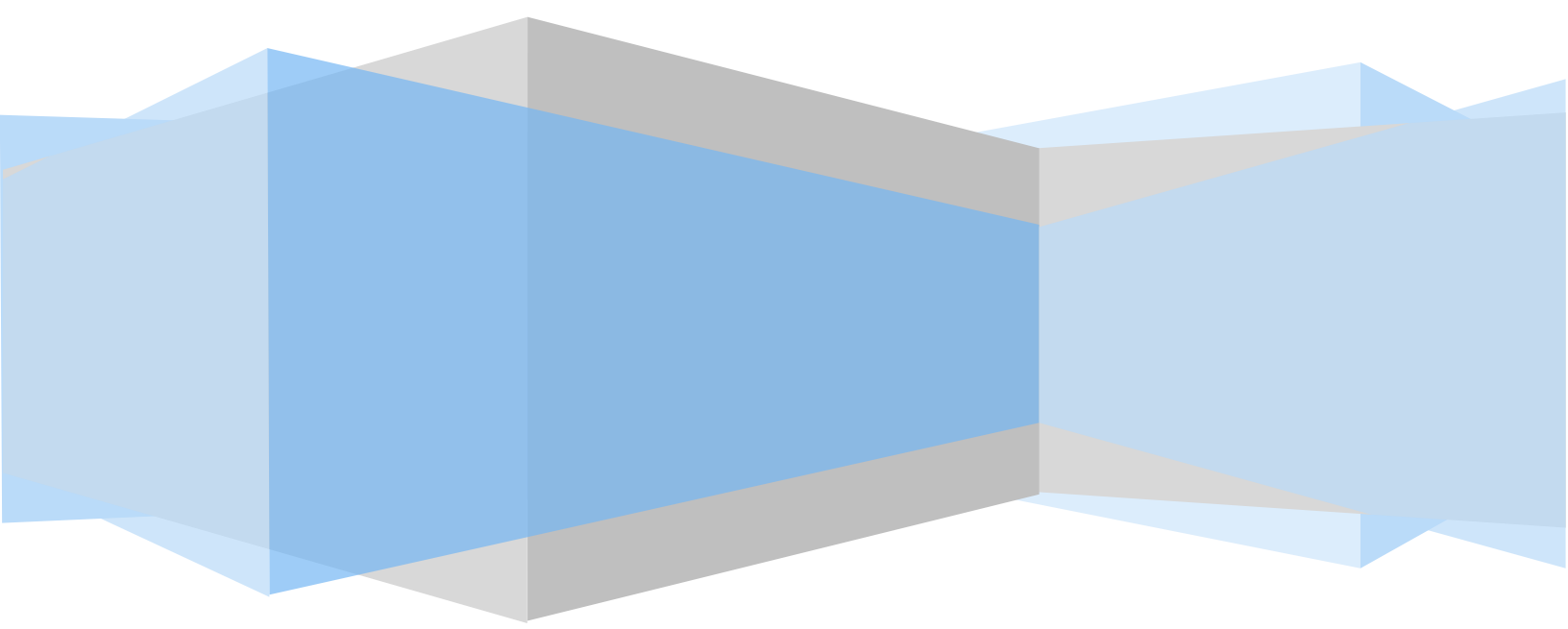


Ogden City Division of Public Utilities

Ogden City Water Shortage Management Plan



OGDEN CITY WATER SHORTAGE MANAGEMENT PLAN

Ogden City Division of Public Utilities

SECTION I: DECLARATION OF POLICY, PURPOSE, AND INTENT

The Ogden City Water Shortage Management Plan is intended to augment and support Ogden City Water Conservation Plans and Ordinances.

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 shortages or other water supply emergency conditions, the Ogden City Division of Public Utilities (Hereafter “Utility”) hereby adopts the following Plan to address water shortages brought about by drought, service interruption, or other emergency or event.

SECTION II: LEGAL AUTHORITY

This Plan is adopted by Public Utilities pursuant to the direction of the Mayor and the City Council contained in Section _____, Ogden City Code (hereafter referred to as “ordinance”).

SECTION III: APPLICATION

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by Ogden City Public Utilities.

SECTION IV: PRIMARY INDEX

Surface Water Supply Index (Hereinafter “SWSI”): The SWSI will be used internally to determine the severity of drought each year. The SWSI is designed to complement the Palmer Drought Index, where mountain snowpack is a key element of water supplies in the intermountain west. The SWSI is calculated by river basin, based on snowpack, stream flow, precipitation, and reservoir storage. The data for the Ogden River SWSI is available on the World Wide Web at: <http://www.ut.nrcs.usda.gov/snow/watersupply/swsi/SWSIOGDE.pdf>

Section V: Secondary Index:

The Utah State Division of Natural Resources publishes the data for snow pack, precipitation and reservoir storage. These data will be used to quantify and support the Surface Water Supply Index Data.

1. Weber Basin Snow Pack Data
2. Weber River Precipitation
3. Pineview Reservoir Storage Data

The data for these indices are available on the World Wide Web at:

<http://www.ut.nrcs.usda.gov/snow/watersupply/wsor.html>

Both the SWSI and secondary data will be utilized by the utility to determine the severity of drought each year and subsequently that years conservation action(s) to be taken.

SECTION VI: CRITERIA FOR INITIATION AND TERMINATION OF WATER SHORTAGE PHASES

Termination of Water Shortage Phase

Each year the utility manager will review drought conditions using the SWSI and other secondary data available. That year's drought conditions will be collected and evaluated by the utility manager and the appropriate water shortage phase will be implemented (a copy of the water shortage phase response summary is attached to this report). Termination of each plan phase will be announced when the trigger conditions that initiated the drought measures have subsided and the shortage no longer exists, by the determination of the Utility Manager. Upon terminating a phase, it is not incumbent on the Utility Manager to implement the phase immediately lower. If the Utility Manager does not designate a Plan phase, then the next lower phase becomes active.

SECTION VII: NOTIFICATION AND EDUCATION

The Utility Manager shall notify The City Council and City Administration of the initiation of the applicable Plan phase and corresponding conservation measures, or the termination of a Plan phase and corresponding conservation measures, by one or more of the following means:

- Publication of notices in a newspaper of general circulation
- Direct mail to each customer on the utility bill, as a bill insert, and/or as a special mailing
- Public service announcements
- Signs posted in public places
- Take-home fliers at schools
- Public meetings/city council meetings
- Ogden City municipal website

Customer Agency Notification:

The Utility Manager shall endeavor to notify directly the following individuals and entities:

1. Ogden City Council
2. Fire Chief(s)
3. City and/or County Emergency Management Coordinator(s)
4. Ogden City Director of Public Services
5. Critical water users (i.e. hospitals, nursing homes)
6. Large water users (typically commercial users)

7. Local School Boards

Additionally, through a public education program the Ogden Public Utilities will periodically provide customers and customer agencies with information about the Plan, including information about water conditions under which each phase of the Plan is to be initiated or terminated, the response measures to be implemented in each phase, as well as any Plan updates. Ogden Public Utilities currently participates in a yearly water fair program. This is a valuable program is sponsored by the local chapter of the American Water Works Association (AWWA) and other local water suppliers. The program utilizes water conservation information and games to educate youth about the importance of water conservation and water management. The program encourages local schools to attend and participate in the program. The participation has been very good and schools participate by allowing classes to take one day to attend the fair and view various exhibits prepared by water organizations. The students are encouraged to participate in experiments and other hands-on programs to increase their understanding of water and water conservation. Additionally students are able to take home a variety of information and promotional items to their family. Ogden Public Utilities will work with the AWWA and the other local water suppliers to further develop our participation in the water fair program to be more comprehensive and interesting to children. The concept of this program is to make the most of children's more accepting nature for new concepts and their ability to promote new ideas to their family.

The success of any water conservation program in achieving long term water conservation targets as might be required under a water shortage is dependent on Public Utilities' ability to convey to the community the water-supply situation, the expected response actions, and clear and measurable targets. The Response Summary and Appendices have been developed to enhance public understanding of water supply levels, response actions, and restrictions (a copy of the water shortage phase response summary is attached to this report).

SECTION VIII: PHASES AND RESPONSES:

This plan provides for four water shortage phases and associated responses of increasing severity, as progressively more serious conditions warrant. The measurements can be applied to identify the four phases in the proposed severity index. Each phase has associated with it a color to provide a visual, at a glance understanding of the severity of that phase. Attached to and made part of this plan is the Ogden City Phase and Condition Index outlining the general conditions for each phase of the drought plan and the corresponding color or cautionary segment. Each segment outlines the conditions that will trigger the phase and outline some advisory and mandatory actions.

Following are proposed severity benchmarks that are intended to notify the public and city officials of the severity of a drought situation and recommend steps to be taken during that phase.

Phase I - Normal Water Conditions - Advisory- (Color = Green): This phase should be on-going and primarily be an education and conservation encouragement phase by which the City Council with the Public Utility Division prepare and publish drought education and management information to the public and industry. The intent of this phase is to educate and encourage water use conservation.

Trigger: There is no specific trigger for implementing this phase. This phase is on-going and intended to educate and encourage the public to conserve water.

Target: Water Use Reduction: No specific target

Phase II – Moderate (Color = Yellow): This phase is intended as a cautionary phase by which the City Council with the Public Utility Division informs the public that the city is experiencing severe drought conditions and all indications are that this condition will extend for the rest of the water season (April 15 to October 15).

Trigger: This phase is initiated when Pineview Reservoir levels and the Ogden River levels are below 30% of normal as of April 15, using the SWSI and other supporting secondary data.

Target: Water Use Reduction: a city wide 5% reduction in water usage.

Phase III – Severe (Color = Orange): This phase is intended to inform the public that the city is in an extreme drought condition and there is a critical need to reduce water usage and increase water restrictions. This condition may at the City Council, the Mayor or the Public Utility Manager’s discretion require mandatory actions. This phase is used when the drought indices indicate a progressive severe drought situation.

Trigger: This phase is initiated when the city water supply is at or below 50% of normal.

The city water supply consists of well-water pumped from six wells located in the Eden valley, a city owned and operated filter plant located in Ogden Canyon and reservoir storage located in various areas of the city. The Public Utility Manager will monitor these system components to determine the level of supply and notify the City Council and City Administration of the severity of the situation.

Target: Water Use Reduction: A city wide 15% reduction in water usage.

Phase IV – Extreme Shortage (Color = Red): This is the most severe of the drought indices. This phase is initiated when the supply of water is not able to keep up with the demand for an extended period of time (3 days or more) and there is a possibility of initiating mandatory shut off of water service. **Trigger:** (conditions) when this phase may be initiated are:

- **Extraordinary drought:** A region wide drought has progressed to the point where the utility cannot maintain restricted service to a major portion of the city.
- **Significant system failure:** An important water supply line breaks or any other significant system component fails and a large section of the city is without water for an extended period of time.
- **Water Supply Contamination:** A contaminant is found within the water system that could affect the health and well being of major portion of the city residences.

This phase sets in motion an emergency situation by which the public utility may need to prioritize water service to keep the most critical residences and industries supplied and shut off certain types of non-essential use. Those critical industries will include hospitals, nursing homes and other life and health preserving enterprises. This phase may require the utility working closely with state drinking water authorities to assist in mitigating and managing the situation.

Target Water Use Reduction: A city wide 30% reduction in water usage

SECTION IX: ENFORCEMENT

Provisions of the Plan and Response Summary shall be enforced as indicated in the ordinance Number: _____.

Violations:

First violation: If a property is observed using inordinate amounts of water or is ignoring the rules and regulations set out in the drought ordinance, the property owner will be notified of the violation by a letter from the City Public Utility. The first letter notice will explain to the property owner that the city has adopted a conservation program that educates and assists property owners to conserve water. The notice will further explain that the property owner has been observed using more water than what seems necessary and may be in violation of City Ordinances. The Notice will be accompanied by education materials and tips on how to conserve water.

The second violation will be considered more stern and require the city to issue a ticket to the property owner. The ticket will be accompanied by a requirement to meet with the city Public Utility Manager and discuss the violation and the importance of citizens being conservation minded. The Public Utility Manager will discuss a remediation program with the property owner and request they develop a program to change their watering habits, including changes to their irrigation system to provide a more efficient “water wise” system.

The city Public Utility Manager recognizes that there are special circumstances when a property owner may need to deviate from water wise standards. One of those instances may be to ensure the survival of newly planted landscaping and lawn. The Public Utility Manager will have the ability to allow for special watering where property owners can show unusual or extraordinary circumstances requiring more water or unusual watering systems.

A typical water conservation program presented to the Public Utility Manager by a commercial business would have elements that are both practical (applied to their water system) and educational (applied to educate their employees).

Suggested elements for a commercial program might be:

1. Have a plumber or their in-house property management service review their system. In the case of a manufacturing company that may include an evaluation of the system components and their efficiency.
2. Develop and implement a water wise landscaping scheme for the property surrounding their building(s). This can be accomplished by a landscape company or by utilizing ideas promoted by Extension Services provided by local universities. Some local water companies provide water wise advice and demonstrations designed to educate people on water wise landscaping. Weber Basin Water Conservancy District provides such service.
3. Set specific goals intended to decrease overall water use within a specific time frame.

Overall, a program must have elements that evaluate and address adjustments to the privately owned system and include a plan to educate employees. Goals must be set to develop timeframes for accomplishment and keep the program on track.

A non commercial (home) program may include:

1. An evaluation of the home sprinkling system to determine effectiveness. Determine how much water the lawn is getting from the present method by zone. Adjustments as necessary for seasons and soil.

2. A Soil evaluation to determine if soil augmentation is appropriate to ensure the appropriate water is applied for the soil water intake.
3. Mowing aeration and sprinkling plans (i.e. mowing height, sprinkler clock and yearly aeration).
4. A sprinkler system maintenance plan designed to check the irrigation system on a regular basis to ensure top performance. A routine check of sprinkler heads and adjustments to eliminate runoff on walks and driveways. Annual draining of the system to clear water from the system and avoid breaks caused by freezing. An annual battery check to ensure the timer and clock are performing as designed.

If a service is disconnected, Ogden City Public Utilities in accordance with applicable city ordinances will assess and collect a fee before service is restored. That fee is in addition to other fines or charges imposed under any particular water shortage response measure.

Customer Notification of Violation:

In accordance with applicable city ordinances, any customer subject to a civil fine shall be notified by the Utility no more than SEVEN (7) calendar days after the date of occurrence of the violation. The notice shall advise the customer of his/her right to appeal the fine within ten business days after receipt of the notice. The appeal process will follow the specific procedure set out in the Ogden City Municipal Code. The Utility Manager, at his or her sole discretion may grant written variances to persons who apply for approval to use water not in compliance with the Plan. A letter from the property owner explaining in detail the situation requiring the inordinate use of water or the installation of an unusual watering system must be submitted to the Public Utilities Manager. The PUM will review the details and circumstances and may discuss the request with the property owner to better understand the request. A variance may be granted if the PUM finds that such water use or system is necessary to prevent an emergency condition relating to health or safety, extreme economic hardship.

Monies collected from fines are not considered rates for the production of water revenue. money collected from this program will be placed in a special water conservation fund, to be administered by Ogden City Public Utilities, and used for, but not limited to, meeting the expenses of enforcement of restrictions under this Plan, producing educational materials relating to water conservation, promoting information related to the Plan.

Craig E. Frisbee
Manager, Ogden City Public Utilities

Date:

Surface Water Supply Index

Jan-Apr

		Ogden	River	SWSI		
April 1,		Reservoir	Stream	Reservoir		
#	Year	KAF	KAF	KAF	Probab	S
1	19	64.	15.3	79.7	2	-
2	19	64.	36.5	101.1	5	-
3	20	57.	44	101.9	7	-
4	19	62.	40	102.2	9	-
5	19	74.	39.8	114.6	11	-
6	20	47.	68	115.3	14	-
7	19	80.	38	118.4	16	-
8	20	84.	40	124.4	18	-
9	19	88.	50	138.3	20	-
1	20	60.	78	138.6	23	-
1	20	63.	80	143.0	25	-
1	20	79.	80	159.6	27	-
1	19	66.	95	161.3	30	-
1	19	76.	94.4	170.7	32	-
1	19	67.	104.8	172.5	34	-
1	19	10	78.9	180.5	36	-
1	19	83.	102	185.4	39	-
1	20	50.	140	190.8	41	-
1	19	10	84	192.7	43	-
2	19	55.	137.6	193.2	45	-
2	19	10	95	197.8	48	-
2	19	11	88.4	200.2	50	0.
2	19	86.	118	204.7	52	0.
2	19	64.	145	209.9	55	0.
2	19	89.	125	214.4	57	0.
2	19	96.	125.2	222.1	59	0.
2	20	79.	145	224.2	61	0.
2	19	74.	151.7	226.3	64	1.
2	19	86.	140.8	227.4	66	1.
3	19	78.	150	228.4	68	1.
3	19	79.	164	243.1	70	1.
3	19	56.	186.9	243.3	73	1.
3	19	96.	147.4	243.5	75	2.
3	19	10	143.4	243.5	77	2.
3	19	95.	150.1	245.8	80	2.
3	19	91.	154.9	246.5	82	2.
3	20	74.	172	246.5	84	2.
3	19	78.	177	255.9	86	3.
3	19	72	190	262.0	89	3.
4	19	86.	196.8	283.7	91	3.
4	19	85.	220.8	306.5	93	3.
4	19	81.	231	312.7	95	3.
4	19	54.	261.4	316.2	98	3.

Year 2008

Property Type / Response	Phase I	Phase II	Phase III	Phase IV
Residential	Advisory (Normal)	Moderate	Severe	Extreme (Shortage)
<p>Lawn Watering</p> <p><i>Prohibited between 10:00 am and 6:00pm</i></p> <p>Suggested: Water 1/2 inch of water once every 4 days in May; once every 3 days in June, July, August; once every 6 days in September</p>	Mandatory	Mandatory	Mandatory	All Lawn Watering Prohibited
CONSERVATION TIPS:				
<p>Always maintain sprinkling systems in good working order. Inspect each system regularly and make repairs as necessary to eliminate leaks. Measure the amount of water the system is producing during a specific timeframe. Use a system timer.</p> <p>Consider using water wise grasses (i.e. Buffalo Grass)</p>				
<p>Swimming Pools</p> <p>(suggested, may require an ordinance change to enforce)</p> <p>use pool covers when pools are not in use and lower the water level by 4 inches to reduce water loss by splashing.</p>	Voluntary	Voluntary	Mandatory	Pools May not be filled
<p>Outdoor Fountains & Ponds</p> <p>(suggested, may require an ordinance change to enforce)</p> <p>Water may not spray above fountain or pond surface</p>	Voluntary	Voluntary	Highly Recommended	Mandatory

<p><i>Hard-Surface Washing</i> (suggested, may require an ordinance change to enforce) No hard-surface washing (except for health or safety)</p>	<p>Voluntary</p>	<p>Highly Recommended</p>	<p>Mandatory</p>	<p>Mandatory</p>
<p><i>Washing personal vehicles</i> (suggested, may require an ordinance change to enforce) Use a bucket or a positive pressure nozzle on the end of any hose. Wash the vehicle on the lawn or a permeable surface.</p>	<p>Voluntary</p>	<p>Voluntary</p>	<p>Highly Recommended</p>	<p>Prohibited</p>
<p>CONSERVATION TIP:</p>				
<p>Find and use a car wash in your neighborhood that uses water recycle systems. NOTE: This type of system is not widely available in some areas; however, they are becoming more available as water conserving car wash systems are installed.</p>				
<p><i>Commercial and Industrial</i></p>	<p>Advisory (Normal)</p>	<p>Moderate</p>	<p>Severe</p>	<p>Extreme (Shortage)</p>
<p><i>Water Management Plan</i> Prepare and implement a water management plan for your organization outlining practices and procedures designed to conserve or recycle water. Follow “water wise” and best water management practices.</p>	<p>Voluntary reduce use 5%-14%</p>	<p>Voluntary reduce use 15%-24%</p>	<p>Voluntary reduce use 25%-34%</p>	<p>Mandatory reduce use 35 %</p>

<p><i>Commercial Lawn Watering</i></p> <p><i>Prohibited between 10:00 am and 6:00pm</i> Suggested: Water 1/2 inch once every 4 days in May; And 1/2" once every 3 days in June, July, August; And once every 6 days in September;</p>	Mandatory	Mandatory	Mandatory:	All Lawn Watering Is Prohibited
<p><i>Swimming pools</i></p> <p>Use a pool cover when the pool is not in use; Lower the pool water level by 4 inches to minimize water loss by splashing.</p>	Voluntary	Voluntary	Highly Recommended	Mandatory
<p><i>Outdoor Fountains & Ponds</i></p> <p>Water should not spray above fountain or pond surface.</p>	Voluntary	Voluntary	Highly Recommended	Mandatory
<p><i>Restaurants</i></p> <p>Serve water upon customer request. NOTE: Table Tent Cards Can Be Used To Notify Customers</p>	Voluntary	Voluntary	Highly Recommended	Mandatory
<p><i>Hotels/Lodging</i></p> <p>Laundry is not washed daily for multiple night stay same patrons. NOTE: This Practice Is Standard For All Hotels/Motels</p>	Voluntary	Voluntary	Highly Recommend	Highly Recommend

CONSERVATION TIP:

Maintain all irrigation systems in good working order. Inspect systems regularly and make repairs as necessary to eliminate leaks. Follow “water wise” best practices.

<i>Government (Parks, Golf, Schools & other facilities)</i>	Advisory (Normal)	Moderate	Severe	Extreme (Shortage)
<p><i>Lawn watering</i> <i>P prohibited between 10 am and 6 pm</i> Use established water irrigation rate target; Maintain all systems in good working order and inspect each system regularly and make repairs as necessary to eliminate leaks.</p>	Mandatory	Mandatory reduction 15 % less than target	Mandatory 25 % less than target	All Lawn Watering Is Prohibited
<p><i>Swimming pools</i> Swimming pools - use a pool cover when the pool is not in use; lower water levels by 4 inches to minimize water loss by splashing.</p>	Voluntary	Voluntary	Highly Recommended	Mandatory
<p><i>Fountains</i> Do not operate fountains or ponds that spray above the water level. Public Fountains Will Be Turned Off</p>	Voluntary	Voluntary	Highly Recommended	Mandatory
<p>CONSERVATION TIP: Consider eliminating the use of ponds, fountains and decorative water features to save water evaporation. Convert them to dry landscaping features that enhance your building landscaping.</p>				