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# **Drought Contingency Plan Public Water System**

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## **Name of Tribe/Band**

Address of Tribe/Band  
P.O. Box XXX  
City, California 95555

## **Name of Tribal Utility Department/Water Department**

Address of Tribal Utility Department/Water Department  
P.O. Box XXX  
City, California 95555

## **Name of Tribal Public Water System**

**Public Water System ID Number: 1234567**

**Date [00/00/2014]**

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**Background and instructions:**

This document is a template for a drought contingency plan for a tribal public water system. The template covers a broad list of sections and topics with the aim of being applicable for a majority of the water systems. Because tribal water systems vary throughout the state (e.g. in complexity, water source, number of customers, etc.), it is recommended that the tribe edit and modify the template to best fit their specific situation and context, and only include those sections that are necessary.

This template was developed by the Indian Health Service, California Area, Office of Environmental Health and Engineer, and primarily based on reference information from the California Drought Contingency Plan (November 2010), the Texas Handbook for Drought Contingency Planning for Retail Public Water Suppliers (April 2005), and several existing drought contingency plans for cities in California.

Please contact your local IHS District Office for assistance with developing a drought contingency plan. Contact information can be located at:  
<http://www.ihs.gov/california/index.cfm/about-us/field-offices/>

Sections with [\_\_\_\_\_] are intended to be edited with information specific to the tribe and/or public water system. The information in the bracket provides reasonable example values; however, it should be reviewed and modified as appropriate. For example: The water usage of [\_\_\_\_\_] [50 gpcd] [75 gpcd] [100 gpcd].

The text in green font provides background and instructions, and should be deleted in the final document.

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Edit the following listing depending on whether relevant articles are contained within final edited section or not.

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# 1. Declaration of policy, purpose, and intent

## 1.1. General

In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the [\_\_\_\_\_] [name of Tribe/Band] hereby adopts the following regulations and restrictions on the delivery and consumption of water through an ordinance/or resolution.

The Drought Contingency Plan (Plan) is a framework of forward-leaning planning for scenarios and objectives, managerial and technical actions, and potential response systems in order to prevent, or better respond to, a drought-related emergency or critical situation. The overall goal of the Plan, and the contingency planning process, is to facilitate rapid emergency response. The intention of the Plan is to be functional, flexible, and easy to implement, and also serve as a tool for maintaining control over the events or limiting the risk of loss of control. The Plan should be periodically updated.

The primary focus is placed on best management practices to manage water use demand, while evaluating options for alternative water supply sources. Water uses regulated or prohibited under the Plan are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in this Plan.

## 1.2. Water use priorities

The risks to public health from water shortages could be high and include issues of water quality, water quantity, sanitation, and hygiene for personal use and food preparation. As a result of this, the Plan establishes the following priorities for use in developing demand reduction programs and allocations during a water shortage emergency. Priorities for use of available water, from highest to lowest priority, are:

1. Health and safety: residential home interior uses, sanitation, and fire fighting
2. Commercial, industrial, and governmental: maintain jobs and economic base
3. Existing landscaping: especially trees and shrubs
4. New demand: projects without permits when shortage is declared

## 1.3. Application

The provisions of this Plan shall apply to all customers and property utilizing water provided by the public water system.

# 2. Drought task force

A drought task force was created by the Tribe/Band in order to develop this Plan and to assist in further developing and implementing effective drought monitoring, mitigation, and response actions. The drought task force consists of representatives from the following:

- [\_\_\_\_\_] [name of tribal office or official]

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- Tribal administrator
  - Tribal water/utility department
  - Tribal environmental department
  - Local tribal housing department entity
  - Local fire chief
  - Local police chief
  - Critical water users, e.g. health clinics, schools

### 3. Authorization

The designated official listed below, or his/her designee, is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The designated official or his/her designee shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan. The authorized designated official is: [\_\_\_\_\_] [name of authorized designated official] [tribal administrator] [tribal public works director] [tribal utility authority director]

### 4. Definitions

For the purposes of this Plan, the following definitions shall apply:

- A. **Aesthetic water use:** water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.
- B. **Commercial and institutional water use:** water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings. The term is also referred to as non-residential water use.
- C. **Conservation:** those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water or increase the recycling and reuse of water so that a supply is conserved and made available for future or alternative uses.
- D. **Customer:** any person, company, or organization using water supplied by the public water system.
- E. **Domestic water use:** water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence. The term is also referred to as residential water use.
- F. **Drought level or stage:** severity of the drought conditions indicated by the impact and/or vulnerability triggering criteria for the water source and capacity to meet demand, and corresponding best management practices to mitigate impacts.
- G. **Even number address:** street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.
- H. **Industrial water use:** the use of water in processes designed to convert materials of

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lower value into forms having greater usability and value.

- I. **Landscape irrigation use:** water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.
- J. **Non-essential water use:** water uses that are neither essential nor required for the protection of public, health, safety, and welfare.
- K. **Non-residential water use:** the term is also referred to as commercial or institutional water use.
- L. **Odd numbered address:** street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.
- M. **Public water system:** a system for the provision to the public of water for human consumption through pipes or other constructed conveyances. The term is also referred to as community water system.
- N. **Residential water use:** the term is also referred to as domestic water use.

## 5. Previous water shortage conditions

Living in the western regions of the United States, the peoples of the [\_\_\_\_\_] [name of Tribe/Band] were accustomed to natural variations in climate cycles, and drought conditions have impacted the Tribe since before recorded history. Like other Native Americans living in this region, the Tribe moved seasonally between the ocean and the mountains, according to rainfall and temperature cycles. The ability to move tribal villages as necessary to be near water sources allowed our ancestors to adapt to periods of abundant rainfall and drought conditions. This cultural adaptability remains, however the physical ability to move tribal homes to new areas was removed when the Tribe was required to live on a reservation. This created new challenges, because the Tribe had to remain in one place and survive off of local water sources, regardless of whether rainfall was plentiful or limited.

Since the formation of the Reservation/Rancheria, the Tribe has been impacted many times by drought. During previous water shortages and droughts in [\_\_\_\_\_] [indicate year] [1987] [1992], the [\_\_\_\_\_] [name of Tribe/Band] experienced [\_\_\_\_\_] [indicate impacts experienced from the water shortage/drought] [declining groundwater levels] [reduced surface water flows] [loss of production capacity from the groundwater wells/surface water intake] [reduction in system pressures].

The water shortage conditions caused the [\_\_\_\_\_] [name of Tribe/Band] to implement the following response actions:

- [\_\_\_\_\_] [indicate any previous actions taken]
- [voluntary water use reduction]
- [mandatory water use reduction]
- [water allocations]
- [deepening groundwater wells]
- [use of alternative water sources]

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## 6. Criteria for initiating and termination of drought response stages

The designated official shall monitor water supply on a periodic bases as determined by the severity of the drought, and determine when conditions warrant initiation or termination of each stage of the Plan based on the specified triggering criteria. The triggering criteria are based on public health risks (likelihood and impacts) and an analysis of the anticipated vulnerability of the water source under drought conditions, and system capacity limits.

## 7. Coordination with regional partners

The public water system(s) is in or adjacent to an area with other potential regional partners. As appropriate, this Plan will be provided to other regional partners for the purpose of effective and efficient planning and coordination of resources for drought emergency response. The regional partners for drought emergency response include:

- A. [ ] [name of adjacent Tribe/Band]
- B. [ ] [name of adjacent city or town]
- C. [ ] [name of adjacent water district/utility]
- D. [ ] [name of local county Office of Emergency Services (OES)]

## 8. Public involvement

Opportunities for public input in the Plan were provided by the methods including:

- Holding a public meeting to accept input on the Plan
- Making the Plan available on the official tribal Website
- Providing the Plan to anyone requesting a copy
- Accepting comments on the Plan at a designated office

## 9. Public education and notification

Community outreach, education, and notification about the Plan will include information about the conditions under which each stage is to be initiated or terminated, the drought response measures to be implemented in each stage, and the specific actions required of the public.

The more severe the water shortage, the more vigorous the public information campaign will need to be. Any public communications strategy undertaken in connection with a water shortage should contain the following fundamental attributes:

- **Timely:** Information should be disseminated well in advance of voluntary or mandatory actions that are to take effect, repeated often, and updated at regular intervals.
- **Credible:** Information should strive to be clear, professional, consistent, straight forward, reasoned, and honest to build trust and community support.
- **Multi-modal:** Information should be made available to the public using a variety of methods; for example using the internet, newsletters, radio, and public meetings.
- **Open:** The public water system will actively listen to, engage, and involve its customers, solicit feedback, address identified concerns, and respond to public input in a manner that is respectful, appreciative, welcome to creative solutions, and acknowledges each individual's sacrifice, inconvenience, and contribution to the solution.

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- **Coordinated:** The public water system should collaborate with other Tribal departments and other impacted entities to ensure that the community as a whole has a synchronized and coordinated approach.
  - **Action oriented:** Information should always contain positive action steps people can take to help foster a spirit of cooperation and create an overall atmosphere that encourages the people to conserve water for the public good.

A valuable technique in communication is to have a prepared and concise public message for each stage of the water shortage as described in the Plan. These statements are included within the response action for each stage, and intended to help communications be consistent, stay on message, and set the tone for subsequent communications through the duration of the incident.

There are various methods to carry out communications and public outreach. The designated official will consider the following techniques and methods to notify the public:

- Announcement at public events and meetings
- Presentations and open forums at community meetings
- Publication in a newspaper of general circulation
- Press releases using other local media; e.g. television, radio, E-mail
- Direct mail to each customer; e.g. utility bill inserts
- Telephone hotline
- Public service announcements
- Signs posted in public places; e.g. posting a bulletin at the tribal offices
- Take-home fliers/posters at schools, churches, libraries, grocery stores
- Public information booths at events
- Outdoor signs
- Drought response center
- Announcements on the official tribal Website
- Notifying other tribal offices, departments, schools, and other agencies as appropriate

The designated official will notify the following individuals or agencies:

- Tribal chairperson and members of the tribal council
- Tribal water utility board
- Tribal environmental department
- Local tribal housing department entity
- Local fire chief
- Local police chief
- Critical water users, e.g. health clinics, schools
- County Office of Emergency Services (OES) director
- Indian Health Service District/Field Office
- Other Federal entities; e.g. BIA, BOR, EPA

## **10. Summary inventory of water supply and demand**

### **10.1. Water supply**

The public water system is currently supplied by water source(s) including [\_\_\_\_\_] [description of the water sources] [groundwater] [surface water] [system intertie with local water]

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district] [imported water].

A brief description of each source is provided in the Table below. A detailed description of each water source is provided in the Appendix, and includes [groundwater: well depth, pump depth, seasonal static water levels, seasonal dynamic/pumping water levels, well drilling logs] [surface water: supply, water allocation, seasonal limitations] [system intertie with local water district: supply, seasonal limitations] [imported water: supply, seasonal limitations].

While production from specific water supply source will often vary year to year, due to a variety of factors, it is anticipated that during a drought condition, the water supply would drastically change in quantity and quality.

**Table 1: Estimated minimum water supply**

<b>Water supply source</b>	<b>Estimated minimum water supply [indicate units] [gallons per day] [acre-feet per day]</b>
Source no. 1	
Source no. 2	
Source no. 3	
Total all sources	

## 10.2. Water demand

The public water system has a current water demand from uses including [\_\_\_\_\_]  
[description of the water demand uses] [residential] [non-residential including commercial, schools, tribal offices, health clinics] [irrigation].

A brief description of each water use demand is provided in the Table below. A detailed description of each water use demand is provided in the Appendix, and includes [average demand] [seasonal peak demands] [special/critical use demands; e.g. health clinics].

**Table 2: Average water use demand**

<b>Customer type</b>	<b>Number of connections</b>	<b>Total water demand [indicate units] [gallons per day] [acre-foot per day]</b>
Residential		
Non-residential		
Irrigation		
Total all demands		

The average water demand is based on a use of:

- [\_\_\_\_\_] [average water usage for each customer type]
- [\_\_\_\_\_] [650 gpd per residential connection]
- [\_\_\_\_\_] [7,000 gpd for high school]
- [\_\_\_\_\_] [5,000 gpd for health clinic]
- [\_\_\_\_\_] [3,000 gpd for all other non-residential connections including tribal offices]
- [\_\_\_\_\_] [2,000 gpd for all irrigation]

In addition, actual water use data for the wintertime (e.g. January and February) has been utilized to evaluate the water use allotments for the most restrictive stages. Wintertime water

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use is considered to be more representative of actual minimum domestic water use because it consists primarily of domestic uses, as exterior water use is likely to be minimal during this time of year (e.g. limited use for lawn irrigation, swimming pools, etc.).

The wintertime water use was found to range from approximately [\_\_\_\_\_] to [\_\_\_\_\_] [indicate approximate range of wintertime per capita water usage] [40 to 95 gpcd].

## **11. Determining if a water shortage is imminent**

In normal or wet years when the water supply outlook is favorable, there is generally sufficient supply to meet the existing demand. However, after an unusually dry winter or period of consecutive dry years, there is an increased likelihood the water supply would not meet the demand. It is critical during this situation to undertake an analysis of whether water supplies will be deficient relative to the estimated water needs for the coming dry season. If possible, the analysis should be performed before the end of the rainy season in time to decide appropriate actions and to provide adequate notice to the public. There is a chance that late winter rains will change the water supply outlook, and therefore, the situation often remains dynamic through the end of April.

Generally, the period of May 1 to October 31 is considered the critical period for the purpose of defining the degree of water supply shortfall and for selecting the appropriate demand reduction strategy and goals. During this period is often when water supply availability is the lowest and water demand is the highest, potentially creating a summer water supply shortage situation.

There may often be no single criterion, trigger, or definition that is used to determine if a water shortage exists. The determination of a water shortfall involves consideration of all the relevant factors listed in the Plan which generally involve both the water supply and demand. Generally, forecasting water supplies available from all potential sources (e.g. surface water and ground water sources) may involve a range of certainty due to the availability of historic information and variance in weather patterns and subsurface conditions. Using the best available information, the designated official will determine the degree of the water shortfall following a three-step process, which includes:

1. Develop a monthly forecast of water supply available from all sources.
2. Compare the water supply available to the anticipated water demand.
3. Evaluate whether the available water supply is adequate to meet the demand over the projected time period of dry weather conditions, and any anticipated water shortfall. Implement any water shortage/drought response actions as necessary.

## **12. Triggering criteria and stages of action**

One of the key elements of the Plan is a framework of incremental or staged triggering criteria for the drought severity and corresponding response actions. Each stage is triggered by an anticipated or actual water shortage condition, and each stage has several triggering criteria. The triggering criteria described below are based on an analysis of the vulnerability of the water source under anticipated drought conditions and system capacity limits. The drought condition stage, water shortage triggering criteria, and corresponding demand reduction goals are presented in the Table below.

**Table 3: Level of water shortage, triggering criteria, and demand reduction goals**

Stage Level	Stage title	Water shortage condition and triggering criteria	Demand reduction goal	Program type
1	Normal	Abnormally dry, minor shortage: 0-10%	10%	Voluntary
2	Alert	Moderate shortage: 10-25%	25%	Mandatory
3	Warning	Severe drought: 25-35%	35%	Mandatory
4	Critical	Extreme drought: 35-50%	50%	Mandatory
5	Emergency	Exceptional drought: over 50%	Over 50%	Mandatory

A water shortage may trigger any stage of response actions and include best management practices for supply management and demand reduction. The designated official will determine the most appropriate stage to implement based on actual conditions at the time of the event. Successive stages of response actions will be declared only after exhausting efforts to make a prior stage successful.

In some cases it may be necessary for the designated official to immediately implement an advanced stage of the Plan. This may occur due to information that indicates likely increased severity in the drought conditions (e.g. to serve as a preemptive action) or when the health and safety of the community are at an increased risk. The response actions are designed to be flexible so that there is an appropriate response to the specific situation occurring at a particular time. The conditions that may trigger specific stages of the Plan are specified below.

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Examples of triggering criteria and conditions for each drought level or stage are provided below. One or a combination of such criteria must be defined for each drought stage, but usually not all will apply. It is recommended to review, edit, and modify the list for those triggering criteria that best fit the specific situation and context, and only include those that are necessary. Select only those appropriate to the public water system. The example values in the brackets are reasonable for each drought level/stage; however, they should be reviewed and modified as appropriate.

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**12.1. Stage 1: Minor/abnormally dry conditions (Normal)**

The triggering criteria and conditions for this drought level or stage include:

- Annually, beginning on [\_\_\_\_\_] through [\_\_\_\_\_] [list duration] [for example: March 1 through November 1].
- State Governor or local authority issues a drought declaration at Level/Stage 1.
- When the water supply available to the public water system is equal to or less than [\_\_\_\_\_] [list amount] [acre-fee, percentage of storage, etc.].
- When the water supply available to the public water system is reduced by [\_\_\_\_\_] [list percentage] [10%] of the long-term average.
- Pursuant to requirements specified in the wholesale water purchase contract with [\_\_\_\_\_] [name of wholesale water supplier], notification is received requesting initiation of a drought stage.

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- When flows in the [\_\_\_\_\_] [list name of stream or river] are equal to or less than [\_\_\_\_\_] [cubic feet per second].
  - When the one-year change in the static water level in the well(s) indicates a downward trend and the change in the depth of static water level exceeds [\_\_\_\_\_] [indicate depth in feet] [for example: 2 feet].
  - When the one-year change in the specific capacity of the well(s), defined as the yield of the well divided by drawdown (expressed in units of gpm/ft), decreases by [\_\_\_\_\_] [indicate percentage difference] [10%] percent of the original specific capacity of the well(s).
  - When total water source yield is unable to meet the water demand averaged over each person at [\_\_\_\_\_] [indicate volume per person per day] [for example: 200 gallons per person day].
  - When total daily water demand equals or exceeds [\_\_\_\_\_] [indicate volume per day] [for example: 55,000 gallons per day] for [\_\_\_\_\_] [indicate number of days] [for example, 3] consecutive days based on a safe operating capacity of the water supply facilities.
  - A combination of the above mentioned circumstances reduces the public water system's overall water supply or production capabilities by [\_\_\_\_\_] [list percentage] [10%] or more.

## 12.2. Stage 2: Moderate conditions (Alert)

The triggering criteria and conditions for this drought level or stage include:

- State Governor or local authority issues a drought declaration at Level/Stage 2.
- When the water supply available to the public water system is equal to or less than [\_\_\_\_\_] [list amount] [acre-foot, percentage of storage, etc.].
- When the water supply available to the public water system is reduced by [\_\_\_\_\_] [list percentage] [25%] of the long-term average.
- Pursuant to requirements specified in the wholesale water purchase contract with [\_\_\_\_\_] [name of wholesale water supplier], notification is received requesting initiation of a drought stage.
- When flows in the [\_\_\_\_\_] [list name of stream or river] are equal to or less than [\_\_\_\_\_] [cubic feet per second].
- When the one-year change in the static water level in the well(s) indicates a downward trend and the change in the depth of static water level exceeds [\_\_\_\_\_] [indicate depth in feet] [for example: 3 feet].
- When the one-year change in the specific capacity of the well(s), defined as the yield of the well divided by drawdown (expressed in units of gpm/ft), decreases by [\_\_\_\_\_] [indicate percentage difference] [10%] percent of the original specific capacity of the well(s).

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[indicate percentage difference] [25%] percent of the original specific capacity of the well(s).

- When total water source yield is unable to meet the water demand averaged over each person at [\_\_\_\_\_] [indicate volume per person per day] [for example: 100 gallons per person day].
- When total daily water demand equals or exceeds [\_\_\_\_\_] [indicate volume per day] [for example: 62,500 gallons per day] for [\_\_\_\_\_] [indicate number of days] [for example, 3] consecutive days based on a safe operating capacity of the water supply facilities.
- A combination of the above mentioned circumstances reduces the public water system's overall water supply or production capabilities by [\_\_\_\_\_] [list percentage] [25%] or more.

### 12.3. Stage 3: Severe conditions (Warning)

The triggering criteria and conditions for this drought level or stage include:

- State Governor or local authority issues a drought declaration at Level/Stage 3.
- When the water supply available to the public water system is equal to or less than [\_\_\_\_\_] [list amount] [acre-fee, percentage of storage, etc.].
- When the water supply available to the public water system is reduced by [\_\_\_\_\_] [list percentage] [35%] of the long-term average.
- Pursuant to requirements specified in the wholesale water purchase contract with [\_\_\_\_\_] [name of wholesale water supplier], notification is received requesting initiation of a drought stage.
- When flows in the [\_\_\_\_\_] [list name of stream or river] are equal to or less than [\_\_\_\_\_] [cubic feet per second].
- When the one-year change in the static water level in the well(s) indicates a downward trend and the change in the depth of static water level exceeds [\_\_\_\_\_] [indicate depth in feet] [for example: 5 feet].
- When the one-year change in the specific capacity of the well(s), defined as the yield of the well divided by drawdown (expressed in units of gpm/ft), decreases by [\_\_\_\_\_] [indicate percentage difference] [35%] percent of the original specific capacity of the well(s).
- When total water source yield is unable to meet the water demand averaged over each person at [\_\_\_\_\_] [indicate volume per person per day] [for example: 75 gallons per person day].
- When total daily water demand equals or exceeds [\_\_\_\_\_] [indicate volume per day] [for example: 67,500 gallons per day] for [\_\_\_\_\_] [indicate number of days] [for example, 3] consecutive days based on a safe operating capacity of the water supply

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facilities.

- A combination of the above mentioned circumstances reduces the public water system's overall water supply or production capabilities by [\_\_\_\_\_] [list percentage] [35%] or more.

#### **12.4. Stage 4: Extreme conditions (Critical)**

The triggering criteria and conditions for this drought level or stage include:

- State Governor or local authority issues a drought declaration at Level/Stage 4.
- When the water supply available to the public water system is equal to or less than [\_\_\_\_\_] [list amount] [acre-foot, percentage of storage, etc.].
- When the water supply available to the public water system is reduced by [\_\_\_\_\_] [list percentage] [50%] of the long-term average.
- Pursuant to requirements specified in the wholesale water purchase contract with [\_\_\_\_\_] [name of wholesale water supplier], notification is received requesting initiation of a drought stage.
- When flows in the [\_\_\_\_\_] [list name of stream or river] are equal to or less than [\_\_\_\_\_] [cubic feet per second].
- When the one-year change in the static water level in the well(s) indicates a downward trend and the change in the depth of static water level exceeds [\_\_\_\_\_] [indicate depth in feet] [for example: 10 feet].
- When the one-year change in the specific capacity of the well(s), defined as the yield of the well divided by drawdown (expressed in units of gpm/ft), decreases by [\_\_\_\_\_] [indicate percentage difference] [50%] percent of the original specific capacity of the well(s).
- When total water source yield is unable to meet the water demand averaged over each person at [\_\_\_\_\_] [indicate volume per person per day] [for example: 50 gallons per person day].
- When total daily water demand equals or exceeds [\_\_\_\_\_] [indicate volume per day] [for example: 75,000 gallons per day] for [\_\_\_\_\_] [indicate number of days] [for example, 3] consecutive days based on a safe operating capacity of the water supply facilities.
- A combination of the above mentioned circumstances reduces the public water system's overall water supply or production capabilities by [\_\_\_\_\_] [list percentage] [50%] or more.

#### **12.5. Stage 5: Exceptional conditions (Emergency)**

The triggering criteria and conditions for this drought level or stage include:

- State Governor or local authority issues a drought declaration at Level/Stage 5.
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- When the water supply available to the public water system is equal to or less than [\_\_\_\_\_] [list amount] [acre-fee, percentage of storage, etc.].
  - When the water supply available to the public water system is reduced by [\_\_\_\_\_] [list percentage] [over 50%] of the long-term average.
  - Pursuant to requirements specified in the wholesale water purchase contract with [\_\_\_\_\_] [name of wholesale water supplier], notification is received requesting initiation of a drought stage.
  - When flows in the [\_\_\_\_\_] [list name of stream or river] are equal to or less than [\_\_\_\_\_] [cubic feet per second].
  - When the one-year change in the static water level in the well(s) indicates a downward trend and the change in the depth of static water level exceeds [\_\_\_\_\_] [indicate depth in feet] [for example: over 10 feet].
  - When the one-year change in the specific capacity of the well(s), defined as the yield of the well divided by drawdown (expressed in units of gpm/ft), decreases by [\_\_\_\_\_] [indicate percentage difference] [over 50%] percent of the original specific capacity of the well(s).
  - When total water source yield is unable to meet the water demand averaged over each person at [\_\_\_\_\_] [indicate volume per person per day] [for example: 25 gallons per person day].
  - When total daily water demand equals or exceeds [\_\_\_\_\_] [indicate volume per day] [for example: 87,500 gallons per day] for [\_\_\_\_\_] [indicate number of days] [for example, 3] consecutive days based on a safe operating capacity of the water supply facilities.
  - A combination of the above mentioned circumstances reduces the public water system's overall water supply or production capabilities by [\_\_\_\_\_] [list percentage] [over 50%] or more.

### **13. Response actions**

The Plan provides stages of response actions to manage and mitigate the impacts indicated by each triggering criteria and condition. The response actions provide for a combination of best management practices for both water supply management and reduction in water demand. The response approaches are designed to be flexible so that there is an appropriate action to the specific drought situation occurring at a particular time.

The response actions included in each stage are cumulative, meaning that if Stage 2 is implemented than all of the measures in Stage 1 and 2 shall be implemented. Likewise, if ultimately Stage 5 is implemented, all of the measures in Stages 1, 2, 3, and 4 shall be implemented as well.

A brief description of the response actions for each stage of the Plan are specified below.

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Examples of response actions for each drought stage are provided below. It is recommended to review, edit, and modify the list of response actions for each stage in order that they best fit the specific situation and context, and only include those that are necessary. Select only those appropriate to the public water system. The example values in the brackets are reasonable for each drought level/stage; however, they should be reviewed and modified as appropriate.

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### 13.1. Stage 1 response actions

#### 13.1.1. Target and public message

**Target:** Achieve a **voluntary** reduction of [\_\_\_\_\_] [indicate percentage] [10%] of total daily water demand.

**Public message:** *Due to abnormally dry conditions this winter, we are asking all customers to voluntarily cut back on water use by [10%] in order to stretch the available water supply. The water users should stop using water for non-essential purposes and conserve where possible in case the dry period continues through the year. If everyone cooperates and the water supplies are not impacted anymore, we may avoid more stringent water restrictions. Wasting water hurts everyone.*

#### 13.1.2. Communication, coordination, and planning

Communication, coordination, and planning activities include:

- A. Initiate public information outreach campaign to:
  - Prepare and distribute educational information
  - Notify customers of the water shortage, the need to conserve water, and the importance of significant water use reductions
  - Notify customers with large landscapes of irrigation restrictions
  - Provide customers with practical information on ways to improve water use efficiency
  - Implement customer meter reading program
  - Request customers to reduce their water use by the percentage listed above
- B. Notify Federal (e.g. FEMA, BOR, BIA, IHS, EPA, etc.), State, and Local (County) entities.
- C. Begin initial evaluation of potential temporary and/or long-term needs for infrastructure improvements and funding opportunities.

#### 13.1.3. Supply management best management practices

Best management practices for supply management include:

- A. Reduce flushing of water mains.
- B. Initiate leak detection and repair program.
- C. Develop program for water waste patrols; hire and train staff.

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D. Initiate use of reclaimed water for non-potable purposes.

#### 13.1.4. Demand reduction best management practices

Best management practices for demand reduction include:

- A. Water customers are requested to voluntarily limit the irrigation of landscaped areas to two days a week. Sundays and Thursdays for customers in service area(s) [\_\_\_\_\_] [indicate name of service area or sub-community A] [or with a street address ending in an even number (0, 2, 4, 6 or 8)]. Saturdays and Wednesdays for customers in service area(s) [\_\_\_\_\_] [indicate name of service area or sub-community B] [or with a street address ending in an odd number (1, 3, 5, 7 or 9)]. Irrigate landscapes only between the hours of 12:00 midnight to 10:00 A.M. and 8:00 P.M. to 12:00 midnight on designated watering days.
- B. Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes including:
1. Willfully or negligently wasting water;
  2. Irrigation or sprinkling systems and devices that are not properly designed, installed, maintained, and operated to prevent wastage of water;
  3. Irrigation or sprinkling of any yard, ground, premise, or vegetation unless the watering device is controlled by an automatic shut-off device, or a person is in immediate attendance of the hose or watering device;
  4. Irrigation or sprinkling of lawns for a period that exceeds 15 minutes per station at one time, or a total of 30 minutes per station during a 24 hour day, if water is applied either through a sprinkler system or through a hose with or without a sprinkler device;
  5. Irrigation or sprinkling of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
  6. Use of water to wash down any sidewalks, walkways, driveways, parking lots, basketball courts, or other hard-surfaced areas;
  7. Use of water for dust control;
  8. Use of water to wash down buildings or structures for purposes other than immediate fire protection;
  9. Flushing gutters or permitting water to run or accumulate in any gutter or street;
  10. Use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
  11. Use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system;
  12. Installing or replacing an air-conditioning systems (including portable systems) without a water conservation device which is properly maintained;
  13. Failure to repair a controllable leak(s) or faulty water fixture(s) within a reasonable period time; and
  14. Use of water from hydrants for construction purposes without a permit or any other purposes other than firefighting.

### 13.2. Stage 2 response actions

#### 13.2.1. Target and public message

**Target:** Achieve a **mandatory** reduction of [\_\_\_\_\_] [indicate percentage] [25%] of total daily

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water demand.

**Public message:** *It is necessary to impose mandatory restrictions on water use to ensure that throughout the duration of this water shortage an adequate supply of water is maintained for public health and safety purposes. Our overall goal is to reduce water use by [25%], which can be achieved if everyone cuts back their outdoor watering and other non-essential uses. We are relying on cooperation and support of all water users to abide by all restrictions and to reach this goal. Otherwise, the shortage could deteriorate into a more serious emergency that requires household water allocations to avoid depleting that available water supply.*

### **13.2.2. Communication, coordination, and planning**

Communication, coordination, and planning activities include:

- A. Increase public information outreach campaign to:
  - Notify customers of the mandatory reductions
  - Notify customers of the water shortage, the need to conserve water, and the importance of significant water use reductions
  - Generate publicity about customers demonstrating significant water savings
  - Consult with major customers to develop conservation plans
  - Publicize weekly water consumption graph/data
- B. Identify priorities for water supplies.
- C. Begin to coordinate with Federal (e.g. FEMA, BOR, BIA, IHS, EPA, etc.), State, and Local (County) entities and in particular the County Office of Emergency Services (OES).
- D. Initiate evaluation and plan for potential temporary and/or long-term needs for infrastructure improvements and funding opportunities (e.g. FEMA, BOR, BIA, IHS, EPA, USDA/RD, State, etc.).
- E. Develop strategy to mitigate revenue losses.

### **13.2.3. Supply management best management practices**

Best management practices for supply management include:

- A. Discontinue flushing of water mains; for emergency purposes only.
- B. Intensify leak detection and repair program.
- C. Intensify program for water waste patrols.
- D. Use of reclaimed water for non-potable purposes.
- E. Plan for use of an alternative water source(s).

### **13.2.4. Demand reduction best management practices**

Best management practices for demand reduction include:

- A. Water customers are required to limit the irrigation of landscaped areas to two days a week. Sundays and Thursdays for customers in service area(s) [\_\_\_\_\_] [indicate

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name of service area or sub-community A] [or with a street address ending in an even number (0, 2, 4, 6 or 8)]. Saturdays and Wednesdays for customers in service area(s) [\_\_\_\_\_] [indicate name of service area or sub-community B] [or with a street address ending in an odd number (1, 3, 5, 7 or 9)]. Irrigate landscapes with hose-end sprinklers or automatic irrigation systems, and only between the hours of 12:00 midnight to 10:00 A.M. and 8:00 P.M. to 12:00 midnight on designated watering days.

- B. Use of water to wash any motor vehicle, motorbike, boat, trailer, or other vehicle is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 A.M. and between 8:00 P.M. and 12:00 midnight. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public are contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
- C. Use of water from hydrants shall be limited to firefighting related activities, or other activities necessary to maintain public health, safety, and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from the public water system.
- D. All restaurants are prohibited from serving water to patrons except upon request of the patron.
- E. Water customers are mandated to practice water conservation and to minimize or discontinue water use for non-essential purposes. Prohibitions include:
  - 1. Willfully or negligently wasting water;
  - 2. Irrigation or sprinkling systems and devices that are not properly designed, installed, maintained, and operated to prevent wastage of water;
  - 3. Irrigation or sprinkling of any yard, ground, premise, or vegetation unless the watering device is controlled by an automatic shut-off device, or a person is in immediate attendance of the hose or watering device;
  - 4. Irrigation or sprinkling of lawns for a period that exceeds 15 minutes per station at one time, or a total of 30 minutes per station during a 24 hour day, if water is applied either through a sprinkler system or through a hose with or without a sprinkler device;
  - 5. Irrigation or sprinkling of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
  - 6. Use of water to wash down any sidewalks, walkways, driveways, parking lots, basketball courts, or other hard-surfaced areas;
  - 7. Use of water for dust control;
  - 8. Use of water to wash down buildings or structures for purposes other than immediate fire protection;
  - 9. Flushing gutters or permitting water to run or accumulate in any gutter or street;
  - 10. Use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
  - 11. Use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system;
  - 12. Installing or replacing an air-conditioning systems (including portable systems)

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- without a water conservation device which is properly maintained;
13. Failure to repair a controllable leak(s) or faulty water fixture(s) within a reasonable period time; and
  14. Use of water from hydrants for construction purposes without a permit or any other purposes other than firefighting.

### 13.3. Stage 3 response actions

#### 13.3.1. Target and public message

**Target:** Achieve a **mandatory** reduction of [\_\_\_\_\_] [indicate percentage] [35%] of total daily water demand.

**Public message:** *The Tribe faces a serious water shortage emergency due to prolonged drought. To conserve the available water supply for the greatest public benefit while minimizing impacts on our local economy, it has become necessary to institute a water allocation program for all residential customers. Our goal is to reduce system water demand by [35%]. While water allocation amounts are adequate for normal domestic needs, significant cuts to outdoor water use may be necessary to remain within set allocations. All customers are urgently asked to make every effort to conserve water and abide by watering restrictions or face further reductions in water allotments.*

#### 13.3.2. Communication, coordination, and planning

Communication, coordination, and planning activities include:

- A. Intensify and expand public information outreach campaign to:
  - Notify customers of the water use allocations
  - Inform customers of ban on open burning
  - Expand and strengthen water conservation education, activities, and programs
- B. Identify priorities for water supplies.
- C. Coordinate with Federal, State, and Local (County) entities, and in particular, the County Office of Emergency Services (OES), and any mutual aid assistance.
- D. Coordinate with local health directors to assess public health treats and take appropriate actions.
- E. Provide regular situational reports to Federal entities and County OES.
- F. Deploy temporary and/or long-term infrastructure improvements for water supply augmentation such as emergency interconnection, rehabilitation of existing water wells, construction of new water wells, re-confirm arrangements for water hauling etc.
- G. Invoke ban on open burning.
- H. Increase customer service training for staff.
- I. Review and adopt enforcement rates and appeals board to process requests for exceptions.

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### 13.3.3. Supply management best management practices

Best management practices for supply management include:

- A. Discontinue flushing of water mains; for emergency purposes only.
- B. Intensify leak detection and repair program.
- C. Intensify and expand program for water waste patrols; e.g. increase staff.
- D. Use of reclaimed water for non-potable purposes.
- E. Use of an alternative water source(s).

### 13.3.4. Demand reduction best management practices

Best management practices for demand reduction include:

- A. Implement Stage 3 water consumption allocations for all customers (see Table 4).
- B. Water customers are required to limit the irrigation of landscaped areas to one day a week. Sundays for customers in service area(s) [\_\_\_\_\_] [indicate name of service area or sub-community A] [or with a street address ending in an even number (0, 2, 4, 6 or 8)]. Saturdays for customers in service area(s) [\_\_\_\_\_] [indicate name of service area or sub-community B] [or with a street address ending in an odd number (1, 3, 5, 7 or 9)]. Irrigate landscapes with hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler system only. The use of hose-end sprinklers is prohibited at all times. Irrigation is limited to the hours of 12:00 midnight and 10:00 A.M. and between 8 P.M. and 12:00 midnight only.
- C. Use of water to wash any motor vehicle, motorbike, boat, trailer, or other vehicle is prohibited.
- D. The watering of golf course tees is prohibited unless the golf course utilizes a water source other than that provided by the public water system.
- E. The use of water for construction purposes from designated fire hydrants under special permit is to be discontinued.

## 13.4. Stage 4 response actions

### 13.4.1. Target and public message

**Target:** Achieve a **mandatory** reduction of [\_\_\_\_\_] [indicate percentage] [50%] of total daily water demand.

**Public message:** *Due to continuing deterioration and scarcity of the available water supply, all customers are subject to reduced water allocations. The current water shortage has become very severe. We must all continue to conserve water to the maximum extent possible and strive to maintain water use within our established water allocation limits as long as the drought endures in order to prevent a water crisis.*

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### **13.4.2. Communication, coordination, and planning**

Communication, coordination, and planning activities include:

- A. Continue to intensify public information outreach campaign to:
  - Notify customers of the water use allocations
  - Publicize daily water consumption graph/data
  - Open a centralized drought public outreach position for issues on conservation, water use allocations, etc.
  - Set-up and/or confirm emergency notification lists for high priority water users including health clinics, schools, stores and restaurants, and other large or critical users
- B. Identify priorities for water supplies.
- C. Coordinate with Federal, State, and Local (County) entities, and in particular, the County Office of Emergency Services (OES), and any mutual aid assistance.
- D. Coordinate with local health directors to assess public health treats and take appropriate actions.
- E. Provide regular situational reports to Federal entities and County OES.
- F. Continue use of water supply augmentation measures such as emergency interconnection, use of existing water wells, use of new water wells, water hauling etc.
- G. Continue ban on open burning.
- H. Plan with local partners for potential movement of vulnerable populations out of areas with limited or no water supply.

### **13.4.3. Supply management best management practices**

Best management practices for supply management include:

- A. Discontinue flushing of water mains; for emergency purposes only.
- B. Intensify leak detection and repair program.
- C. Intensify program for water waste patrols and consider expansion to 24/7 with additional staff if necessary.
- D. Use of reclaimed water for non-potable purposes.
- E. Use of an alternative water source(s).

### **13.4.4. Demand reduction best management practices**

Best management practices for demand reduction include:

- A. Implement Stage 4 water consumption allocations for all customers (see Table 4).

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- B. Irrigation of landscaped areas is prohibited.
  - C. Use of water to wash any motor vehicle, motorbike, boat, trailer, or other vehicle is prohibited.
  - D. The watering of golf course tees is prohibited.
  - E. No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as the drought response stage.

### **13.5. Stage 5 response actions**

#### **13.5.1. Target and public message**

**Target:** Achieve a **mandatory** reduction of [\_\_\_\_\_] [indicate percentage] [over 50%] of total daily water demand.

**Public message:** *The Tribe is confronted with a critical water shortage emergency of unprecedented proportions. At this time, there exists barely enough drinking water for the most essential human health, sanitation, and safety needs. As a result, all outdoor water use is prohibited. We understand the hardship this extraordinary condition poses to every customer, and we appreciate the sacrifices people are making to ensure that water system does not run dry. Everyone is urgently requested to do whatever necessary to maintain water use within or below their allotted amount.*

#### **13.5.2. Communication, coordination, and planning**

Communication, coordination, and planning activities include:

- A. Continue to intensify public information outreach campaign to:
  - Notify customers of the water use allocations
  - Notify customers of public water points; e.g. for bottled water or portable water storage tanks
  - Notify vulnerable populations of potential movement/relocations
- B. Identify priorities for water supplies.
- C. Coordinate with Federal, State, and Local (County) entities, and in particular, the County Office of Emergency Services (OES), and any mutual aid assistance.
- D. Coordinate with local health directors to monitor and assess public health treats and take appropriate actions.
- E. Provide regular situational reports to Federal entities and County OES.
- F. Continue use of water supply augmentation measures such as emergency interconnection, use of existing water wells, use of new water wells, water hauling etc.
- G. Continue ban on open burning.

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- H. Plan with local partners for monitoring and potential movement of vulnerable populations out of areas with limited or no water supply.

### 13.5.3. Supply management best management practices

Best management practices for supply management include:

- A. Discontinue flushing of water mains; for emergency purposes only.
- B. Intensify leak detection and repair program.
- C. Intensify program for water waste patrols.
- D. Use of reclaimed water for non-potable purposes.
- E. Use of an alternative water source(s).

### 13.5.4. Demand reduction best management practices

Best management practices for demand reduction include:

- A. Implement Stage 5 water consumption allocations for all customers (see Table 4).
- B. Water use reduced to health and safety needs only. All other uses are prohibited.

## 14. Water use allocations

### 14.1. General

In the event that water shortage conditions threaten public health, safety, and welfare, the designated official is authorized to allocate water according to the following water allocation plan in the Table listed below.

**Table 4: Stage water use allocations**

Customer/connection type	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Residential	Normal or 200 gpcd	Normal or 100 gpcd	75 gpcd	50 gpcd	25 gpcd
Commercial/institutional	Normal	90% of average	85% of average	65% of average	50% of average
Landscape irrigation	Normal	90% of average	50% of average	0% of average	0% of average

Note: gallons per capita per day is gpcd

The residential water use allocations are based on water use priorities for health and safety and were calculated based on minimum domestic uses including drinking, cooking, personal washing, sanitation, and washing clothes. In addition, these water uses have been compared to actual data, in particular during the wintertime period. The Table below provides a more detailed presentation of the basis for the residential water uses and requirements for Stage 4, 5, and rationing water allocations.

**Table 5: Stage 4, 5, and rationing residential water use allocations requirements**

Residential water uses	Stage 4 requirements (gpcd)	Stage 5 requirements (gpcd)	Rationing requirements (gpcd)
Drinking	2.5	2.5	2.5
Cooking	5.0	2.5	2.0
Personal washing	15.0	12.5	7.5
Sanitation	5.0	2.5	1.5
Washing clothes	2.5	2.5	1.5
Cleaning home	5.0	2.5	0
Growing food/garden	15.0	0	0
Total	50	25	15

Residential customers may have some livestock, and will be entitled to an allocation to meet the needs of the animals. Residential customers with livestock should follow water conservation practices including repairing leaks, dripping faucets, practice of filling water tubs and tanks, and cleaning floors and equipment. The Table below provides a list of daily water needs of some common animals.

**Table 6: Water needs for farm animals**

Type of animal	Daily water requirements (gallons per day)
Horse	12
Cow	20-45
Beef animal	8-12
Swine/pig	3-5
Sheep/goats	2-4
Poultry/fowl (per 100)	8-15

## 14.2. Residential customer single-family

The allocation to residential water customers residing in a single-family dwelling shall be based on the persons per household at the level given in Table 4. A “household” means the residential premises served by the customer’s water service line and/or water meter. Persons per household include only those persons currently physically residing at the premises and expected to reside there for the entire billing period. It shall be assumed that a particular customer’s household is comprised of two (2) persons unless the customer notifies the designated official of a greater number of persons per household.

It shall be the customer’s responsibility to go to the office of the designated official to complete and sign the necessary form claiming more than two (2) persons per household. New customers may claim more persons per household at the time of applying for water service on the form prescribed by the designated official. When the number of persons per household increases so as to place the customer in a different allocation category, the customer may notify the designated official and the change will be implemented in the next practicable billing period. If the number of persons in a household is reduced, the customer shall notify the designated official in writing within two (2) days. In prescribing the method for claiming more than two (2) persons per household, the designated official shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with negligence falsely reports the number of

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persons in a household or fails to timely notify the designated official of a reduction in the number of person in a household shall be fined not less than [\_\_\_\_\_] [indicate amount] [\$50].

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Example surcharges for metered customers. Review and modify as appropriate.

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Residential water customers shall pay the following surcharges:

- For the first 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$5].
- For the second 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$10].
- For the third 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$15].
- For each additional 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$5].

Surcharges shall be cumulative.

### 14.3. Residential customer master-metered multi-family

The allocation to a customer billed from a master meter which jointly measures water to multiple permanent residential dwelling units (e.g. apartments, mobile homes) shall be allocated based on [\_\_\_\_\_] [indicate number of persons] [2] persons in each dwelling unit per month. It shall be assumed that such a customer's meter serves two dwelling units unless the customer notifies the designated official of a greater number on a form prescribed by the designated official. It shall be the customer's responsibility to go to the office of the designated official to complete and sign the form claiming more than [\_\_\_\_\_] [indicate number of dwellings] [2] dwellings. A dwelling unit may be claimed under this provision whether it is occupied or not. New customers may claim more dwelling units at the time of applying for water service on the form prescribed by the designated official. If the number of dwelling units served by a master meter is reduced, the customer shall notify the designated official in writing within two (2) days. In prescribing the method for claiming more than [\_\_\_\_\_] [indicate number of dwellings] [2] dwelling units, the designated official shall adopt methods to insure the accuracy of the claim. Any person who knowingly, recklessly, or with negligence falsely reports the number of dwelling units served by a master meter or fails to timely notify the designated official of a reduction in the number of person in a household shall be fined not less than [\_\_\_\_\_] [indicate amount] [\$50].

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Example surcharges for metered customers. Review and modify as appropriate.

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Customers billed from a master meter under this provision shall pay the following monthly surcharges:

- For 1,000 gallons over allocation up through 1,000 gallons for each dwelling unit: [\_\_\_\_\_] [indicate amount] [\$5].
- Thereafter, for each additional 1,000 gallons over allocation up through a second 1,000 gallons for each dwelling unit: [\_\_\_\_\_] [indicate amount] [\$10].
- Thereafter, for each additional 1,000 gallons over allocation up through a third 1,000 gallons for each dwelling unit: [\_\_\_\_\_] [indicate amount] [\$15].
- Thereafter for each additional 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$5].

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Surcharges shall be cumulative.

#### 14.4. Commercial customers

A monthly water allocation shall be established by the designated official, or his/her designee, for each non-residential commercial customer. The non-residential customer's allocation shall be based on Table 4, and the customer's usage for corresponding month's billing period for the previous 12 months. If the customer's billing history is shorter than 12 months, the monthly average for the period for which there is a record shall be used for any monthly period for which no history exists.

The designated official shall give his/her best effort to see that notice of each non-residential customer's allocation is mailed to such customer. If, however, a customer does not receive such notice, it shall be the customer's responsibility to contact the designated official to determine the allocation. Upon request of the customer or at the initiative of the designated official, the allocation may be reduced or increased if, (1) the designated period does not accurately reflect the customer's normal water usage, (2) one non-residential customer agrees to transfer part of its allocation to another non-residential customer, or (3) other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal an allocation to the designated official.

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Example surcharges for metered customers. Review and modify as appropriate.

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Non-residential commercial customers shall pay the following surcharges:

Customers whose allocation is [\_\_\_\_\_] [indicate number of gallons] [10,000] or less per month:

- For the first 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$20] per thousand gallons
- For the second 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$30] per thousand gallons
- For the third 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$40] per thousand gallons
- For each additional 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$20] per thousand gallons

Customers whose allocation is [\_\_\_\_\_] [indicate number of gallons] [10,000] or more per month:

- For the first 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$40] per thousand gallons
- For the second 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$60] per thousand gallons
- For the third 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$80] per thousand gallons
- For each additional 1,000 gallons over allocation: [\_\_\_\_\_] [indicate amount] [\$40] per thousand gallons

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The surcharges shall be cumulative.

## 15. Enforcement

This Plan is designed to place the responsibility for managing the water resources during a water shortage emergency on the entire community. Care has been taken in the design of the Plan not to penalize any customer who has undertaken good-faith and diligent measures to conserve water. However, for the protection of the water resources and ability to provide sufficient water for public health and safety priorities, enforcement and penalties are required for those customers who knowingly or intentionally use water in a manner contrary to the Plan.

Enforcement provisions include the following:

- A. No person shall knowingly or intentionally allow the use of water from the public water system for any purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by the designated official in accordance with provisions of this Plan.
- B. Any person who violates this Plan shall be fined:
  1. For the first incident, the fee shall be deferred for customers who attend a course in water conservation. The deferral shall be conditioned upon the customer's successful completion of a water conservation course provided by the authorized designated official and the customer not having an additional incident of water wastage within a one-year period. The deferred fee shall be collected if a second incident of water wastage occurs within a one-year period.
  2. For the second incident, the fee shall be not less than [\_\_\_\_\_] [indicate amount] [\$50]. Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense.
  3. If a person is convicted of a third incident or more distinct violations of this Plan within a one-year period, the designated official shall, upon due notice to the customer, be authorized to:
    - i. Require the customer to repair any defects in the water system of such customer within 14 days of notice;
    - ii. Installation by the designated official of flow restrictors or termination of water service for exterior use;
    - iii. Termination of all water service to a customer unless in the opinion of the designated official such termination would result in an unreasonable risk to the health and safety of the persons;
    - iv. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at [\_\_\_\_\_] [indicate amount] [\$50], and any other costs incurred by the public water system in discontinuing service. In addition, suitable assurance must be given to the designated official that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought through injunctive relief in the [\_\_\_\_\_] [indicate

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tribal entity] [tribal council, tribal court, etc.].

- v. Compliance with this plan may also be sought through injunctive relief in the [\_\_\_\_\_] [indicate tribal entity] [tribal council, tribal court, etc.].

C. Any person, including a person classified as a water customer of the public water system, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation. Parents shall be presumed to be responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Plan and that the parent could not have reasonably known of the violation.

D. Any employee of the public water system, police officer, or other designated official, may issue a citation to a person he/she reasonably believes to be in violation of this Plan. Service of the citation shall be complete upon delivery of the citation to the alleged violator, to an agent or employee of a violator, or to a person over 14 years of age who is a member of the violator's immediate family or is a resident of the violator's residence.

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Consider adding for systems with no or limited residential water meters. Modify as appropriate to the customers metered and billing structure.

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E. Because there are currently no and/or a limited number of single-family residential customers with a meter and are billed for water use based on a monthly flat rate, no penalties can be assessed for excessive water use based on a metered volume of water. However, enforcement of violations of the Plan will be made based on other factors including visual observations of irrigation practices, water used for washing vehicles, dust control, and other acts of negligently wasting water.

## 16. Variances

The designated official may in writing grant temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:

- Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other condition for which the Plan is in effect, and
- Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Plan shall file a petition for variance with the public water system within 5 days after the Plan or a particular drought

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response stage has been invoked. All petitions for variances shall be reviewed by the designated official and shall include the following:

- A. Name and address of the petitioner(s).
- B. Purpose of water use.
- C. Specific provision(s) of the Plan from which the petitioner is requesting relief.
- D. Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Plan.
- E. Description of the relief requested.
- F. Period of time for which the variance is sought.
- G. Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
- H. Other pertinent information.

Variances granted by the public water system shall be subject to the following conditions, unless waived or modified by the designated official:

- Variances granted shall include a timetable for compliance.
- Variances granted shall expire when the Plan is no longer in effect, unless the petitioner has failed to meet specified requirements.

No variance shall be retroactive or otherwise justify any violation of this Plan occurring prior to the issuance of the variance.

## **17. Revenue and expenditure analysis**

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An example of a revenue and expenditure analysis as a result of the response actions is provided below. It is recommended to review, edit, and modify in order that it best fits the specific situation and context.

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### **17.1. Potential revenue impacts**

The public water system's revenues from water use charges are derived from customers and uses including [\_\_\_\_\_] [description of the customers and water demand uses] [residential] [non-residential including commercial, schools, tribal offices, health clinics] [irrigation]. Water service to the customers is [not] billed and is [not] based on [\_\_\_\_\_] [description of the rate structure] [metered rate] [flat rate] [no charge]. Therefore, as customer water use decreases based on the mandatory restrictions and water allocations, the revenue would [\_\_\_\_\_] [description of the impact to the revenue as the customers use less water] [decrease] [remain the same with limited change].

[In the future, all customers will be metered and billed based on a metered usage rate. As the transition occurs, the public water system may become potentially more vulnerable to revenue impacts during periods when water use is reduced.]

### **17.2. Potential expenditure impacts**

During a water shortage and activation of this Plan, the expenditures for water-related services may be impacted. Expenditures may increase based on numerous factors including:

- Increased water conservation program costs to implement, monitor, and enforce new or more intensive activities.
- Increased staffing costs for operation and maintenance of facilities to ensure efficient operation of available facilities
- Increased costs for acquisition of alternative water supplies and associated facilities including [\_\_\_\_\_] [description of the additional costs for alternative water supplies] [interconnection use agreements] [purchase of additional water] [water hauling services].
- Increased costs for groundwater pumping, if additional groundwater pumping is needed to compensate for decreased surface water supplies or if more energy is required because of increased pumping lifts associated with decreasing groundwater levels.

With assumed increases in certain expenditures, overall water expenditures may increase during the various stages of the Plan. These increases in expenditures, coupled with reductions in revenue [for metered rate customers], could potentially impact the public water system's budget and financial status.

### 17.3. Proposed measures to overcome revenue and expenditure impacts

Measures that may be implemented to overcome revenue and expenditure impacts include:

- Water rate increases; and
- Development and use of reserve funds.

## 18. Mechanism for determining actual water use reductions

The system's water production from [\_\_\_\_\_] [description of the water source(s)] [ground water wells] [surface water] is continuously monitored by [\_\_\_\_\_] [description of the system to measure water production] [totalizing flow meter] [SCADA system].

During Stage 1 or Stage 2, daily water production figures will be reported to the designated official. The designated official will then compare the weekly production to the target weekly production and verify that the reduction goal is being achieved. Weekly reports would then be forwarded to the Drought Task Force and [\_\_\_\_\_] [name of tribal office or official] [Tribal council] [Tribal administrator]. If the reduction goals are not met, the designated official will notify the Drought Task Force and consider potential corrective actions; e.g. implementation of additional water use restrictions.

During Stage 3 or Stage 4, the procedure would remain the same, with the addition of a daily report being provided to the Drought Task Force and other required Tribal entities.

During Stage 5, the procedure would remain the same, with the addition of an hourly or on-demand report being provided to the Drought Task Force and other required Tribal entities.

## 19. Drought scenario

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An example drought scenario is provided below. It is recommended to review, edit, and modify the list of conditions and response actions in order that they best fit the specific situation and context, and only include those that are necessary. Select only those appropriate to the public water system.

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For contingency planning purposes, the drought scenario and assumptions include the following:

- A. Drought conditions with below-normal precipitation and snowpack levels have adversely impacted water sources.
- B. Drought conditions progress from abnormally dry to [\_\_\_\_\_] [list anticipated drought conditions will reach] [moderate] [severe] [extreme] [exceptional/emergency] conditions through the year with severity increasing into fall (September/October).
- C. Water source(s) capacity reduced by [\_\_\_\_\_] [list anticipated reduction in capacity] [minimal impact at up to 10%][moderate impact at 10 to 25%] [severe impact at 25 to 35%] [critical impact at 35 to 50%] [exceptional/emergency impact at over 50%].
- D. Anticipated available water source(s) capacity after reductions from drought will be [\_\_\_\_\_] [list anticipated remaining water source capacity after reduction from drought] [for example: 10,000 gpd].
- E. During the peak drought conditions, the anticipated water demand level and corresponding water use allocation will be at [\_\_\_\_\_] [list the anticipated water demand reduction/allocation level/stage] [level 1] [level 2] [level 3] [level 4] [level 5].
- F. Based on the anticipated drought level, the total water demand, including anticipated water use reductions, will be [\_\_\_\_\_] [list the anticipated water demand including any water reductions from allocations and conservation] [for example: 20,000 gpd].
- G. Existing alternative water source(s) include [\_\_\_\_\_] [description of the existing alternative water sources] [back-up wells] [irrigation wells] [spring sources] [system intertie with local water district] [agreement for imported water]. [Include in the Appendix specific information on the existing alternative water sources including location, capacity, water quality, agreements, etc.].
- H. New feasible alternative water sources that could be completed within a reasonable timeframe include [\_\_\_\_\_] [description of the new feasible alternative water sources] [back-up wells] [irrigation wells] [spring sources] [system intertie with local water district] [agreement for imported water]. [Include in the Appendix specific information on the proposed new alternative water sources including location, conceptual design, cost estimate, capacity, water quality, agreements, permits, etc.].
- I. Likelihood of alternative water sources (existing and/or new, if any), in combination with current water supply reduced by the drought, could fully meet the anticipated water demand is [\_\_\_\_\_] [list anticipated likelihood of total water sources being able to meet demand during the drought] [likely] [unlikely].
- J. Duration of reduced water supply is anticipated to be [\_\_\_\_\_] [list anticipated duration] [14 days] [30 days] [45 days] [60 days] [90 days].
- K. [\_\_\_\_\_] [list other specific site conditions, context, or assumptions for the scenario].

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## **APPENDIX:**

Example Resolution forming a Drought Task Force

Example Resolution adopting a Drought Contingency Plan

Other possible items to include:

- A. Information on water sources; e.g. well logs, test pumps, river flows
- B. Information on water sources; e.g. historic water use demands, pumphouse meter readings
- C. List of high priority customer contacts for emergency notification including health clinics, schools, stores and restaurants, and other large or critical users
- D. List of important contacts for tribal offices
- E. List of important contacts for Federal, State, and Local (County) entities, and in particular, the County Office of Emergency Services (OES)
- F. Example monthly water supply and water demand monitoring report
- G. Copies of water agreements with vendors for hauling
- H. Copies of water agreements with utilities for interconnections
- I. Conceptual design/cost estimate for alternative water sources
- J. Copies of applicable tribal ordinances and laws

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[\_\_\_\_\_] [name of Tribe/Band]

EXAMPLE RESOLUTION FOR FORMING A DROUGHT TASK FORCE

Resolution No. [\_\_\_\_\_]

Date [\_\_\_\_\_]

WHEREAS, the [\_\_\_\_\_] [name of Tribe/Band] is a federally recognized Tribe governing itself according to a Constitution and By-laws; and

WHEREAS, the [\_\_\_\_\_] [name of Tribe/Band] is experiencing drought conditions along with other areas of the State of California; and

WHEREAS, the [\_\_\_\_\_] [name of Tribe/Band] recognizes that the amount of water available to the public water systems and its water customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the [\_\_\_\_\_] [name of Tribe/Band] desires to develop a Drought Contingency Plan in partnership with other federal and local agencies; and

WHEREAS, a critical part of managing and mitigating the impacts of a drought are initial contingency planning and to have competent staff identified that are assigned to work on this important issue; and

THEREFORE BE IT RESOLVED, that [\_\_\_\_\_] [name of Tribe/Band] desires to create the Drought Task Force, a subcommittee of the [\_\_\_\_\_] [name of tribal entity] [Tribal Water Board], that will be comprised of staff from [\_\_\_\_\_] [name of tribal office or official] [Tribal administrator] [Tribal water/utility department] [Tribal environmental department] [Local tribal housing department entity] [Local fire chief] [Local police chief] [Critical water users, e.g. health clinics, schools], and staff deemed necessary to carry out the duties to develop a Drought Contingency Plan; and

BE IT FURTHER RESOLVED, that the Drought Task Force will report to the [\_\_\_\_\_] [name of tribal entity] [Tribal Water Board], and the will keep the Tribal Council informed of the current drought conditions; and

BE IT FURTHER RESOLVED, that Drought Contingency Plan developed and recommended by the Drought Task Force will be presented to the Tribal Council for review and approval.

CERTIFICATION

This is to certify that the above resolution was duly adopted at a Tribal Council meeting of the [\_\_\_\_\_] [name of Tribe/Band] on [\_\_\_\_\_] [date], and will be ratified at the next General Council Meeting. The Resolution was adopted by a vote of: [\_\_\_\_\_] [names of Tribal Council members]

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[\_\_\_\_\_] [name of Tribe/Band]

EXAMPLE RESOLUTION FOR ADOPTION OF A DROUGHT CONTINGENCY PLAN

Resolution No. [\_\_\_\_\_]

Date [\_\_\_\_\_]

WHEREAS, the [\_\_\_\_\_] [name of Tribe/Band] is a federally recognized Tribe governing itself according to a Constitution and By-laws; and

WHEREAS, the [\_\_\_\_\_] [name of Tribe/Band] is experiencing drought conditions along with other areas of the State of California; and

WHEREAS, the [\_\_\_\_\_] [name of Tribe/Band] recognizes that the amount of water available to the public water systems and its water customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the Drought Task Force has developed a Drought Contingency Plan; and

WHEREAS, as authorized under the Constitution and By-laws, and in the best interests of the Tribal members and all water system customers, the [\_\_\_\_\_] [name of Tribe/Band] deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought emergencies;

THEREFORE BE IT RESOLVED, that the Drought Contingency Plan attached hereto as Exhibit "A" and made part hereof for all purposes be, and the same is hereby, adopted as the official policy of the [\_\_\_\_\_] [name of Tribe/Band]; and

BE IT FURTHER RESOLVED, that [\_\_\_\_\_] [indicate title of designated official] [tribal administrator] [tribal public works director] [tribal utility authority director] is hereby directed to implement, administer, and enforce the Drought Contingency Plan; and

BE IT FURTHER RESOLVED, that the Drought Task Force consisting of its current membership, and other staff deemed necessary to carry out the duties detailed in the Drought Contingency Plan, shall remain in effect to assist and support the implementation of the Drought Contingency Plan; and

BE IT FURTHER RESOLVED, that the Drought Task Force will report to the [\_\_\_\_\_] [name of tribal entity] [Tribal Water Board], and the [\_\_\_\_\_] [indicate title of designated official] will keep the Tribal Council informed of the current drought conditions.

CERTIFICATION

This is to certify that the above resolution was duly adopted at a Tribal Council meeting of the [\_\_\_\_\_] [name of Tribe/Band] on [\_\_\_\_\_] [date], and will be ratified at the next General Council Meeting. The Resolution was adopted by a vote of: [\_\_\_\_\_] [names of Tribal Council members]