El Dorado Irrigation District

DROUGHT ACTION PLAN

2021 UPDATE

PURPOSE. This Drought Action Plan serves as a detailed work plan for El Dorado Irrigation District staff and our customers, not only during drought conditions, but before and after as well. It includes specific actions for management of the District's water supply and demand, addresses the impacts associated with drought, and facilitates the timely implementation of effective drought responses.

CHANGES. The original foundation of this action plan is the District's 2008 Drought Preparedness Plan. The drought action plan was created and underwent several changes in 2014 and 2015 to reflect the then-current conditions and to comply with State-mandated conservation levels and actions applicable at that time. Recent changes to the plan include removal of some of the specific conservation levels required by the state at the time and a return to the original drought stages and corresponding target conservation levels. The Plan has also been updated to comply with California Water Code (CWC) §10632, which lists new requirements for urban water suppliers regarding development of a Water Shortage Contingency Plan. Accordingly, this Drought Action Plan 2021 Update includes new sections and information specifically aimed at addressing the requirements. For purposes of compliance with CWC §10632, the terms Drought Action Plan (or Plan) and Water Shortage Contingency Plan are considered synonymous.

ADOPTION. The Drought Action Plan was first adopted by the Board on February 4, 2014. Subsequent revisions to the Plan were approved in 2014 and 2015 as the District navigated through that drought. The Board adopted the 2021 Drought Action Plan on June 14, 2021.

Table of Contents

1.0 Introduction

1.1 Purpose of this Plan

In 2007, the El Dorado Irrigation District (EID or District) and the El Dorado County Water Agency (EDCWA) completed comprehensive drought preparedness plans that provided indicators and modeling tools to determine when El Dorado County, and specifically each water purveyor, might enter into drought conditions. In January of 2008, the EID Board of Directors adopted the District's Drought Preparedness Plan. District staff then developed an internal action plan to address specific tasks and detailed actions, which was completed in March of 2009, and was based upon the drought metrics and customer responses provided in EID's Drought Preparedness Plan. The plan was then updated in 2014 and 2015.

This 2021 Drought Action Plan Update (Plan) continues to serve as a detailed work plan for District staff in order to prepare for and address supply shortages, including shortages from drought conditions and catastrophic interruption of supplies. It includes specific actions regarding the management of water supply and demand, addresses the impacts associated with supply shortage conditions, and facilitates a District-wide supply shortage response that is both timely and effective. This Plan is also listed in Part III of the District's Emergency Operations Plan.

The Plan complies with California Water Code (CWC) §10632, which lists requirements for urban water suppliers regarding development of a Water Shortage Contingency Plan. Accordingly, this 2021 Drought Action Plan Update includes new sections and information specifically aimed at addressing those requirements. For purposes of compliance with CWC §10632, the terms Drought Action Plan (or Plan) and Water Shortage Contingency Plan are synonymous.

1.2 Adoption, Submittal, and Availability

The Plan (including subsequent updates) shall be adopted in accordance with standard District procedures, including requirements for public participation, and adoption by the EID Board of Directors. Upon adoption, the Plan will be provided to the City of Placerville, El Dorado County, and submitted to DWR within 30 days. The adopted Plan will be available on the District's website.

1.3 Summary of Reliability Assessments

As part of EID's 2020 Urban Water Management Plan (UWMP), two separate assessments were conducted to evaluate both the near- and long-term reliability of the District's supplies. The District's Water Reliability Assessment was conducted for normal year, single-dry year, and a drought lasting five consecutive years, and is used to evaluate long-term supplies with demands over the next 25 years, in five year increments. The Drought Risk Assessment assumes the occurrence of a drought over the next five years, and aims to assess EID's near-term reliability.

Results from the Water Reliability Assessment indicate EID has ample supplies through 2045 to meet expected customer demands under the normal year, single-dry year, and five-year drought conditions. Similarly, the District's Drought Risk Assessment indicates sufficient supplies to meet expected demands during an assumed drought occurring in the next five consecutive years (2021-2025). For a more detailed description of the assessments, the reader is referred to the District's 2020 UWMP.

1.4 Summary of Drought Stages

All declarations of drought stages occur by action of the EID Board of Directors. As a policy, EID implements the same drought stage and employs the same response measures throughout its

geographical water supply regions whenever possible, making public outreach and implementation consistent and effective. However, different stages can and have been applied to the District's two satellite water systems compared to the main system to account for system-specific conditions. To see an example of a drought declaration, resolution, and staff report, refer to the February 4, 2014 Board packet and Public Hearing Item Number 1.

The drought stages defined by this Plan are consistent with the 2010 recommendations of a Regional Water Authority (RWA) work group, which consisted of ten member agencies in the Sacramento region. The group was tasked with developing a regional water shortage contingency plan that would provide consistent messaging for the region, and ranges from Stages 1 through 4 as the water shortage becomes progressively worse. When a drought stage is declared by the water purveyor's governing body, as deemed necessary, the individual purveyors would also determine the actual water demand reductions for each declared stage. If conditions warrant, the District will coordinate with the City of Placerville and El Dorado County for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

The four stages of the EID Drought Action Plan depend upon District water supply conditions, and the corresponding response requested of our customers. For normal water supply conditions, the District would continue to implement water efficiency measures and prohibit water waste, while raising public awareness regarding water efficiency practices. Prohibitions on water waste during all stages, including Normal Water Supply are outlined in Administrative Regulation (AR) 1041 (Water Waste Prohibition).

If water supplies become slightly restricted, the Plan calls for an introductory **Stage 1** drought response, during which customers are informed of possible shortages and asked to voluntarily conserve up to 15 percent. At **Stage 2** when water supplies become moderately restricted, both voluntary and mandatory measures are implemented to achieve a demand reduction goal of up to 30 percent. If water supplies subsequently become severely restricted, a **Stage 3** drought can be called with the enforcement of mandatory measures to achieve a demand reduction goal of up to 50 percent. Lastly, if drought conditions persist and the District experiences extremely restricted water supplies, then a **Stage 4** can be implemented that requires water rationing for health and safety purposes in order to achieve a greater than 50 percent reduction of demands.

Table 1 summarizes these water supply conditions and the corresponding drought stages, titles, and objectives; along with the expected response actions and demand reduction targets.

Table 1 - Drought Stages Summary				
Water Supply Conditions	**Drought Stage**	**Stage Title**	**Stage Objective**	**Response Actions**
Normal Water Supply	**None** - Ongoing water conservation and enforcement of water waste prohibition.	Normal Conditions	Public awareness of water efficiency practices and prohibition of water waste.	Public outreach and education for ongoing water efficiency practices and the prohibition of water waste.
Slightly Restricted Water Supplies Up to 15% Supply Reduction	**Stage 1** Introductory stage with voluntary reductions in use.	Water Alert	Initiate public awareness of predicted water shortage and encourage conservation.	Encourage voluntary conservation measures to achieve **up to a 15% demand reduction.**
Moderately Restricted Water Supplies Up to 30% Supply Reduction	**Stage 2** Voluntary and mandatory reductions in water use.	Water Warning	Increase public awareness of worsening water shortage conditions. Enforce mandatory measures such as watering restrictions.	Voluntary conservation measures are continued, with the addition of some mandatory measures to achieve **up to a 30% demand reduction.**
Severely Restricted Water Supplies Up to 50% Supply Reduction	**Stage 3** Mandatory reductions in water use.	Water Crisis	Enforce mandatory measures and/or implement water rationing to decrease demands.	Enforce mandatory measures to achieve **up to a 50% demand reduction.**
Extremely Restricted Water Supplies Greater than 50% Supply Reduction	**Stage 4** Water rationing for health and safety purposes.	Water Emergency	Enforce extensive restrictions on water use and implement water rationing to decrease demands.	Enforce mandatory measures to achieve **greater than 50% demand reduction.**

Water Code Section 10632(a)(3) calls on suppliers to identify six standard water shortage levels from the normal reliability (10, 20, 30, 40, 50 and greater than 50 percent shortage) in their Water Shortage Contingency Plan. EID has instead chosen to use the existing four shortage levels identified in this Drought Action Plan for consistency with past droughts and ease of implementation. Pursuant to Water Code Section 10632(a)(3)(B), Table 2 cross-references this Plan's shortage levels to the State identified levels.

Table 2

State Mandated Shortage Levels	EID Drought Action Plan Levels	
Stage 1: 0 – 10%	Stage 1 – Water Alert	0 – 15%
Stage 2: 10 – 20%	Stage 1 – Water Alert Stage 2 – Water Warning	0 – 15% 15 – 30%
Stage 3: 20 – 30%	Stage 2 – Water Warning	15 – 30%
Stage 4: 30 – 40%	Stage 3 – Water Crisis	30 – 50%
Stage 5: 40 – 50%	Stage 3 – Water Crisis	30 – 50%
Stage 6: >50%	Stage 4 – Water Emergency	>50%

1.5 Action Plan Organization

This document will focus on those activities directly impacting the management of water supply and demand, along with the customer services that would be modified to address changing drought conditions. The tasks and duties in this Plan are organized by function rather than by department. There are a number of policies that are identified as drought conditions occur. Revisiting and updating drought policies during and after a drought are essential to continuing the benefit and effectiveness of this Plan.

1.6 Applicable Water Codes and Legal Authorities

During times of water shortage, there are actions the District may take that are not solely based upon internal policies and regulations. Several California Water Code Sections and California Codes of Regulation grant authority to or mandate that the water purveyor declare drought conditions and implement drought stages. Below are **summaries** of specific actions required during water shortage conditions; however, the official California Water Code or California Code of Regulations should be

referenced for the complete language of the section. Where not otherwise indicated, citations are to the California Water Code.

Title 23, California Code of Regulation, Section 864 – End-User Requirements in Promotion of Water Conservation – To prevent the waste and unreasonable use of water and to promote water conservation, various actions are prohibited, except where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a state or federal agency.

Title 23, California Code of Regulation, Section 865 – Mandatory Actions by Water Suppliers – To promote water conservation, each urban water supplier shall provide prompt notice of leaks within an end-user's control, submit monthly monitoring reports to the state, and meet a state-prescribed water conservation mandate..

Section 350 – The governing body of the water purveyor may declare a water shortage emergency condition whenever it determines that ordinary demands cannot be satisfied without depleting supplies to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

Section 351 – The declaration shall be made only after a public hearing is held, at which consumers have an opportunity to protest and to present their respective needs to the governing body. There is an exception for a breakage or failure that causes an immediate emergency.

Section 352 – At least seven days prior to the date of the public hearing, a notice of the time and place of the hearing shall be published in a newspaper that is distributed within the water purveyor's service area.

Section 353 – When the governing body has declared a water shortage emergency condition within its service area, it shall adopt regulations and restrictions on the delivery and consumption of water supplied for public use in order to conserve water supply for the greatest public benefit, with particular regard to domestic use, sanitation, and fire protection.

Section 354 – After allocating the amount of water, which in the opinion of the governing body will be necessary to supply domestic use, sanitation, and fire protection, the regulations may establish priorities in the use of water for other purposes – without discrimination between consumers using water for the same purpose.

Section 355 – These regulations and restrictions shall remain in effect during the water shortage emergency condition, and until the water supply has been replenished or augmented.

Section 356 – These regulations and restrictions may prohibit new or additional service connections, and authorize discontinuing service to consumers willfully in violation of a regulation or restriction.

Section 357 – These regulations and restrictions prevail over any conflicting laws governing water allocations while the water shortage emergency condition is in effect.

Section 22257 – An irrigation district may impose equitable rules and regulations, including controls on the distribution and use of water, as conditions of ongoing service to its customers.

1.7 Evaluation and Improvement Procedures

This Drought Action Plan is an adaptive plan that allows for active refinement in response to particular shortage conditions. The general procedures for refinement are presented below.

1. For each shortage response action, compare expected results with actual shortage response and identify any shortfall or over-achievement.
2. Revise expected reduction for a specific shortage response action based on updated information.
3. Assess the aggregate expected reductions (from revised shortage response actions) for each shortage stage.
4. Revise stage declaration or modify stage shortage response actions to better balance demands with supplies.

The procedures presented above aim to ensure an adaptive Drought Action Plan is maintained that can be relied upon under various and changing circumstances.

1.8 Drought and Water Management Tools

There are resources available to aid water purveyors and individuals before, during, and after a drought. Below is a brief description of a few of these tools.

- **California Urban Drought Guidebook** – a publication providing help to water managers facing water shortages by showing them how to use tried-and-true methods of the past, such as demand management, conservation analysis, and fiscal considerations; as well as new methods and technology such as ET controllers and cooling system efficiencies. Download the Urban Drought Guidebook, 2008 Updated Edition at: https://cawaterlibrary.net/document/urban-drought-guidebook-2008-updated-edition/

- **DWR Office of Water Use Efficiency** – makes available technical expertise, manages the CIMIS weather station network, carries out demonstration projects and data analysis to increase efficiency where possible, and provides loans and grants to achieve efficiency in water and energy. This information can be found at https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency

- **DWR Drought Conditions** – a webpage providing State and regional updates with regards to water conditions. More information can be found at https://water.ca.gov/Current-Conditions

- **U.S. Bureau of Reclamation Drought Response Program** – aids federal water contractors and other interested parties in a wider view of drought conditions, encompassing the western United States. Staff from this program will also provide technical assistance, grant and loan funding, and expertise in drought planning. Information on this Bureau program can be found at https://www.usbr.gov/drought/

- **SWRCB Drought Information and Updates** – provides the latest information and updates on drought conditions in California, actions by SWRCB, and resources for conservation strategies and funding opportunities. More information can be found at https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/

2.0 Coordination and Guidelines

EID's drought response should be managed by participants in the District's Drought Response Team (DRT), which should include department heads and/or their appointed representative and the General Manager. The DRT may coordinate with other agencies in the county and region through other organized Drought Committees. Responding to a drought in El Dorado County should include a number of tactics and agencies, and a multi-level management team with function-specific responsibilities is an important planning device for collaborative and comprehensive drought event management.

2.1 Drought Response Team

The 2008 Drought Preparedness Plan emphasized the importance of a DRT for inter-department drought management. Initially, the DRT should be made up of staff representing the following functions.

- Engineering and Operations
- Finance and Customer Services
- OGM/Legal
- Public Outreach
- Recreation
- Water Efficiency

This list may be narrowed down due to staff availability and specific needs, as different functions may not be necessary in all situations nor at all times.

2.2 Role and Responsibilities

The DRT will be responsible for monitoring the activities of the District with regard to general drought management, including issues of timing, policy, public relations, financial solvency, customer education, facility operations, environmental considerations, and public health. The EID Board of Directors should be updated by the General Manager and/or staff at regular and special board meetings. During cases of extreme drought, updates may occur more often by e-mail or by phone, consistent with the requirements of the Ralph M. Brown Open Meetings Act.

The DRT should meet periodically during normal water supply conditions to discuss updates and other important ongoing considerations. The group would meet more often as drought events occur and worsen, perhaps once per week or even once per day in extreme cases. A DRT meeting may be requested by any member, but should be facilitated and convened jointly by the Customer Services and Water Operations Managers or as designated by the General Manager.

Another important component of the DRT function during the early stages of drought is to make preparations for subsequent stages, including an examination of staff levels, financial resources, water waste enforcement staff resources, and areas of collaboration among other agencies in the region. It is also important for the DRT to recognize that some of the activities recommended by this Plan may not be possible at current staffing levels and with current financial resources.

2.3 Drought Monitoring and Modeling

While County-wide strategies and mechanisms can be discussed in regional, multi-agency drought committees, monitoring of individual water supplies and drought conditions are the responsibility of each water purveyor. Within EID, drought monitoring will be the combined task of engineering and operations. It is important that staff use the sources of information and drought tools available to them to ensure adequate monitoring. Because drought is the leading hazard of economic loss in the United States each year, monitoring regional and long-term trends within the United States will enable EID to be better prepared for drought. Local drought conditions can change very quickly, but if staff frequently monitors the climatic conditions that cause hydrologic drought, EID will be better equipped to manage District-wide concerns.

2.4 Annual Water Supply and Demand Assessment Procedures

Beginning July 1, 2022, EID is required to prepare an annual water supply and demand assessment and submit an Annual Water Shortage Assessment Report to DWR. The Annual Water Shortage Assessment Report will be due by July 1 of every year, as required by Water Code Section 10632.1. Procedures for EID's annual Water Supply and Demand Assessment are presented below. This assessment is conducted annually to help inform water resources management decisions for the current year. The analysis incorporates numerous data sources used as evaluation criteria to forecast water reliability (water supply vs. demand) for the current year and one subsequent dry year. Data sources and operational factors to consider in preparing the assessment include:

- Projected weather conditions
    - Northern Sierra 8-Station Precipitation Index compared to historical
    - Snow Water Content data – Central Region compared to historical
    - Bulletin 120 Projections for Water Year Type
    - Snow surveys - Caples Lake, Silver Lake and Carson Pass, others
    - NOAA Precipitation Outlooks
    - Seasonal Drought Outlook (Drought Monitor)
- Projected Unconstrained Customer Demand
    - Historical Water Diversion Reports
    - Historical Water Consumption Reports
    - Urban Water Management Plan demand forecasts
    - New customer connections
    - Recycled Water Demand

  Projected Supply Availability
    - Project 184 Reservoir Storage (Aloha, Echo, Caples and Silver Lake Levels)
    - Project 184 pre-1914 water rights
    - Jenkinson Lake Storage
    - Folsom Lake Levels and USBR CVP allocations
    - Water Right Permit 21112
    - Ditch/Weber Reservoir water rights
    - Recycled Water production
- Regulatory Conditions
    - FERC license conditions for in-stream flows and target lake levels
    - Water right conditions for lake levels and minimum releases
    - State-mandated conservation or curtailment orders
- Infrastructure Constraints
    - El Dorado Canal planned maintenance schedule

- Planned or unplanned major water infrastructure upgrades and repairs that constrain normal capacity
- Others as identified

The general procedure for preparing the annual Water Supply and Demand Assessment is listed below. EID may modify this process based on available data, significant events, operational restrictions, or other external factors that may impact the assessment. The following procedures will be undertaken beginning each winter season and continue through late spring until the current year water supply conditions are known. The final product will result in a written water supply assessment per the requirements of Water Code Section 10632.1 to be submitted by July 1 of each year.

1. Compile existing weather data to characterize current year water supply conditions. District staff typically will provide regular Board informational updates on developing water supply conditions during the winter and spring months as needed, and discuss any potential water supply reliability concerns.
2. Estimate current year and subsequent dry year unconstrained demands based on representative customer use data. Sources to estimate demands primarily include annual water diversion and consumption reports. Dry year demand projections developed in the Urban Water Management Plan updates may also be used. Development of unconstrained demand should incorporate any additional demand considerations resulting from new customer connections or unique demand trends.
3. Determine current year available supply for each primary supply region (Jenkinson Lake, Project 184 - Forebay, and Folsom Lake). Estimate subsequent dry year water supply for each supply region. The UWMP data may be used to estimate the subsequent dry year water supply availability for each source.
4. Identify and incorporate any applicable constraints (infrastructure, regulatory, etc.) regarding accessibility of supply in the current year and subsequent year.
5. Compare water supply availability to demand for the current year and one subsequent dry year, which will summarize the results of the annual water supply assessment. Consider if any current year supply targets and operational modifications are appropriate to prepare for a subsequent dry year. For example, consideration may be given in the current year to maximize utilization of available Project 184 supplies to supplement and/or reduce the demand from Jenkinson Lake in order to preserve Jenkinson Lake storage in the event of a subsequent dry year. Identify any projected current year supply shortfall to meet the unconstrained demand, cross referencing the condition to one of the water shortage levels identified in this Plan. If current year supply will meet demand, but the projections for the subsequent dry year show a supply reliability concern, consider whether it is appropriate to take any operational actions, water resource management strategies, or demand management measures in the current year to prepare in the event of a subsequent dry year.
6. Prepare the annual Water Supply and Demand Assessment pursuant to subdivision (a) of Section 10632. Assessment will include information as applicable on any anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions, consistent with the Drought Action Plan (Water Shortage Contingency Plan).
7. Present the annual Water Supply and Demand Assessment to the Board of Directors for approval as necessary and appropriately trigger any recommendations for specific shortage response actions resulting from the assessment. Staff may modify/update the assessment per direction from the Board.

8. The general proposed annual timeline for the assessment is as follows:
    - Monitor conditions and prepare assessment: January-May
    - Present assessment to Board: May/June
    - Submit annually to DWR per CWC Section 10632.1: July 1

2.5 Interagency Coordination

A County-wide Drought Coordination Committee (DCC) may be formed to include regional partners and water purveyors. The team would meet monthly during a drought to discuss the issues of water supply and demand, conjunctive use, and environmental needs. EID staff should attend these coordination meetings, as designated by the General Manager.

MONITORING – Communication among agencies of their drought indicator status would allow each agency to understand the current conditions of the other water purveyors.

PUBLIC OUTREACH – Development of drought education tools, plus collaboration on public education and outreach, provides efficiency and consistency within the region.

RESOURCE SHARING – Collaboration resources, including: staff, grant funding, monitoring tools, infrastructure, water, and educational outreach tools would allow agencies to support each other efforts in the community.

2.6 Drought Guidelines and Definitions

There are a number of circumstances during a drought in which the District would be required to make and implement decisions that are not solely based upon water supply availability, such as how long to stay in a drought stage, and how demand reductions should be quantified. The new annual assessment procedure will define the base unconstrained demand for which a proxy demand for each user category can be developed and compared against actual conservation performance.

Overall Guidelines

Below is a list of drought guidelines developed to assist staff in managing the drought event.

1) The District will strive to stay within each stage of drought for at least 2 months for consistency in messaging and effective public outreach.
2) Drought stage demand reductions will be quantified by output at the water treatment plants during all stages; however, in Stages 3 and 4 meter reads may also be necessary to determine compliance with individual allocations and reduction targets.
3) This Drought Action Plan should be reviewed and updated every 5 years (or as needed) due to changes in water supplies, operations, expected water demands or other relevant factors.

Early Actions

1.1.1 CROSS TRAINING – It is important that ongoing staff training be conducted before a drought occurs, as staffing may be necessary for the enforcement of water waste prohibition, enforcement of mandatory or prohibited conservation measures, and answering questions

related to recycled water use. Staff ordinarily responsible for other duties may be temporarily reassigned to implement these drought-response activities.

1.1.2 BOARD UPDATES – The Board should be kept apprised of all drought monitoring and predicted water shortages. It is the responsibility of the General Manager to decide the best method for these updates.

1.1.3 PUBLIC OUTREACH TO ID 97 OWNERS – Pursuant to paragraph 10 of the Interim Agreement to Amend the Terms and Conditions of El Dorado Irrigation District Improvement District No. 97, the District will reduce aesthetic flows in Clear Creek from Jenkinson Lake during declared water shortages. The district will provide 30 days written notice to all ID 97 property owners.

- Background. The *4-Stage Water Supply Matrix and Water Shortage Response Measures* – a copy of which can be found in Appendix D of the 2008 Drought Preparedness Plan – was in effect when the ID 97 Interim Agreement was adopted by the Board of Directors in 2005. Pursuant to this agreement, the flow rate in Clear Creek is reduced as the drought stages progress, from a maximum of 3 cubic-feet per second (cfs) down to a minimum of 1 cfs. When drought is imminent, notifications are to be sent to the ID 97 property owners that Clear Creek flows may be reduced with the drought stages.

2.7 Enforcement and Appeals

Water conservation enforcement measures for all stages, including Normal Water Supply, are outlined in AR 1041.5 (Penalties for Violation of the District's Water Waste Regulation) and AR 5011. AR 5011.1 states, "a prohibition of water waste will be in effect during both normal and restricted water supply conditions." The sequence of notification, discontinuance of service, and progressive reconnect fees are outlined in AR 1041.5.

3.0 Ongoing Activities

This Drought Action Plan addresses water management and customer service activities that would be modified during drought conditions. In this section, ***Ongoing Actions*** are defined as activities that are performed on a regular basis, even in non-drought conditions, that might change in the face of a drought being declared. Throughout the District, there are a number of ongoing activities related to drought management. It will be the responsibility of the DRT members to ensure that these activities continue to occur in their respective areas during non-drought conditions, in order to be ready for a declaration of drought. The following sub-sections refer to staff functions rather than departments, and include a brief description of these functions and their ongoing actions as they pertain to a drought.

3.1 Engineering and Operations

The primary responsibility of engineering and operations staff is to ensure the continued integrity of infrastructure throughout the District's service area, in addition to actively monitoring and modeling potential drought conditions. Operations staff must also stay abreast of changes during drought conditions, such as lower pressures, increased sewer pipeline blockages, lower reservoir levels, changes in demand patterns, and other potential impacts. The environmental staff contributions to the District's drought preparedness occur mostly prior to a drought event while conducting environmental reviews and permit preparation for proposed projects, but may also include outreach to recycled water customers during the course of their work relating to recycled water compliance.

Ongoing Actions

1) Manage water supplies and conservation levels to achieve approximately 25,000 acre-feet of carry-over storage in Jenkinson Lake to guard against multiple year drought conditions including importing Project 184 supplies through the Hazel Creek tunnel.
2) Track regional weather predictions and monitor reservoir levels in conjunction with the dashboard drought risk assessment.
3) Gather information on drought management from other agencies.
4) Incorporate the results of various drought supply analyses and modeling when analyzing the environmental effects of proposed projects.
5) Enforce the water waste prohibition regulation – *with legal, water efficiency, and customer services*.
6) Examine the District's infrastructure for leakage, and reduce losses where cost-effective.
7) Assist community members whose wells have gone dry due to drought conditions, to access drinking water through bulk water stations and key cards – *with public outreach*.
8) Investigate all dry-year water supply options such as water transfers, conjunctive use, and groundwater banking – *with legal*.
9) Develop drought impact avoidance projects, if needed.
10) Investigate potential reservoir re-operation, and consider long-term adjustments to reservoir release rules.
11) Consider the environmental effects of long-term draw-down of reservoirs, such as air quality, soil/sedimentation, water quality, temperature, and other conditions that may affect the District's ability to provide treated water.
12) Work with the El Dorado Water Agency to facilitate additional water supply projects, if needed.

13) Collaborate with regional water management groups, including but not limited to the Regional Water Authority (RWA), Mountain Counties Water Resources Association (MCWRA), and the Cosumnes, American, Bear, and Yuba Rivers group (CABY).

14) Maintain interagency coordination, primarily through a DCC, but also through participation in federal, state, and/or regional drought task forces.

3.2 Finance and Customer Services

The primary responsibility of finance staff is to keep the District solvent when faced with the increased costs and potential for reduced revenues associated with a drought condition in the watershed and enforcement of excessive residential water use as described in the District's Water Waste Prohibition. Along with other District employees, staff must be able to look into the future to assess possible staffing needs and potential sources of cost to the District. On the other side, finance staff must also be able to identify possible sources of income, or at the very least, a method of financing the additional efforts associated with managing drought.

Ongoing Actions

1) Enforce the water waste prohibition regulation – *with legal, operations, and water efficiency.*

2) Educate customers on how to read their water meters in order to determine their own monthly usage during times of demand restrictions – *with public outreach.*

3) Provide prompt notice to a customer whenever the District obtains information that indicates that a leak may exist within the end-user's exclusive control.

3.3 Legal

The primary responsibility of administration and legal staff is to ensure that EID's actions are legal and defensible. It is important that the administration and legal staff be apprised of policy and planning activities with regard to water supply, regional activities, and inter-agency planning.

Ongoing Actions

1) Ensure the District follows applicable state law when declaring drought conditions, and include citations to pertinent legal authority in drought-related Board actions.

2) Continue to enforce the water waste prohibition regulation – *with water efficiency, operations, and customer services.*

3) Examine possible legal implications of dry reservoirs and canals during drought conditions, and associated liability at recreational lakes – *with recreation and property.*

4) Examine the District's Board Policies and Administrative Regulations for potential changes and/or additions for better drought management.

5) Track legislation and regulation relating to drought, especially as they pertain to curtailing water rights, prescribing or prohibiting actions by water suppliers, financing drought management, water transfers, and ground-water banking.

6) Urge county and city planners to consider the drought stages when implementing development and future planning scenarios.

7) Collaborate with regional water management groups, such as RWA, MCWRA, and CABY - *with engineering and operations.*

3.4 Public Outreach

The efforts of public outreach staff are integral to the implementation a successful Plan and management of a drought event. Public education is the most important activity when a drought occurs, because demand management will not be successful if customers are not adequately informed regarding the water situation and the requirements of the purveyor. The most important time for public outreach and education is at the beginning of Stage 1.

Ongoing Actions

1) Educate customers regarding water saving devices and practices – *with water efficiency*.
2) Educate customers regarding the overall challenges of providing a reliable water supply in a semi-arid climate.
3) Educate customers regarding drought stages through bill inserts or a printed message on the bill, an article in the bi-monthly newsletter, e-mail messages, social media, drought website, automated telephone messages, direct mail post cards, government and community organization meetings, newspaper advertisements, and other means – *with water efficiency*.
4) Develop a webpage for "Drought Stage" information, including an easy-to-understand explanation of when a drought is called and when a drought has ended – *with water efficiency*.
5) Educate customers on how to read their water meters in order to determine their own monthly usage during times of demand restrictions – *with finance and customer services*.
6) Work with the DCC to educate community members, whose wells have gone dry due to drought conditions, about the availability of drinking water through bulk water stations with key card access – *with customer services*.
7) Collaborate with the Regional Water Authority, ACWA, Mountain Counties and other regional groups to ensure consistent messaging.

3.5 Recreation

The challenges and responsibilities of recreation and property staff in the face of a drought are quite different from those of other EID functions. The primary concerns with recreation and property are the liabilities associated with water attractions in low water level conditions. These can vary from exposed rocks in reservoirs to increased danger of fires resulting from recreational use in campgrounds and day use areas.

Ongoing Actions

1) Consider alternative recreational strategies/opportunities for dry years.
2) Identify sensitive areas and outline management plans for these areas in dry years.
3) Examine possible legal implications of dry reservoirs and canals during drought conditions, and associated liability at recreational lakes – *with legal*.
4) Ensure adequate protection against catastrophic fires through vegetation management and homeowner education (adjacent to District facilities).
5) Inform customers of the mooring facility policy during drought, and any curtailments of water supplies at recreational facilities.
6) Work with regional partners to identify areas of greatest fire risk.

3.6 Water Efficiency

Water efficiency staff should work closely with public outreach staff, as the activities required to meet water supply constraints are usually through the implementation of water efficiency practices or devices. Because there are ongoing mandated activities, a drought event will increase the number of tasks for which water efficiency staff are responsible. The Drought Preparedness Plan stipulated a number of water conservation actions, some of which are activities *required* of customers, such as not filling swimming pools; while some are simply *guidelines* for customers to help them save water.

Agricultural demands are an important consideration during drought events. The District's Irrigation Management Service (IMS) program is not required for agricultural customers, but staff should encourage participation in the IMS program prior to a drought, including the education of landowners with regard to individual drought planning. A total of 2,000 acre-feet of water is estimated to be saved each year by the IMS program, as verified by the State Water Resources Control Board in 1986.[1]

Ongoing Actions

1) Identify and pursue drought assistance grants available for water efficiency programs.
2) Enforce the water waste prohibition regulation – *with legal, operations, and customer services*.
3) Offer water efficiency rebate programs and complimentary water surveys as staff, budget, and grant funding allows.
4) Continue to implement the California Urban Water Conservation Council's Best Management Practices, as applicable and as required by the U. S. Bureau of Reclamation.
5) Maintain the IMS program for commercial agriculture customers.
6) Educate customers regarding drought stages through bill inserts or a printed message on the bill, an article in the bi-monthly newsletter, e-mail messages, and newspaper advertisements – *with public outreach*.
7) Develop a webpage for "Drought Stage" information, including an easy-to-understand explanation of when a drought is called and when a drought has ended – *with public outreach*.

[1] Source: EID's Water Supply Master Plan, Administrative Draft, December 2001, Pages 3-36 and 3-38. As part of the South Fork American River (SOFAR) water rights permitting process, the 2,000 acre-feet of IMS program water savings was verified in 1986 by the SWRCB; and later acknowledged in an SWRCB letter dated January 1989.

4.0 Stage 1 – Water Alert

A drought Stage 1 is considered a water alert, where water supplies are only slightly restricted. The response actions are intended to initiate public awareness of a possible water shortage in the near future, and to encourage water efficiency practices. Stage 1 actions target up to a **15 percent demand reduction** through the implementation of voluntary measures. The following ***New Actions*** outlined in this section are activities that must be performed during this stage of a drought declaration.

At the beginning of a dry period there is no certainty as to whether the conditions will persist into a more significant drought. Accordingly, the initial phase of conservation is voluntary on the part of the customer, and the use of recycled water continues as normal. Staff should implement an outreach program to educate customers regarding the status of District water supplies, and the predicted water shortage; however, the education should be done without alarming customers as there is not yet a true emergency. This outreach can be complemented by the actions of the Department of Water Resources and RWA. To avoid confusion though, it is important to educate our customers that due to the District's multiple water sources and integrated infrastructure, the rest of the region and the state might be worse off than the District. Raising public awareness therefore represents one of the most important components of this Plan.

4.1 Engineering and Operations

New Actions

1) Monitor reservoir levels on a monthly basis.
2) Manage water supplies and conservation levels to achieve approximately 25,000 acre-feet of carry-over storage in Jenkinson Lake to guard against multiple year drought conditions including importing Project 184 supplies through the Hazel Creek tunnel.
3) Alert ditch customers of potential cutbacks, reminding them of Item No. A-8 of their ditch application for service, and reduce potable water releases from valve blow-offs, if possible – *with customer services*.
4) Alert the Improvement District No. 97 property owners listed on the current County assessment roll of the water alert declaration, reminding them of paragraph 10 of the 2005 Interim Agreement for ID 97 and possible accommodations to decrease the releases to Clear Creek should the drought conditions continue – *with legal*.
5) Monitor water demands weekly at the water treatment plants to assess the amount of water savings accomplished and forecast end-of-year carryover storage needs.
6) Identify areas of low pressure, both present and projected, and communicate this to local fire protection agencies.
7) Increase monitoring for water theft.
8) Refer to the draft ditch operations guidelines in Appendix E of the Drought Preparedness Plan for further information on ditch management during a drought.
9) Alert regulatory agencies to the possibility of decreased stream flow.
10) Examine Deer Creek discharge requirements; and assess the need to work with stakeholders and the State Water Resources Control Board to temporarily reduce flows to conserve potable water – *with legal*.

4.2 Finance and Customer Services

New Actions

1) Implement a project code or charge number for use by all employees to track time and expenses for all drought-related activities.
2) Alert ditch customers of potential cutbacks and remind them of Item No. A-8 of their ditch application for service – *with engineering and operations*.
3) Identify target levels of water usage per user class – *with water efficiency*.
4) Request assistance in programming and obtaining database information appropriate to the drought stage, customer requests, and cutback priorities.
5) Provide prompt notice to a customer whenever the District obtains information that indicates that a leak may exist within the end-user's exclusive control.

4.3 Legal

New Actions

1) When determined appropriate by the DRT, prepare materials for the declaration of a water alert for approval by the Board of Directors, consistent with applicable state law – *with engineering and operations*.
2) Alert the Improvement District No. 97 property owners listed on the current County assessment roll of the water alert declaration, reminding them of paragraph 10 of the 2005 Interim Agreement for ID 97 and possible accommodations to decrease the releases to Clear Creek should the drought conditions continue – *with engineering and operations*.
3) Track legislation and regulation relating to drought, especially as they pertain to curtailing water rights, prescribing or prohibiting actions by water suppliers, the management of water transfers/ground-water banking, and financing drought management.

4.4 Public Outreach

New Actions

1) Create educational information regarding the stage of drought, what is expected from customers, and the consequences if demand reduction goals are not met.
2) Ensure that customers are aware that drought conditions may worsen quickly, causing rapid progression through the drought stages.
3) Educate recycled water users and community leaders regarding the importance of conserving recycled water and the consequences of reducing or suspending potable water supplementation during a Stage 2 drought.
4) Ensure that the public is aware of the water waste regulation and all associated penalties – *with water efficiency*.
5) Work with local and regional newspapers to secure op-ed space as-needed for public information and water supply/drought education.
6) Maintain drought information on website, and update throughout the drought.
7) Strongly encourage local restaurants to post "serve if requested" messages via poster, table tent signage, in menus, or other means in their establishment – *with water efficiency*.

4.5 Recreation and Property

New Actions

1) Implement new mooring facility policy when warranted by low lake levels.

4.6 Water Efficiency

New Actions

1) Investigate water waste reports, and enforce Administrative Regulation (AR) 1041, Water Waste Prohibition, as currently amended and incorporated by reference.
2) Increase educational efforts regarding water efficiency practices – *with public outreach*.
3) Identify target levels of water usage per user class – *with customer services*.
4) Strongly encourage local restaurants to post "serve if requested" messages via poster, table tent signage, in menus, or other means in their establishment – *with public outreach*.
5) Voluntary: Request customer compliance with these water saving guidelines.
    a) Apply irrigation water during evening and early morning hours only (7 PM to 10 AM);
    b) Inspect irrigation system for leaks and then repair or replace;
    c) Adjust sprinkler run times to avoid runoff; and
    d) Avoid pursuing construction of new swimming pools or rehabilitation that would require filling with potable water.

5.0 Stage 2 – Water Warning

Drought Stage 2 action items are intended to increase public understanding of worsening water supply conditions, encourage community-oriented voluntary conservation measures, enforce some conservation measures and implement mandatory water use reduction measures to **decrease "normal" demand by up to 30 percent**. Stage 2 activities include a continuation of activities described under Stage 1 and new actions. The achievement of the water use reduction goal is measured by overall performance of the entire customer population, based on EID production meters at the three main potable water treatment plants. It is important to note that user category demand reduction goals are not by individual customer, but are the goal for the customer category.

At the point of calling a Stage 2 Drought, customers are asked to contribute to a system-wide demand reduction of up to 30 percent. The major emphasis by public outreach and customer service is to elevate customer awareness of the supply situation and encourage continued savings to achieve the 30 percent demand reduction goal.

5.1 Engineering and Operations

New Actions

1) Assess the need for a temporary change in the point of diversion for water taken from Folsom Reservoir to further upstream on the South Fork of the American River, possibly to supplement Sly Park's Jenkinson Lake through the Hazel Creek Tunnel – *with legal*.
2) Examine the risk of solids loading, line blocks, water-quality exceedances, and other low-flow hazards, and then take appropriate action.
3) Provide 30-days written notice to all Improvement District No. 97 property owners listed on the current County assessment roll, notifying them of the water warning declaration and the planned decrease of releases into Clear Creek; and take to the Board for approval or ratification at the first available regular Board meeting – *with legal*.
    a) After the 30-day notification period, decrease releases into Clear Creek to no more than 2.0 cfs.
4) Begin examination of source water quality for increasingly concentrated pollutants and higher temperatures.
5) Refrain from releasing water from valve blow-offs unless necessary to maintain compliance with water quality regulatory standards.
6) Review all regulatory requirements relating to water quality and stream flow; and investigate how the District might be affected by these regulations in case of extreme drought.
7) Monitor source and system water quality for increasingly concentrated pollutants and contaminants as a result of drought conditions. Take necessary operational actions to remain in compliance with the Safe Drinking Water Act.
8) Consider reducing or suspending potable supplementation to the recycled water system.

5.2 Finance and Customer Services

New Actions

1) Continue actions listed in Stage 1.

2) Assess the fiscal consequences and present need for a larger drought management staff, particularly of temporary workers.
3) Consider adding customer service representatives to help with answering phones, assisting in customer questions regarding drought restrictions, and possibly extending hours later into the evening.
4) Provide prompt notice to a customer whenever the District obtains information that indicates that a leak may exist within the end-user's exclusive control.

5.3 Legal

New Actions

1) When determined appropriate by the DRT, prepare materials for the declaration of a water warning for approval by the Board of Directors, consistent with applicable state law – *with engineering and operations*.
2) Assess the need for a temporary change in the point of diversion for water taken from Folsom Reservoir to further upstream on the South Fork of the American River, possibly to supplement Sly Park's Jenkinson Lake through the Hazel Creek Tunnel – *with engineering and operations*.
3) Provide 30 days written notice to all Improvement District No. 97 property owners listed on the current County assessment roll, notifying them of the water warning declaration and the planned decrease of releases into Clear Creek; and take to the Board for approval or ratification at the first available regular Board meeting – *with engineering and operations*.
4) Review options for Area-of-Origin water rights and exceptions to water-right curtailments.
5) Seek public health and safety adjustments to U. S. Bureau of Reclamation contract shortage criteria, if needed.

5.4 Public Outreach

New Actions

1) Send regular notification postcards to all customers, and email messages to those customers providing email addresses, informing them of mandatory watering restrictions and other conservation requirements in effect.
2) Launch a monthly automated telephone message informing customers of mandatory watering restrictions and other conservation requirements in effect.
3) Work with regional partners to spread the word about drought and fire danger.
4) Secure an op-ed space in local and regional newspapers for an essay on water supply and use restriction in El Dorado County.
5) Continue to update the Drought Stage website link, including weekly updates on community demand response.
6) Assist the City of Placerville with water use reduction targets – *with water efficiency*.

5.5 Recreation and Property

New Actions

1) Urge caution and educate visitors within the District's recreational areas due to elevated fire danger.

5.6 Water Efficiency

New Actions

1) Coordinate with the Sacramento region through RWA membership, especially water purveyors with a common border, in order to coordinate educational efforts to better reach customers.
2) Identify the top 10 percent of residential and CII[2] users, and target these customers with water efficiency outreach – *with customer services*.
3) Voluntary: Ask customers to refrain from: - *with public outreach*.
    a) Planting new or replacement turf.
    b) Pursuing new agricultural plantings.
    c) Pursuing construction of new swimming pools or rehabilitation that would require filling with potable water.
4) Offer assistance to the City of Placerville to help meet their water use reduction targets - *with engineering and operations*.
5) Mandatory: Watering restrictions are in place as shown below. All outside irrigation, potable and recycled—including garden, lawn, landscape, pasture, parks, golf courses, school grounds, and public grounds—shall ONLY occur according to the following schedule:
    a) Outdoor irrigation is limited to the hours of 7:00 PM to 10:00 AM.
    b) Watering days are based on street addresses.
    c) Once-a-week watering is allowed from November 16 to April 15 on Sundays for customers with addresses ending in even numbers (0, 2, 4, 6, 8) and on Saturdays for customers with addresses ending in odd numbers (1, 3, 5, 7, 9).
    d) Twice-a-week watering is allowed from April 16 to May 31 and October 1 to November 15 on Wednesdays and Sundays for customers with addresses ending in even numbers and Tuesdays and Saturdays for customers with addresses ending in odd numbers.
    e) Three days per week watering is allowed from June 1 to September 30 on Wednesdays, Fridays and Sundays for customers with addresses ending in even numbers; and Tuesdays, Thursdays and Saturdays for customers with addresses ending in odd numbers.
    f) Exemptions to watering restrictions are allowed for non-residential customers if a detailed conservation plan is submitted to the District that demonstrates a minimum 30 percent water savings over customer's baseline usage.
6) Mandatory: Outside irrigation for newly constructed homes and buildings is prohibited unless watered using drip or microspray systems.

[2] CII is defined as all commercial, industrial, and institutional customers; which includes businesses, schools, community service districts, owner associations, churches, and public buildings and grounds.

7) Mandatory: Agricultural metered irrigation customers who do not participate in the Irrigation Management Services program must submit a detailed conservation plan to the District that demonstrates minimum 30% water savings over customer's baseline usage.

8) Mandatory: Do not serve drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased.

9) Mandatory: Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each bathroom using clear and easily understood language.

10) Mandatory: Filling or re-filling ponds, lakes, and other non-irrigation water features with District-supplied potable water is prohibited.

6.0 Stage 3 – Water Crisis

The objective of Drought Stage 3 actions are to **reduce District-wide water demand by up to 50 percent** through effective and consistent public outreach, enforce extensive restrictions of water use, and implement water rationing. Protection of water supply for public health and safety purposes is the primary objective during Stage 3 drought conditions. This stage of drought will require much more staff time for policy enforcement with the public, and much greater inter-agency coordination. Because of the mandatory restrictions, emergency management agency notification is required, and public outreach and education will be key in achieving the water savings goal in Stage 3.

6.1 Engineering and Operations

New Actions

1) If needed, implement a temporary change in the point of diversion for water taken from Folsom Reservoir to further upstream on the South Fork of the American River, possibly to supplement Sly Park's Jenkinson Lake through the Hazel Creek Tunnel – *with legal*.
2) As needed, implement and monitor emergency water distribution.
3) EID's General Manager is responsible for notifying the El Dorado County Emergency Management Agency (EMA) of any mandatory requirements for water use reduction.
    a) Staff should consider the escalation of emergency management at the beginning of this stage.
4) Contact the County's EMA regarding fire protection directives that are being implemented within the county.
5) Provide 30-days written notice to all Improvement District No. 97 property owners listed on the current County assessment roll, notifying them of the water crisis declaration, and of the planned decrease of releases into Clear Creek; and take to the Board for approval or ratification at the first available regular Board meeting – *with legal*.
    a) After the 30-day notification period, decrease releases into Clear Creek to no more than 1.5 cfs.
6) Prohibited: Use of EID potable water for construction use.

6.2 Finance and Customer Services

New Actions

1) Continue actions listed in Stage 2.

6.3 Legal

New Actions

1) When determined appropriate by the DRT, prepare materials for the declaration of a water crisis for approval by the Board of Directors, consistent with applicable state law – *with engineering and operations*.
2) If needed, implement a temporary change in the point of diversion for water taken from Folsom Reservoir to further upstream on the South Fork of the American River, possibly to

supplement Sly Park's Jenkinson Lake through the Hazel Creek Tunnel – *with engineering and operations.*

3) Provide 30-days written notice to all Improvement District No. 97 property owners listed on the current County assessment roll, notifying them of the water crisis declaration, and of the planned decrease of releases into Clear Creek; and take to the Board for approval or ratification at the first available regular Board meeting – *with engineering and operations.*

6.4 Public Outreach

New Actions

1) Secure an op-ed and/or advertising space in local and regional newspapers to publicize mandatory water restrictions within the service area of the District.

6.5 Recreation and Property

New Actions

1) Remain alert to fire danger and water pressure considerations at outlying facilities; coordinate with other agencies to ensure a consistent public message.
2) Protect identified sensitive areas from overuse in extreme dry periods.
3) Limit or restrict filming within the District's recreational areas due to severe fire danger.

6.6 Water Efficiency

New Actions

In addition to Stage 2 actions, inform customers of these **mandatory** conservation measures in Stage 3 – *with public outreach.*

1) Prohibited: Filling empty and/or new swimming pools with District-supplied potable water.
2) Prohibited: Washing of vehicles (automobiles, recreational vehicles, trailers, etc.) and boats with District-supplied potable water.
3) Mandatory: Watering restrictions are in place as shown below, however additional restrictions should be evaluated to achieve a higher level of conservation required in Stage 3. All outside irrigation, potable and recycled—including garden, lawn, landscape, pasture, parks, golf courses, school grounds, and public grounds—shall ONLY occur according to the following schedule:
    a. Outdoor irrigation is limited to the hours of 7:00 PM to 10:00 AM.
    b. Watering days are based on street addresses.
    c. Once-a-week watering is allowed from November 16 to April 15 on Sundays for customers with addresses ending in even numbers (0, 2, 4, 6, 8) and on Saturdays for customers with addresses ending in odd numbers (1, 3, 5, 7, 9).
    d. Twice-a-week watering is allowed from April 16 to November 15 on Wednesdays and Sundays for customers with addresses ending in even numbers and Tuesdays and Saturdays for customers with addresses ending in odd numbers.
    e. Exemptions to watering restrictions are allowed for non-residential customers if a detailed conservation plan is submitted to the District that demonstrates a minimum 50% water savings over customer's baseline usage.

4) Prohibited: Use of EID potable water for construction use.
5) Prohibited: IMS customers are not to use more water than recommended by the IMS program schedule.
6) Mandatory: Agricultural metered irrigation customers who do not participate in the Irrigation Management Services program must submit a detailed conservation plan to the District that demonstrates minimum 50 percent water savings over customer's baseline usage.
7) Prohibited: Mist systems.
8) Enforce the water waste prohibition regulation with the help of City and County law enforcement, if needed; and coordinate operational safety with HR-Safety/Security staff.

7.0 Stage 4 – Water Emergency

The objective of Drought Stage 4 actions are to **further reduce water demands in order to achieve a greater than 50 percent reduction**, which may be accomplished through effective and consistent public outreach, enforcement of extensive restrictions on water use, and the implementation of water rationing. Protection of the remaining water supply for public health and safety purposes is the District's primary objective during Stage 4 drought conditions. This stage of drought will require considerable staff time for enforcement, and much greater inter-agency coordination. Because of the mandatory restrictions, public outreach and education are key to meeting the water savings goals.

7.1 Engineering and Operations

New Actions

1) Provide 30-days written notice to all Improvement District No. 97 property owners listed on the current County assessment roll, notifying them of the water emergency declaration, and of the planned decrease of releases into Clear Creek; and take to the Board for approval or ratification at the first available regular Board meeting – *with legal.*
    a) Decrease releases into Clear Creek to no more than 1.0 cfs.

7.2 Finance and Customer Services

New Actions

1) Continue actions listed in Stage 2.

7.3 Legal

New Actions

1) Advise customer services staff on enforcement of AR 1041.5 to ensure compliance with mandatory conservation requirements.
    a) Seek relief from SWRCB as necessary to ensure adequate supply.

7.4 Public Outreach

New Actions

1) Use authorized email addresses and an automated telephone message through the mass notification system as necessary to advise customers of water use restrictions or other drought alerts.

7.5 Recreation and Property

New Actions

1) Restrict filming within the District's recreational areas due to extreme fire danger.

7.6 Water Efficiency

New Actions

1) Prohibited: Automatic sprinklers for the irrigation of existing turf, ornamental plants, garden or landscaped areas.
    a) Watering may ONLY occur by hand-held hose with shut-off nozzle or by a drip irrigation system.
2) Mandatory: Single-family and multi-family residential meters are limited to 50 gallons per person per day **allotment** per bimonthly billing cycle for "health and safety" purposes
    a) Allotments can be increased for special health-related issues.
3) Mandatory: Recreational Turf, non-IMS Ag, and Small Farm customers must **reduce their usage** by 65 percent, based upon their usage during the same billing cycle in the base period.
4) Mandatory: IMS agricultural customers must **reduce their usage** by 40 percent, based upon their usage during the same billing cycle in the base period. IMS customers have already restricted use through weekly soil moisture data sampling and comply with irrigation schedule.
5) Allowed: Vital healthcare and public safety uses are exempt.
6) Mandatory: Commercial, Industrial & Institutional (CII): Reduce by 65 percent.

8.0 Post-Drought Actions

8.1 The End of a Drought

Coming out of a drought can occur quickly or slowly, depending on the weather and the storage accumulated with any precipitation. It is very important to make clear to the public that one good storm will not reverse weeks or months of dry weather. The conditions that end a drought require the filling of reservoirs, which usually occurs over time. Precipitation that occurs during the deepest of droughts can potentially put the District in a less severe stage of drought. If this occurs, and the DRT determines the present situation and probable future indicate a lessening of the drought, staff may recommend reducing the drought stage to the previous stage.

In the event that the drought severity lessens, it must be made explicitly clear to the public which stage the District has moved to, why the change was made, and what the measurements are based upon. Effective public education will minimize conflicts with regard to fines for mandatory cutbacks, and for health and safety concerns. In addition, a lessening of drought severity must be communicated clearly to all staff, especially those with regular public interaction.

- There are several scenarios that would lead the District to either declare the end of a drought or announce a less severe drought stage, including but not limited to, the following three cases.

    1) **Significant rainfall and snowpack** – While it is highly unlikely for one storm to end drought conditions, it is possible that a series of storms over a several-week period could fill Jenkinson Lake and replenish snowpack that could fill the Project 184 reservoirs in the spring. This scenario would assure staff that the drought has ended, and that a return to "normal" conditions is a responsible decision.

    2) **Significant rainfall but no snow** – It is also possible that Jenkinson Lake could fill from a series of storms, but little snowpack accumulates due to warm temperatures. In this scenario, there would be little snowpack to keep Jenkinson Lake full into the summer, and the Project 184 reservoirs may not fill. In this case, the water supply is not secure for the next year, and staff may recommend a less severe drought stage rather than a return to "normal" conditions.

    3) **Average rainfall and snowpack** – Another scenario could be the occurrence of a "normal" water year, with average precipitation and snowpack, following weeks or months of drought. These conditions may not fill the reservoirs adequately to assure staff that ending a drought declaration is the appropriate action. In this case, the drought stage may be lessened or stay the same, as it is important to remember that a year of average precipitation may not immediately result in "normal" conditions.

In any case, declaring the end of a drought depends in large part upon the judgment of staff. While this Drought Action Plan serves as a blueprint for actions in each stage of drought, it is not a rigid prescription for when and how to call a drought, or what actions to take in response. Those decisions must be made by informed and experienced staff, based upon the situation at the time, and approved by the Board of Directors.

8.2 Lessons Learned

When a drought is completely over, and District operations are back to normal, it is important to review what worked, what did not work, and how the overall drought response can be improved. The first step must be an examination of the stages, objectives, and response actions. Did the ongoing and new actions in this Plan work? Was there public confusion? If so, why? Did the mandatory actions cause problems due to uncertainty in implementation or ambiguity in

description? A discussion among all DRT members and implementing staff is imperative to get a complete picture on these questions. Likewise, it may be important to repeat the same process with the County's Drought Coordination Committee, and to involve the Board and customers in the dialogue as well.

8.3 Financial Analysis

The District will analyze the financial considerations following a drought, which is an important way to gauge the success of drought management activities. A detailed financial assessment of the costs incurred during a drought are important.

- Below are two scenarios of drought finances, along with their impacts on the District.
  1) **Costs to the District** – When the drought Stage 1 was declared, a charge number should have been established for all new drought activities, including: permanent staff time, temporary worker time, special materials, and other costs associated with drought management. All costs associated with the drought must be charged to this number in order to completely account for the additional costs incurred during drought.
  2) **Revenues for the District** –Finance staff should analyze how the decreased revenue from the drought impacted District finances and reserve funds and make recommendations for financial stability in future droughts.

The District is aware of the expected decreased revenues and increased costs associated with supply shortage conditions. Approximately 50 percent of the District's revenues are derived from volumetric charges. Assuming a reduction in sales commensurate with the particular Plan stage declaration, a decrease in water rate revenues in the range of 5-15 percent (or higher) may be expected.

EID maintains financial reserves that can be utilized to buffer potential revenue impacts of reduced sales during a stage declaration, should it be prudent to do so. These reserves are a tool that can be used by the District to maintain financial stability during times of imbalanced revenues and expenses that may be caused by reduced volumetric sales during dry periods. In addition to utilizing financial reserves, the District may enact a range of financial management actions depending on the specific situation.

8.4 Report to the Board

The concluding task in any drought management effort is the final report to the Board, especially summarizing the costs and revenues described above. Because the Board reports directly to the customers served by the District, it is important for the Board members to be able to convey to their constituents the successes and lessons learned of the District's drought management efforts. This report may also be released to all District customers, as successful drought management is not possible without customer involvement, cooperation, and support.