

# North Logan City - Water Shortage Management Policy and Procedures

## **SECTION I: DECLARATION OF POLICY, PURPOSE, AND INTENT**

The North Logan City Water Shortage Management Plan is intended to augment and support North Logan 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 North Logan City Public Works Department (Hereafter "Utility") hereby adopts the following Plan to address water shortages brought about by drought, service interruption, or other emergency or event.

## **SECTION II: APPLICATION**

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

## **SECTION III: PRIMARY WATER SHORTAGE INDEX**

A direct method of determining culinary water shortage severity is by comparing actual water production (supply) with water usage (demand). North Logan City currently has a number of water sources. These sources consist of surface water collection and treatment, along with several culinary water production wells throughout the community. This water is then stored in reservoirs and directly distributed to residents (water users) within North Logan City. North Logan City will compare culinary water, produced, collected, and stored, with the actual usage by the citizens of the Community. The primary method of measurement will be through the City's culinary water reservoir depths.

This primary index shall be used throughout the entire year to help determine the level of water shortage phase that should be implemented.

## **SECTION IV: SECONDARY WATER SHORTAGE INDEX**

A secondary method of determining annual projected water availability and shortages is through the Natural Resources Conservation Service - Water Availability Climate Center:

<http://www.wcc.nrcs.usda.gov/nwcc/view?intervalType=View+Current+&report=WYGRAPH&timeseries=Daily&format=plot&interval=WATERYEAR&sitenum=823&wateryear=2013>

This site compares average snowfall to actual snowfall, and provides a "Snow Water Equivalent" metric that provides a more accurate estimate of the amount of water that is available in each foot of snow pack. This data shall be used in conjunction with actual water

levels of the Logan River, along with snowpack levels and runoff amounts in Green/Water Canyons (**snowpack levels shall be measured monthly by North Logan City Staff in Water Canyon**).

This index shall be used during the spring and early summer to determine the water shortage phase that should be implemented:

#### **SECTION V: CRITERIA FOR INITIATION AND TERMINATION OF WATER SHORTAGE PHASES**

Each year the Utility Superintendent, in conjunction with the City Council and City Administration, will review drought conditions using the Primary and Secondary Water Shortages Indices. That year's drought conditions will be collected and evaluated by the Utility Superintendent and the appropriate water shortage phase will be implemented. 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 Superintendent. Upon terminating a phase, it is not incumbent on the Utility Superintendent to implement the phase immediately lower. If the Utility Manager does not designate a Plan phase, then the next lower phase becomes active.

#### **SECTION VI: NOTIFICATION AND EDUCATION**

The Utility Superintendent 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
- Notification through the City's mass emergency notification system (phone, email, text).
- 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
- North Logan City municipal website

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

1. North Logan City Council
2. Fire Chief(s)
3. City and/or County Emergency Management Coordinator(s)
4. North Logan City Administration
5. Critical water users (i.e. hospitals, nursing homes)
6. Large water users (typically commercial users) Water Shortage Management Plan;
7. Local School Boards:

Additionally, through a public education program the North Logan Utilities Department 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. North Logan City currently participates in a yearly water fair program. The program utilizes water conservation information and games to educate youth about the importance of water conservation, water management, and stormwater pollution prevention. 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 resources and water pollution prevention.

**SECTION VII: PHASES AND RESPONSES:**

This plan provides for four water shortage phases and associated responses of increasing severity, as progressively more serious conditions warrant. 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 North Logan 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.

Included below are the severity phases (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. The actual phase, and the associated reduction strategies, that are implemented, will be under the discretion of the public utility manager:

<b><u>Phase 1</u></b>	Normal Water Conditions - This phase should be ongoing and primarily be an education and conservation encouragement phase by which the City Council, with the Public Works Department, compile, create, 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.
<b>Trigger</b>	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.
<b>Target</b>	Water Use Reduction: No specific target Water Shortage Management Plan
<b>Reduction Strategies</b>	Public Education (See Appendix A)

<b>Phase 2</b>	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 moderate drought conditions and all indications are that this condition will extend for the rest of the water season (May 1st to October 15th).
<b>Trigger</b>	<p><b>This phase is initiated when:</b></p> <ul style="list-style-type: none"> <li>• The Green Canyon Reservoir levels drop below eleven (11) feet (for more than 3 hours), and/or,</li> <li>• The secondary index indicates that projected water levels are below 80% of average.</li> </ul>
<b>Target</b>	Water Use Reduction: A city wide reduction of water usage of 15-20%.
<b>Reduction Strategies</b>	<p><b>Public Education and Encouragement:</b></p> <ul style="list-style-type: none"> <li>• Water users must cut back exterior watering by 15% (ie. users shall water no more than three days per week).</li> <li>• Commercial, Industrial, and Research Buildings cut back by 15% on all water usage (both inside/outside usage).</li> <li>• No washing of cars using culinary water at a home/residence.</li> <li>• No spraying sidewalks, driveways..etc. with a hose.</li> <li>• No excessive or wasteful watering.</li> <li>• City's splash pad will be reduced to 6 hours/day.</li> </ul> <p>The City may also monitor water usage through real time water meter reports. If a resident, commercial, industrial, or research related water user is using excessive amounts of culinary water they will be subject to the Enforcement standards included in this document.</p>

<b>Phase 3</b>	This a highly cautionary phase by which the City Council with the Public Utility Division informs the public that the city is experiencing moderate to severe drought conditions and that the City water supply is not adequately meeting the demand of the residents.
<b>Trigger</b>	<p><b>This phase is initiated when:</b></p> <ul style="list-style-type: none"> <li>• The Green Canyon Reservoir levels drop below nine (9) feet (for more than 3 hours), and/or,</li> <li>• The secondary index indicates that projected water levels are below 70% of average.</li> <li>• Canal/Irrigation companies have implemented similar water management strategies.</li> </ul>
<b>Target</b>	Water Use Reduction: A city wide reduction of water usage of 30-40%.
<b>Reduction Strategies</b>	<p><b>Public Education and Water Management:</b></p> <ul style="list-style-type: none"> <li>• Water users must cut back exterior watering by 30% (culinary water users may only water lawns twice per week (1 hour maximum exterior</li> </ul>

	<p>watering time each day per water user) - Monday &amp; Thursday for homes/buildings with an odd address, and Wed. and Saturday for homes/buildings with an even address ).</p> <ul style="list-style-type: none"> <li>• No washing of cars using culinary water at a home/residence.</li> <li>• No spraying sidewalks, driveways..etc. with a hose.</li> <li>• No excessive or wasteful watering.</li> <li>• No refilling pools/hot tubs.</li> <li>• Reduce shower times by 50%.</li> <li>• City’s splash pad will be reduced to 3 hours/day for 2 days a week.</li> </ul> <p>The City will also monitor water usage through real time water meter reports. If a resident, commercial, industrial, or research related water user is using excessive amounts of culinary water they will be subject to the Enforcement standards included in this document.</p>
--	---

<b>Phase 4</b>	<p>This phase is intended to warn the public that the city is in an extreme drought condition and there is a critical need to reduce water usage and increase water management strategies. 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.</p>
<b>Trigger</b>	<p><b>This phase is initiated when:</b></p> <ul style="list-style-type: none"> <li>• The Green Canyon Reservoir levels drop below seven (7) feet (for more than 3 hours), and/or,</li> <li>• The secondary index indicates that projected water levels are below 50% of average.</li> <li>• Canal/Irrigation companies have implemented similar water management strategies.</li> </ul>
<b>Target</b>	<p>Water Use Reduction: A city wide reduction of water usage of 50-60%.</p>
<b>Reduction Strategies</b>	<p><b>Public Education and Water Management:</b></p> <ul style="list-style-type: none"> <li>• Water users must cut back exterior watering by 60% (culinary water users may only water lawns once per week for no more than 1 hour/home/water user). Even Addresses north of 2900N will water on Monday, Odd addresses North of 2900N on Tuesday. Even addresses between 2200N and 2900N shall water on Wednesday, Odd addresses between 2200N and 2900N shall water on Thursday. Even addresses between 1500N and 2200N shall water on Friday, Odd addresses between 1500N and 2200N shall water on Saturday. No watering on Sunday.</li> <li>• Commercial, Industrial, and Research Buildings cut back by 60% on all water usage (both inside/outside usage), and follow exterior lawn watering requirements based on address (listed in the previous bullet).</li> </ul>

	<ul style="list-style-type: none"> <li>● No washing of cars using culinary water at a home/residence.</li> <li>● No spraying sidewalks, driveways..etc. with a hose.</li> <li>● No excessive or wasteful watering.</li> <li>● No refilling pools/hot tubs.</li> <li>● City’s splash pad will be shut off.</li> <li>● Shower times shall be reduced to 2 minutes/person/day.</li> </ul> <p>The City may also monitor water usage through real time water meter reports. If a resident, commercial, industrial, or research related water user is using excessive amounts of culinary water they will be subject to the Enforcement standards included in this document.</p>
--	--

<b>Phase 5</b>	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 and there is a possibility of initiating mandatory shut off of water service.
<b>Trigger</b>	<p><b>This phase is initiated when:</b></p> <ul style="list-style-type: none"> <li>● The Green Canyon Reservoir levels drop below five (5) feet (for more than 3 hours), and/or,</li> <li>● The secondary index indicates that projected water levels are below 33% of average, or</li> <li>● Extraordinary drought: A region wide drought has progressed to the point where the utility cannot maintain water service to a major portion of the city, or</li> <li>● 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 a period of time, or</li> <li>● 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.</li> <li>● Canal/Irrigation companies have implemented similar water management strategies.</li> </ul>
<b>Target</b>	Water Use Reduction: A city wide reduction of water usage of 75-100% (unless there is a contamination level, then the City will implement policies to deal directly with the contaminant, ie a boil order...etc.).
<b>Reduction Strategies</b>	This phase is intended to provide only those water services needed to sustain immediate public health and safety. This phase also sets in motion an emergency situation by which the public utility may need to prioritize water service to keep the most critical services, 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.

- This phase will prohibit the usage of culinary water outside of the home.
- If this phase is implemented due to water shortage, all residential, commercial, industrial, and research water users may be required to eliminate water usage unless it is used to sustain human life (only drinking water, and minimal restroom water usage will be allowed).
- If this phase is implemented due to water contamination, then the appropriate measures will be taken to ensure that the water is not consumed or utilized by water users, in any way, until the City has advised otherwise.

The City may also monitor water usage through real time water meter reports. If a resident, commercial, industrial, or research related water user is misusing culinary water they will be subject to the Enforcement standards included in this document.

**Secondary Water Company and City Collaborative Water Conservation Efforts:** The City shall work closely with companies that provide secondary irrigation water throughout the watering season. While water supplies and resources may differ for the culinary and secondary water, the water management and shortage policies should be similar in nature. Incidentally, those culinary water users who generally utilize secondary irrigation water for outside watering needs, shall not utilize culinary water for outside watering in the event of a secondary water restrictions. This can place an unintended, and harmful burden on the City's culinary water system, that can stress and cause damage to the overall culinary water distribution system.

## **SECTION VIII: ENFORCEMENT**

**Written Warning:** If a water user is observed using inordinate amounts of water or is ignoring the rules and regulations set out in the City's water shortage policies, procedures, and the associated water shortage phase reduction strategies, the property owner will be notified of the violation by a letter (or door hanger) from the City Public Utility.

The first written warning will explain to the property owner that the city has adopted a conservation program that educates and assists property owners to conserve water. The warning will further explain that the property owner has been observed using more water than what seems necessary and may be in violation of City Water Shortage Policies. The warning will be accompanied by education materials (or a link to the City's education materials) and tips on how to conserve water.

**Violation:** After two written warnings have been given to a given water user, and if the user continues in violation of the City's water conservation and water shortage policies, the violating user's water will be shut off. In order for a user's water to be turned on, after a water shortage violation shut off has occurred, the user must pay a water turn-on fee of \$100. A second violation will result in a shutoff of the water, and a subsequent turn-on fee of \$300.

The city Public Utility Manager recognizes that there are special circumstances when a property owner may need to deviate from water shortage policies. 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 than is permitted by a particular phase reduction strategy. However, special circumstances will not be considered if the City has implemented phase IV or V of the water shortage policies.

## **Appendix A - Public Education Regarding Water Conservation:**

The following are educational items related to common water conservation practices:

### **Indoor**

**SINK - Fill it first.** You'll use far less water by filling your sink to rinse vegetables, pans and dishes than by just letting the water run.

**DISHWASHER - Load it full.** The more dishes you get into the dishwasher per load, the more efficient your water use. Newer dishwashers use about half the water of older models, too.

**BATHROOM SINK - Fix all drips.** On average, leaks make up about 14% of all indoor water use. If your faucet is not dripping, you'll save about 3 gallons of water by turning it off while brushing your teeth.

**SHOWER - Shorten your shower.** Showering just one minute less every day will save up to 1,875 gallons of water each year. In addition, replacing old showerheads can cut your water use in half.

**WASHING MACHINE - Wash full loads.** Laundry uses over 20% of all the water in your home. Use discretion when washing. Newer front loading machines also use about half the water and detergent of conventional models.

For more information regarding indoor water conservation please contact the USU Extension office, or go online to:

<http://extension.usu.edu/drought/htm/home>

## **Outdoor**

**TREE - Water wider.** Root tips need water; the base of the tree doesn't. Water around the drip line, located directly under the circumference of the tree.

**RAIN GUTTER - Aim to conserve.** Direct downspouts and other runoff towards shrubs and trees.

**KIDS - Conservation fun.** Let them run through the sprinklers in an area where your lawn needs it the most.

**PET - Good, clean conservation.** Bathe your pets outdoors in an area in need of water.

**LANDSCAPE - Conserving water is beautiful.** Less grass and more shrubs, wildflowers, and rocks saves water (and money). Try xeriscaping to save even more, and planting water wise plants.

**SHRUBS - Mulch more.** Organic mulch around plants reduces evaporation. Use a drip system to save even more water.

**VEGETABLE GARDEN - It's hip to drip.** Use drip systems and soaker hoses in flower and vegetable gardens.

**DEAD PLANT - Stop water torture.** More plants die from over-watering than from under-watering. Only water plants when necessary.

**WEEDS - Moisture moochers.** Ugly, and they rob water from other plants. Dig them out.

**WATERING CAN - Perfect for pots.** Use one to water potted plants or small areas. Watering with a hose wastes water.

**SPRINKLERS - No wet cement.** Adjust sprinklers so they don't spray sidewalks and driveways.

**LAWN - Evaporation mitigation.** Water only in the early morning or evening when it's cooler.

**EMPTY TUNA CAN - See where you're sprinkling.** Set cans out to catch and measure the water output of your sprinklers. Aim for  $\frac{3}{4}$  of an inch.

**MOISTURE SENSOR - Water smarter.** Comes with an in-ground probe that turns on the sprinklers only when needed. Saves a ton of water and money.

**SCREWDRIVER - A new twist on saving water.** A great tool to test the soil for moisture. If the screwdriver goes easily into the ground, don't water.

**MOWER - A cut above.** Adjust your lawn mower to a higher setting. Longer grass shades root systems and holds soil moisture better.

**FAUCET - Don't drip.** Check for leaks and fix them.

**HOSE NOZZLE - Slow the flow, literally.** Use when washing your car. Shutting off the hose when not using it can save more than 100 gallons.

**DRIVEWAY - Sweep up savings.** Use a broom not your hose. It will save 80 gallons of water every time.

**AUTOMOBILES - Park on the grass.** Wash cars on the lawn or at a commercial car wash that recycles water.

For more information regarding outdoor water conservation please contact the USU Extension office, or go online to: <http://cwel.usu.edu/>

For a free water audit/irrigation check, please go to: <https://cwel.usu.edu/htm/water-check-program>

For additional information please visit: [www.slowtheflow.org](http://www.slowtheflow.org)