability and is aligned with shortage response actions which can reduce water demand as needed to address the water shortage. Reduction of available water supply by the indicated percentages will trigger an appropriate water shortage stage and the District will implement the response actions identified in Tables 6-1 through 6-6.

6.4 Shortage Response Actions

The WSCP is required to identify locally appropriate shortage response actions that align with the defined shortage stages and include demand reduction actions, supply augmentation actions, system operational changes, and mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions. For each response action the WSCP is to provide an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action. The estimated water savings for each action is identified in terms of a percentage in Tables 6-1 through 6-6.

6.4.1 Stages of Shortage Response Actions

The District has identified shortage response actions to be implemented during each of the six sequential stages and corresponding water shortage conditions. These actions are based on specific hydrological and regulatory conditions and the fundamental need to meet water service requirements within the District's service area. Moreover, the shortage response actions provide the District with some flexibility to address water dynamic water shortage conditions while protecting the District against extreme conditions where supplies are drastically reduced beyond 50%. The following is an overview of the staged response actions the District could follow during a given water shortage condition based on shortage severity, relative supply conditions for each stage, and percent shortage reduction levels. A water shortage declaration would be made by resolution of the HDWD Board of Directors, with administrative discretion delegated to the General Manager.

The shortage response actions derived from Chapter 5.70, Section 5.70.010 of Municipal Code that may be implemented in each stage include, but are not limited to, the following:

Stage 1 (up to 10 percent shortage) "Water Alert" – If water supplies are threatened with constraint, the Plan calls for an introductory Stage 1 drought response, during which customers are informed of possible shortages and asked to voluntarily conserve 10 percent. In addition, customers are prohibited from wasting water or unreasonably using water for beneficial purposes. For example, prohibited water uses under this stage include: allowing water to run off unused into a gutter, ditch, or drain; failing to repair a controllable leak; washing sidewalks, driveways, parking areas, tennis courts, patios, or other paved or areas; utilizing a hand-held hose without an automatic shut-off nozzle; and irrigating during a precipitation event. Additional prohibitions will apply to new developments, including prohibiting single pass-through cooling water systems, commercial car washes and laundries without recirculating water systems, and decorative fountains without recirculating water systems.

This stage includes performing public outreach and education about the shortage and methods individuals can implement to reduce their water use. The District will inform the public and neighboring governmental bodies of the potential shortage condition and will coordinate with customers to implement the actions consistent with this Stage.

Stage 2 (11 - 20 percent shortage) "Moderate Water Shortage" – In the event Stage 2 is implemented the District will continue to encourage community-oriented voluntary conservation measures, enforce conservation measures, and implement mandatory water use reduction measures to decrease demand by up to 20 percent. Stage 2 activities include a continuation of activities described under Stage 1, as

well as greater conservation and water use restrictions. These additional restrictions include beyond those identified in Stage 1, limiting outdoor irrigation only between the hours of 7:00 PM and 10:00 AM and vehicle washing must be done using a bucket or hand-held hose with an automatic shut-off nozzle, or take place at a commercial car wash. Customer baseline water use will be monitored and addressed with excess use above the shortage percentage subject to financial penalties under Section 5.70.020 of the Municipal Code.

The District will also continue to engage in public outreach and education as it applies to the water shortage conditions and the actions necessary to achieve up to 20% reduction in use.

Stage 3 (21 - 30 percent shortage) “Severe Water Shortage” – Stage 3 includes all response actions taken in Stages 1 and 2 and is focused on continuing to encourage customers to voluntarily reduce water use regarding turf watering, fillings pools, etc., mandatory-watering restrictions will be implemented following additional shortage actions described in Stage 2. Increased monitoring related to prescribed water conservation actions will occur under this stage. Customer baseline water use will be monitored and addressed with excess use above the shortage percentage subject to financial penalties under Chapter 5.70 of the Municipal Code.

The District will also continue to engage in public outreach and education as it applies to the water shortage conditions and the actions necessary to achieve up to 30% reduction in use.

Stage 4 (31 - 40 percent shortage) “Critical Water Shortage” – Stage 4 includes all response actions taken in prior stages regarding mandatory conservation and intensifies their implementation and enforcement. Stage 4 restrictions will be implemented if the Stage 3 demand reduction and other response actions are deemed insufficient to achieve reductions due to water supply shortages. All Stage 3 response actions will be intensified, and water production will be monitored daily by HDWD for compliance with necessary reductions. Customer baseline water use will be monitored and addressed with excess use above the shortage percentage subject to financial penalties under Chapter 5.70 of the Municipal Code.

The District will also continue to engage in public outreach and education as it applies to the water shortage conditions and the actions necessary to achieve up to 40% reduction in use.

Stage 5 (41 - 50 percent shortage) “Water Shortage Crisis” – Stage 5 includes all response actions taken in prior stages regarding mandatory conservation. The primary focus of Stage 5 is to ensure the protection of the water supply for all public health and safety purposes. This Stage will require reductions in water demand by up to 50 percent and will follow all voluntary and mandatory actions described in Stages 1-4. Customer baseline water use will be monitored and addressed with excess use above the shortage percentage subject to financial penalties under Chapter 5.70 of the Municipal Code.

The District will also continue to engage in public outreach and education as it applies to the water shortage conditions and the actions necessary to achieve up to 50% reduction in use.

Stage 6 (greater than 50 percent shortage) “Emergency Water Shortage” – Stage 6 includes all response actions taken in prior stages focused on reducing water demands by more than a fifty percent in response to greater than 50 percent water shortages. This stage requires only use of water for human health and safety purposes. No additional water uses are permitted, including any outdoor

irrigation for anything other than maintenance of legacy vegetation. Customer baseline water use will be monitored and addressed with excess use above the shortage percentage subject to financial penalties under Chapter 5.70 of the Municipal Code.

The District will also continue to engage in public outreach and education as it applies to the water shortage conditions and the actions necessary to achieve greater than 50% reduction in use.

Tables 6-1 through 6-6 show a summary of the staged response actions.

Table 6-1. Stage 1 – Water Alert

Stage 1 Water Alert: Savings up to 10%	
<ol style="list-style-type: none"> 1. Waste and unreasonable use of water prohibited and voluntary conservation encouraged (up to 10%). 2. Water shortage situation and possible subsequent water shortage stages explained to the public and governmental bodies (up to 10%) 3. Establish customer use baselines. 4. Identify customers with high per capita water usage to achieve proportionally greater reduction than those with low use. 5. Actions may include, but are not limited to: <ul style="list-style-type: none"> • Public information campaign consisting of distribution of literature, speaking engagements, website updates, bill inserts, and conversation messages printed in local newspapers. • Educational programs in area schools. • Water Conservation Kits (combined up to 10%). 6. Consumption Reduction Methods, including: <ul style="list-style-type: none"> • Encourage customers to fix leaks or faulty sprinklers promptly (0-1%). • Decorative water features (water fountains, etc.) to recirculate water and be leak proof (0-1%). • Direct customers to irrigate landscapes during cooler morning and evening hours to reduce evaporation and minimize landscape runoff (0-5%). • Landscape watering shall be confined to a user's property and shall not runoff onto adjacent properties, roadsides or gutters (0-5%). • No landscape watering shall occur while it is raining (0-5%). • Use a shutoff nozzle on hoses (0-1%). • Washing down impervious surfaces such as driveways and sidewalks is prohibited unless for public health and safety purposes (0-1%). • Unauthorized use of hydrants is prohibited. Authorization for use must be obtained from water supplier (0-1%). • Commercial, industrial, institutional equipment must be properly maintained and in full working order (0-1%). • Encourage customers to wash only full loads when washing dishes or clothes (0-1%). • Encourage customers to use pool covers to minimize evaporation (0-1%). • Encourage restaurants to only serve water to customers on request (0-1%). 	

Table 6-2. Stage 2 – Moderate Water Shortage

Stage 2 Moderate Shortage: Savings up to 20%
<ol style="list-style-type: none"> 1. All measures implemented in Stage 1 2. Voluntary conservation usage reductions (up to 20%) 3. Mandatory conservation rules and restrictions and some prohibitions on end uses (10-20%). 4. Water Use Penalties under 5.70.020 available. 5. All consumption reduction methods from Stage 1 and intensified as needed; additionally: <ul style="list-style-type: none"> • Voluntary outdoor irrigation restrictions including limiting number of watering to 3 days per week, and time when irrigation can occur (e.g., between 7:00 pm and 10:00 am). Plant containers, trees, shrubs and vegetable gardens may be watered additional days using only drip irrigation or hand watering (5-10%). • Fix leaks or faulty sprinklers within 7 days (0-1%). • Restaurants serve water only upon customer request (up to 1%). • Pool covers required (up to 5%) • Non-essential potable water uses strongly discouraged (up to 20%) • No restrictions on landscape watering with non-potable water. • Assess customer usage against baseline (up to 20%)

Table 6-3. Stage 3 – Severe Water Shortage

Stage 3 Severe Shortage: Savings up to 30%
<ol style="list-style-type: none"> 1. All measures implemented in Stages 1 and 2 2. Some or all of the following: <ul style="list-style-type: none"> • Adherence to customer baselines and actual water use reductions water allocations and mandatory conservation rules (20-30%) • Customer water usage in excess of baseline to be monitored and recorded • Water use prohibitions can include restrictions of days and daytime hours for watering, excessive watering resulting in gutter flooding, using a hose without a positive shutoff device, use of decorative fountains with non-recirculating pumps, washing down sidewalks or patios, not repairing leaks in a timely manner, etc. (up to 30%) 3. All activities are intensified and production is monitored daily for compliance with necessary reductions from customer baseline. (up to 30%) 4. Water Use Penalties under 5.70.020 available 5. All Consumption Reduction Methods from Stage 2 and intensified as needed; additionally: <ul style="list-style-type: none"> • Fix leaks or faulty sprinklers within 3 days (0-1%). • Decorative water features that use potable water must be drained and kept dry (0-1%). • Car washing is only permitted using a commercial carwash that recirculates water or by high pressure/low volume wash systems (0-1%). • Require a construction water use plan be submitted to the water supplier that addresses how impacts to existing water users will be mitigated (such as dust control) (0-1%). • With the exception of landscapes watered with non-potable water, limit the installation of new landscaping to drought tolerant trees, shrubs and groundcover. Prohibit installation of new turf or hydroseed. Customers may apply for a waiver to irrigate during an establishment period for the installation of new turf or hydroseed. (0-1%) • During Warm/Dry Season: Up to two days per week turf watering when using potable water (5-20%). Cool/Wet Season: Turf shall not be watered unless utilizing non-potable water during extended dry spells (1-5%). • Mandatory rationing (up to 30%)

Table 6.4. Stage 4 – Critical Water Shortage

Stage 4 Critical Shortage: Savings up to 40%
<ol style="list-style-type: none"> 1. All measures implemented in Stages 1-3 2. All activities are intensified and production is monitored daily for compliance with necessary reductions from customer baseline. (up to 40%) 3. All Consumption Reduction Methods from Stage 3 and intensified as needed; additionally: <ul style="list-style-type: none"> • Fix leaks or faulty sprinklers within 1 day (0-1%). • Existing pools shall not be emptied and refilled using potable water unless required for public health and safety purposes (0-1%). • Water use for new landscape installations or renovations is not authorized (0-1%). • Previous waivers for watering during an establishment period will be revoked (0-1%). • Warm/Dry Season outdoor irrigation: Up to one day per week turf watering when using potable water (10-30%). Cool/Wet Season: Turf shall not be watered unless utilizing non-potable water during extended dry spells (1-5%). 4. Water use penalties under 5.70.020 available.

Table 6-5. Stage 5 – Water Shortage Crisis

Stage 5 Shortage Crisis: Savings up to 50%
<ol style="list-style-type: none"> 1. All measures implemented in Stages 1-4 2. Source of supply for the System is severely curtailed to the level that requires each customer to restrict their water use for only human health and safety purposes (up to 50%) 3. All activities are intensified and production is monitored daily for compliance with necessary reductions from customer baseline (up to 50%). 4. All Consumption Reduction Methods from previous stages and intensified as needed 5. Update current water shortage condition response measures based on Board approvals and direction, state policy directives, emergency conditions, or to improve customer response 6. Water use penalties under 5.70.020 available. 7. Catastrophic Event (Supply reduction up to 50%): Implement Applicable Actions for Catastrophic Events (such as boil water order)

Table 6-6. Stage 6 – Emergency Water Shortage

Stage 6 Emergency Shortage: Savings greater than 50%
<ol style="list-style-type: none"> 1. All measures implemented in Stages 1-5 2. Source of supply for the System is severely curtailed to the level that requires each customer to restrict their water use for only human health and safety purposes. Customer rationing may be implemented. (>50%) 3. All activities are intensified and production is monitored continually for compliance with necessary reductions from customer baseline (more than 50%). 4. All Consumption Reduction Methods from previous stages and intensified as needed 5. Update current water shortage condition response measures based on Board approvals and direction, state policy directives, emergency conditions, or to improve customer response 6. Catastrophic Event (Supply reduction greater than 50%): Implement Applicable Actions for Catastrophic Events.

6.4.2 Demand Reduction Actions

The District has identified a range of available and feasible customer demand reduction actions that can be used adaptively and implemented with progressively greater intensity to meet the supply shortage challenges faced under each water shortage condition. These demand reduction actions are identified by the associated water shortage stage in which they may be implemented. Other response actions not specified in this Plan may also be identified by the District to implement the essential purposes of this Plan or the UWMP (see CWC 10632.2).

Tables 6-1 through 6-6 summarizes HDWD Demand Reduction Actions associated with each water shortage stage and shortage level, provides an estimate of the action’s effectiveness as related to that stage.

6.4.3 Mandatory Prohibitions

This section is required to identify any mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions. HDWD has revised Municipal Code Chapter 5.70 Water Use Restrictions Ordinance to adopt state mandated stages and incorporate mandatory prohibitions. Section 5.70.010 Water Shortage Stages and Water Use Restrictions prohibits intentional or unintentional water waste and unreasonable uses of water and encourages beneficial water use. Certain prohibited activities are also listed among the demand reduction actions on Tables 6-1 through 6-6, which are also included in revised Section 5.70.010.

6.4.4 Emergency Operations Plan for Catastrophic Water Shortages

This section identifies actions to be undertaken by HDWD to prepare for, and implement during, a catastrophic interruption of water supplies. In addition to climate, other events that can cause water supply shortages are earthquakes, chemical spills, dam failures, canal breaks, waterline ruptures, and energy outages at treatment and pumping facilities, which could cause a water shortage severe enough to trigger a Stage 1-6 water supply shortage condition.

The District has an adopted an Emergency Operations Plan, which provides procedures and guidance to District personnel in responding to emergency situations including catastrophic events, both natural and manmade. The plan provides procedures for preparing, mobilizing, and employing District resources and coordinating outside resources during an emergency. The District provides periodic training, including simulated events and responses to keep District personnel fully trained on implementation of emergency procedures. Mobilization is consistent with Standardized Emergency Management and the Incident Command System.

In addition to specific actions to be undertaken during a catastrophic event, HDWD performs maintenance activities, such as annual inspections for earthquake safety, and budgets for emergency items, such as auxiliary generators, to prepare for potential catastrophic events.

Table 6-7 is a summary of actions cross-referenced against specific catastrophes for three of the most common possible catastrophic events: regional power outage (such as Public Safety Power Shutoff or “PSPS” events), natural disasters (such as earthquake, flood or storm damage, or fire), and malevolent acts.

Table 6-7: Summary of Actions for Catastrophic Events

Possible Catastrophe	Summary of Potential Actions
Regional Power Outage	<ol style="list-style-type: none"> 1. Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water. 2. Establish water distribution points and ration water if necessary. 3. If water service is restricted, attempt to provide potable water tankers or bottled water to the area. 4. Make arrangements to conduct bacteriological tests, in order to determine possible contamination. 5. Utilize backup power supply to operate pumps in conjunction with elevated storage.
Natural Disaster	<ol style="list-style-type: none"> 1. Assess the condition of the water supply system. 2. Complete the damage assessment checklist for reservoirs, water treatment plants, system transmission and distribution. 3. Coordinate with Governor’s Office of Emergency Services utilities group or fire District to identify immediate firefighting needs. 4. Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water. 5. Prepare report of findings, report assessed damages, advise as to materials of immediate need and identify priorities including hospitals, schools and other emergency operation centers. 6. Take actions to preserve storage. 7. Determine any health hazard of the water supply and issue any “Boil Water Order” or “Unsafe Water Alert” notification to the customers. 8. Cancel the order or alert information after completing comprehensive water quality testing. 9. Make arrangements to conduct bacteriological tests, in order to determine possible contamination.
Malevolent acts	<ol style="list-style-type: none"> 1. Assess threat or actual intentional contamination of the water system. 2. Notify local law enforcement to investigate the validity of the threat. 3. Get notification from public health officials if potential water contamination 4. Determine any health hazard of the water supply and issue any “Boil Water Order” or “Unsafe Water Alert” notification to the customers, if necessary. 5. Assess any structural damage from an intentional act. 6. Isolate areas that will take the longest to repair and or present a public health threat. 7. Arrange to provide emergency water.

6.4.5 Seismic Risk Assessment and Mitigation Plan

Beginning January 2020, CWC Section 10632.5 mandates urban water suppliers include in their UWMP a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities. This requirement can be met by submittal of a copy of the most recent adopted local hazard mitigation plan or multi-hazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multi-hazard mitigation plan addresses seismic risk.

HDWD intends to submit a copy of the San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan, approved by the Federal Emergency Management Agency (FEMA) on July 13, 2017 (HMP). This Hazard Mitigation Plan is currently under review and may have updates before the next Urban Water Management Plan cycle in 2025.

The fundamental hazards identified in this plan include, Earthquake, Wildfire, Flood, Drought, Terrorism and Climate Change. The HMP addresses the vulnerabilities associated with these items, the other plans and financial issues that impact implementation of the HMP, as well as a comprehensive mitigation strategy. Accordingly, the HMP is incorporated by reference into HDWD's WSCP.

6.5. Communication Protocols

The District maintains an established and effective communications program to inform its customers, neighbors, and other stakeholders of water service issues, updates, and policies. Implementation of the WSCP will utilize the existing communication program structure to inform customers and others of the declared shortage stage and respective actions and restrictions in place.

The District Board of Directors meetings addressing the Annual Assessment and any potential water shortage declaration will be noticed using normal District Board meeting public notification procedures. The meeting will also be announced through regular press release protocols.

Once a shortage stage as been declared by the District Board, the District will notify its customers and others through a range of efforts. The stage and restrictions will be identified in a press release, customer billing statements, and posted on the District's website. Specifically, the District's website will be updated to feature the shortage declaration, restrictions, and resources available to customers from the District and other entities to help meet the restrictions. Subsequent District Board meetings will include a review of the shortage condition, customer response results, and discussion and recommendations for potential modifications. The District will also coordinate with the neighboring public agencies to declare a local emergency with respect to anticipated water supplies and demands in the event conditions necessitate.

The District's communications protocols may include, but are not limited to, some or all of the following locally relevant actions. These communications protocols will be used at the discretion of District staff based on then-current and anticipated water shortage conditions:

- Publishing information on HDWD's website.
- Staffing a telephone hotline.
- Providing bill inserts and direct mailings above and beyond those legally required.

- Directly calling and/or emailing customers.
- Developing materials for non-English speaking customers.
- Preparing social media posts to communicate HDWD actions.
- Advertising actions on other local audio and video media.
- Coordinating voluntary and mandatory water conservation activities with other local and regional governing bodies.

HDWD is a member of the regional Alliance for Water Awareness and Conservation (AWAC), a collaborative group of over twenty agencies committed to achieving water conservation goals within the 4,900 square mile service area of the Mojave Water Agency. HDWD will collaborate AWAC to promote a consistent regional water conservation message and use AWAC materials and resources to communicate with the public regarding water conservation actions to address water shortages, as appropriate.

6.6. Compliance and Enforcement

Chapter 5.70 of the Municipal Code provides significant compliance and enforcement actions for the District in implementing its water shortage planning. Financial penalties, flow restrictors, and disconnected water service are among the options available to the District to ensure compliance with the required water shortage actions. Appeals processes are also available for those that are subject to the enforcement provisions of the Municipal Code.

6.7. Legal Authorities

The District is empowered to implement and enforce its WSCP by means of Municipal Code Chapter 5.70 Water Use Restrictions Ordinance.

In addition, the District is able to exercise general powers granted to water distributors in CWC §§350-359. CWC §350 authorizes the governing body of a distributor of a public water supply to declare a water shortage emergency whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent there would be insufficient water for human consumption, sanitation, and fire protection. Upon a finding of such an emergency condition, the distributor can adopt such regulations and restrictions on the delivery and consumption of water as will conserve the water supply for the greatest public benefit, with particular regard to domestic use, sanitation, and fire protection (CWC §353). The regulations and restrictions remain in force and effect until the supply of water available for distribution within such area has been replenished or augmented, and restrictions may include the right to deny new service connections and discontinue service for willful violations (CWC §355 and §356). The District also coordinates with the Town of Yucca Valley and San Bernardino County within which it provides water supply services for the possible proclamation of a “local emergency” under California Government Code, California Emergency Services Act (Article 2, Section 8558).

6.8. Financial Consequences of WSCP

The Act requires an analysis of the impacts of implementation of this WSCP and likely financial consequences to the District. This section addresses aspects of revenue reduction, expense increases, and additional costs that may arise, and identifies financial response actions.

6.8.1 Revenue and Expenditure Impacts

HDWD has established water rates that support its on-going operation and maintenance activities, as well as the capital projects required to provide a safe and reliable water supply to its customers. Water rates are tied to HDWD's customers' normal water consumption activities, which will be reduced through voluntary or mandatory water conservation by customers. Thus, in times of shortage, there will be revenue reductions to HDWD. In addition to the revenue reductions, HDWD will also experience an increase in expenses resulting from augmented communication actions, increased enforcement activities, and the administration of water shortage management actions identified in the WSCP.

When a drought or water shortage occurs, the District's costs increase due to the additional activities and duties of instituting a stage of action. Not only will there be costs for materials, and time from permanent staff, but additional staff may need to be hired to assist in implementing the Water Shortage Contingency Plan. Staff will regularly report the identified and anticipated revenue and expenditure impacts and recommend appropriate responses to the District Council. Currently, the District has a reserve fund allocated for the purchase of supplemental water. The availability of these funds creates flexibility for purchasing water other than SWP water, especially during times when SWP water is unavailable due to drought or other factors beyond the District's control. Should this be the case, revenues and expenditures of the District would remain unchanged. However, in the event the District experiences temporary system inadequacies, e.g., loss of production capacity, emergency measures would be implemented mandating an immediate reduction of water use by the customers. Depending on duration of the emergency, revenues could ultimately be impacted during this scenario. In this case, the District may be required to utilize discretionary reserve funds to supplement the shortfall and reevaluate consumption rates during the yearly rate review.

6.8.2 Drought Rate Structures and Surcharges

HDWD does not currently have drought rate structures or surcharges. As water rate structures are subject to the yearly rate review, the District may choose to consider adopting drought rate structures or surcharges to address the financial consequences of longer-term water shortages. Should the District decide to proceed, such rate changes would be adopted in compliance with then current legal requirements.

6.9. Monitoring and Reporting

The District will conduct regular monitoring and reporting to ensure WSCP implementation is effective and responsive to conditions as they unfold. The District will then use this information to restore and maintain the water supply and demand balance. Similar to the supply and demand projections used to establish a shortage condition, the District will monitor the same data to determine effectiveness and efficacy.

Monitoring activity is expected to include, but not be limited to:

- ◆ Gathering monthly or bi-weekly customer water use data.
- ◆ Preparing technical assessments of customer water use and identifying deficiencies.
- ◆ Analyzing trends in water supply availability, including meteorological events, regional water supply coordination actions, and statewide regulatory trends.
- ◆ Assessing water conservation activities and the effectiveness of enforcement actions as applicable to achieving conservation objectives.

District staff will report to decision makers at least quarterly on status and results. Data reporting will include preparation of written reports and presentations, as necessary, for HDWD management meetings and other public meetings summarizing key information and data, including but not limited to:

- ◆ Actual water demands compared to projected demands by customer class and in total.
- ◆ Actual supply availability and utilized compared to projected availability for each supply source.
- ◆ Projected supply availability for next 12 months for each supply source.
- ◆ Monthly reporting of water production and conservation, as required by the State Water Resources Control Board.

These and other data will be regularly evaluated by staff to assess the effectiveness of response measures and to identify the need for any changes or modifications to the declared water shortage stage or actions based on the results. With regard to monitoring and reporting, District staff may determine the need for additional monitoring and reporting measures, or the need to develop or amend ordinances, or update the WSCP as a whole. Any WSCP update or modification will be conducted through the District Board meeting process, unless specific conditions require otherwise.

6.10. Re-evaluation and Improvement Procedures

HDWD will continually review and assess its procedures for implementing the WSCP. Specifically, HDWD will use the monitoring and reporting protocols identified above as a quality assurance and quality control measure to understand the effectiveness of water conservation activities. These re-evaluation and improvement procedures will include developing reports, memoranda, and presentations that assess the effectiveness of water conservation actions and the WSCP. These materials will be provided to HDWD's customers and decision-makers for consideration. Public comments on the published materials and management considerations should be incorporated into the development and implementation of future actions. These protocols will be continually assessed and updated by HDWD management staff.

6.11. Special Water Feature Distinction

For purposes of water shortage contingency planning and implementation, the District defines as "special water features" those that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains. Such special water features are considered distinct from swimming pools and spas (as defined in subdivision (a) of Section 115921 of the Health and Safety Code).

Water shortage response actions will focus on health and safety issues and balancing continuation of these uses with the severity of the water shortage condition. The relative total water use from these sources is a consideration for how special water features and swimming pool uses could be curtailed during specific water shortage conditions. For instance, when swimming pool filling and refilling would exceed a customer's use allocation under the various drought stages in the Municipal Code, then these actions are prohibited and can be subject to drought penalties and other District enforcement actions. HDWD determined that special water features are a relatively small discretionary use but may be restricted under all identified water shortage condition.

6.12. Plan Adoption, Submittal, and Availability

The WSCP has been adopted, submitted, and is available as required by the Urban Water Management Planning Act. As a stand-alone document, the WSCP is also subject to the following separate adoption, submittal, and availability processes, and whenever it is separately amended or revised in the future. HDWD may refine or amend this WSCP as necessary and in compliance with the normal public notice and adoption. HDWD has followed all applicable law in adopting the WSCPs. The current adopted WSCP shall be available to District customers and to the Town of Yucca Valley, MWA, Joshua Basin Water District, Bighorn-Desert View Water Agency, Twentynine Palms Water District, and San Bernardino County within 30 days of its adoption. A copy of the current WSCP is available for public inspection during business hours at the Hi-Desert Water District Office, 55439 29 Palms Highway, Yucca Valley (subject to current COVID 19 restrictions). The current WSCP is posted and available for download here <https://www.hdwd.com/228/Reports-Plans>.

Appendix A

Delta Reliance Analysis

This Appendix provides the Delta Reliance assessment for Hi-Desert Water District (HDWD or District). The Mojave Water Agency (MWA) service area boundary includes the following retail water service agencies: Liberty Utilities – Apple Valley Water Company, Bighorn-Desert View Water Agency, City of Adelanto Water District, San Bernardino County Service Area 64, San Bernardino County Service Area 70J, Golden State Water Company – Barstow System, Helendale Community Services District, Hesperia Water District, Hi-Desert Water District, Joshua Basin Water District, Phelan Pinon Hills Community Services District, and Victorville Water District. These retail agencies are subject to the minimum threshold requirements of the Urban Water Management Planning Act (UWMP Act) and work with MWA on managing regional water supplies. Additional entities that are not currently subject to the UWMP Act but may be subject to the UWMP Act in the future and that rely upon water supplies derived from MWA’s and the retail agencies’ management are also considered in this assessment. This assessment is consistent with all applicable water management activities within the MWA service area boundary including the Mojave Basin Area Adjudication, the Warren Valley Basin Judgment, and the Ames/Reche Groundwater Storage and Recovery Program Management Agreement.

A.1 Delta Reform Act and Certification of Consistency

The Delta Reform Act of 2009 required state and local agencies to prepare a written certification of consistency with Delta Plan policies before initiating a covered action in the Delta.⁴⁰ The written certification of consistency must be submitted to the Delta Stewardship Council and include detailed findings as to whether the covered action is consistent with applicable Delta Plan policies.⁴¹ The submitted certification of consistency may be appealed by any person and the Delta Stewardship Council may grant the appeal to address contested issues.⁴² In short, water suppliers that anticipate participating in a proposed covered action must comply with the requirements of the Delta Reform Act. For more detail on the specific provisions of the Delta Reform Act covered by this Delta Reliance Analysis, see Mojave Water Agency’s 2020 Urban Water Management Plan, Appendix A.

⁴⁰ California Water Code section 85057.5.

⁴¹ California Water Code section 85225.

⁴² California Water Code section 85225.10-85225.25.

A.2 Expected Outcomes for Reduced Delta Reliance and Regional Self Reliance

The expected outcomes for this Delta reliance and improved regional self-reliance assessment were developed using guidance described in Appendix C of DWR’s Urban Water Management Plan Guidebook 2020 issued in March 2021 (Guidebook 2020). The data used in this assessment represent the total regional efforts of MWA and the retail agencies and were developed as part of a region-wide coordination process. Table A-1 shows MWA’s expected outcomes for reduced Delta reliance.

Table A-1: Expected Outcomes for Reduced Reliance on the Delta

Year	2010	2015	2020	2025	2030	2035	2040	2045
Total Water Supplies from the Delta Watershed	34.2%	34.2%	31.9%	28.7%	26.2%	24.4%	22.9%	22.2%
Change in Water Supplies from the Delta Watershed		-0.1%	-2.4%	-5.6%	-8.0%	-9.8%	-11.4%	-12.1%

Table A-2 shows the expected outcomes for supplies contributing to regional self-reliance.

Table A-2: Supplies Contributing to Regional Self-Reliance

The data presented in this section demonstrate the expected outcomes for reduced Delta reliance and regional self-sufficiency. The information contained in this Appendix is also intended to be an addendum to the District’s 2015 UWMP consistent with WR P1 subsection (c)(1)(C). The information has been noticed and presented in accordance with applicable law. Further information related to these determination may be found in Mojave Water Agency’s 2020 Urban Water Management Plan, Appendix A.