

CITY OF LINCOLN

WATER MANAGEMENT PLAN

(Revised 5/94, 4/00, 5/01, 3/12/03, [Date Revised by EO adopted in 2013])

I. INTRODUCTION

A. Declaration of Purpose of Plan

The City of Lincoln first adopted the Water Management Plan in 1994 to provide guidance for imposing water restrictions. The purpose of this Plan is to: (1) keep water use within pumping capacity and delivery capability, based on recommendations of the Lincoln Water System, (2) define procedures to be used when the above criteria cannot be met, and (3) familiarize citizens, businesses and industry with procedures which may be implemented when voluntary or mandatory water restrictions are required. The Director of Public Works and Utilities, or designated representative, shall keep the Mayor informed of the conditions of water supply, system usage, and delivery capacity. The Director of Public Works and Utilities may make recommendations to the Mayor as appropriate, using best professional judgment and considering weather conditions, weather forecasts, river flow conditions and water system operations, for either enactment of initial restrictions or acceleration to an appropriate phase in the Plan. The Plan outlines specific signals for responding to and management of the City's water supplies through various circumstances, particularly drought conditions. The Lincoln-Lancaster County Health Department shall assist in determining whether an exception to any restrictions imposed according the Plan is necessary for the welfare, health, and safety of the public and also assist with restrictions involving swimming pools and notification for owners with water well permits. The Department of Building and Safety will assist with permits to allow watering beyond the restrictions imposed herein, such as for installation of new sod. The Parks and Recreation Department will assist with restrictions involving golf courses, ball fields, and swimming pools. Implementation of water shortage rates may also be considered as a means of reducing the volume of water used.

B. Water System Capacity

Lincoln Water System pumps its water from its two water treatment plants near the Platte River to Lincoln. The water supply, treatment, and transmission system has the capacity to treat and distribute over 90 million gallons per day (MGD). Water is distributed to Lincoln homes and businesses through 1,200+ miles of water mains. There are over 80,000 water customers in the Lincoln Water System.

C. Policy of Water Conservation

It is the policy of the City of Lincoln to promote water conservation. The water supply to the City of Lincoln is a limited resource, and everyone shares in the responsibility for appropriately using and preserving this resource. All customers of the Lincoln Water System are therefore encouraged to voluntarily reduce water usage by daily practicing water conservation, regardless of whether voluntary or mandatory water restrictions are implemented or certain water shortage rates are applied. There are many simple, cost-effective ways to lower water use and reduce strain on water resources and infrastructure without compromising Lincoln's quality of life. Customers of the Lincoln Water System are encouraged to follow at all times the water conservation measures found at lincoln.ne.gov, keyword: water conservation.

II. CAUSES FOR RESTRICTIONS

A. Drought

If drought conditions cause a reduction in Platte River flows to the extent that water demands within the Lincoln Water System service area begin to deplete the volume of water available in the well field, City may consider enacting voluntary or mandatory restrictions targeted primarily at reducing irrigation of turf and other high use outdoor watering activities. Such restrictions would be based primarily on Platte River flows and water use that is occurring. Any such restrictions would be enacted pursuant to Lincoln Municipal Code Chapter 17.26 and enforced pursuant to applicable code provisions.

B. Natural Disaster or Failure of Water System Facilities

If a natural disaster, such as a tornado, fire, blizzard, ice, or flood, or catastrophic failure of Lincoln Water System facilities occurs, City will enact restrictions under the Catastrophic Water Shortage Levels in Section IV of this Plan, separate from Phases 1-3 within this Plan. Such restrictions would be based on the varying circumstances as adjudged necessary and appropriate by the Mayor and the Director of Public Works & Utilities Department. Any restrictions would be enacted pursuant to Lincoln Municipal Code Chapter 17.26 and enforced pursuant to applicable code provisions.

III. DROUGHT WATER RESTRICTION PHASES

The signals below based on river flow by cubic feet per second (cfs) and water use by million gallons a day (MGD) shall be used to initially consider if drought water restrictions shall be implemented. Other circumstances shall also be considered, including but not limited to, the time of year, weather forecasts, well field modeling, river flow forecast, previous rainfall, temperature, past experience, agricultural and economic considerations, and the volume of water available for pumping. Each of the phases shall remain in effect until conditions indicate a more or less restrictive phase is necessary and the current phase is rescinded to a less restrictive phase or accelerated to a more restrictive phase by the Mayor. The Mayor shall have authority to enact any phase and need not proceed in order through the phases. Phases 2 and 3 of the Plan shall be enacted by declaring an emergency water restriction pursuant to Lincoln Municipal Code Chapter 17.26. All restrictions are limited to the city limits of Lincoln. Any restrictions on City's use of water are provided in Section V.

TABLE III - 1
DROUGHT PHASES

PHASE	SIGNAL RIVER FLOW	SIGNAL WATER USE	POSSIBLE ACTION
1: Moderate Shortage	3,000-1,500 cfs	Greater than 75 MGD	Voluntary three (3) designated days
2: Severe Shortage	1,500-200 cfs	Greater than 65 MGD	Mandatory three (3) designated days
3: Critical Shortage	Less than 200 cfs	Greater than 55 MGD	Limited outdoor water use; may result in either mandatory two (2) or one (1) designated day or no outside water use

TABLE III - 2
PHASE 1: MODERATE SHORTAGE - VOLUNTARY DESIGNATED DAY
(SIGNAL: 3,000-1,500 CFS RIVER FLOW, GREATER THAN 75 MGD USAGE)

WATER USE	DEFINITIONS	RESTRICTIONS	EXEMPTIONS/ALLOWED USE
Outdoor water use (see subcategories below)	Use of water obtained from hoses or sprinkler systems when applied to lawns, landscape, gardens	Voluntary designated 3 days as provided below	<ul style="list-style-type: none"> • Outdoor watering using attended handheld hoses is permitted for occasional watering of landscape • All watering of personal, community, and commercial gardens for produce for human consumption • Bird baths • Water from rain barrels or cisterns • Hand-held containers from inside/outside house for minimal watering
Outdoor water use at residential properties with odd addresses	Single or two family dwellings with street address ending in odd number (1,3,5,7,9)	Tuesday, Thursday, Saturday	
Outdoor water use at residential properties with even addresses	Single or two family dwellings with street address ending in even number (0,2,4,6,8)	Sunday, Wednesday, Friday	
Outdoor water use at multiple family dwelling, commercial, industrial, governmental, institutional, common irrigation	Multiple dwellings with accommodations for more than two families, apartment complexes, offices, commercial, industrial, governmental, institutional, residential developments with common irrigation systems, other property types without unique street addresses such as medians and outlots	Sunday, Tuesday, Friday	
Washing vehicles	Motor vehicles, trucks, trailers, boats, other types of mobile equipment or implements	Voluntary designated days based on address/ property type	Water use permitted for commercial car washing facilities (automatic or manual)
Washing sidewalks, driveways, paved areas	Cleaning paved or surfaced areas used for travel	Voluntary designated days based on address/ property type	NONE
Swimming Pools	Swimming pools used or intended to be used by owner, operator, or public, having a depth of 18 inches or more, see L.M.C. <u>8.36</u> , <u>8.38</u>	Voluntary designated day refilling based on address/property type	All reasonable use permitted
Power washer businesses	Businesses using portable, high pressure mechanical sprayer to clean surfaces	NONE	All use permitted

TABLE III - 2
PHASE 1: MODERATE SHORTAGE - VOLUNTARY DESIGNATED DAY
(SIGNAL: 3,000-1,500 CFS RIVER FLOW, GREATER THAN 75 MGD USAGE)

WATER USE	DEFINITIONS	RESTRICTIONS	EXEMPTIONS/ALLOWED USE
Commercial plant nurseries	For-profit nurseries, includes retail site, stock site, and off-site installations	NONE	All use permitted
Sod	Sodded or newly seeded lawns	NONE	All use permitted
Irrigation system	Install of sprinkler system	NONE	All use permitted
Fountains, ponds		NONE	All use permitted
Water-cooled A/C	Air conditioner using water to cool interior of dwelling	NONE	All use permitted
Golf courses	Area of land landscaped for playing golf	NONE	All use permitted
Private wells	Property owners with private wells not using LWS water	NONE	All use permitted

TABLE III - 3
PHASE 2: SEVERE SHORTAGE: MANDATORY DESIGNATED DAY
(SIGNAL: 1,500-200 CFS RIVER FLOW, GREATER THAN 65 MGD USAGE)

WATER USE	DEFINITIONS	RESTRICTIONS	EXEMPTIONS/ALLOWED USE
Outdoor water use (see subcategories below)	Use of water obtained from hoses or sprinkler systems when applied to lawns, landscape, gardens	Mandatory designated 3 days as provided below	<ul style="list-style-type: none"> • Outdoor watering using attended handheld hoses is permitted for occasional watering of landscape • All watering of personal, community, and commercial gardens for produce for human consumption • Bird baths • Water from rain barrels or cisterns • Hand-held containers from inside/outside house for minimal watering
Outdoor water use at residential properties with odd addresses	Single or two family dwellings (duplexes) with street address ending in odd number (1,3,5,7,9)	Tuesday, Thursday, Saturday	
Outdoor water use at residential properties with even addresses	Single or two family dwellings (duplexes) with street address ending in even number (0,2,4,6,8)	Sunday, Wednesday, Friday	
Outdoor water use at multiple family dwelling, commercial, industrial, governmental, institutional, common irrigation	Multiple dwellings with accommodations for more than two families, apartment complexes, offices, commercial, industrial, governmental, institutional, residential developments with common irrigation systems, other property types without unique street addresses such as medians and outlots	Sunday, Tuesday, Friday	
Washing vehicles	Motor vehicles, trucks, trailers, boats, other types of mobile equipment or implements	Mandatory designated days based on address/ property type	Health and safety purposes (i.e., garbage trucks, vehicles carrying food perishables, sludge trucks, emergency vehicles) and commercial car washing facilities (automatic or manual)
Washing sidewalks, driveways, paved areas	Cleaning paved or surfaced areas used for travel	PROHIBITED	Health and safety purposes to avoid hazardous, obnoxious, unsafe, unhealthy, unsanitary condition or threat to the health, safety, and welfare of persons living or passing in the vicinity thereof
Power washer businesses	Businesses using portable, high pressure mechanical sprayer to clean surfaces	Mandatory designated days based on address/ property type	NONE

TABLE III - 3
PHASE 2: SEVERE SHORTAGE: MANDATORY DESIGNATED DAY
(SIGNAL: 1,500-200 CFS RIVER FLOW, GREATER THAN 65 MGD USAGE)

WATER USE	DEFINITIONS	RESTRICTIONS	EXEMPTIONS/ALLOWED USE
Commercial plant nurseries	For-profit nurseries, includes retail site, stock site, and off-site installations	None, nurseries asked to restrict non-essential uses	All use permitted
Sod	Completely sodded or newly seeded lawns (both cool and warm season grasses, at least 1,000 square feet)	None, if permit obtained from Building & Safety Dept.	Outdoor water use permitted for 30 days according to permit, otherwise by mandatory designated days, signs must be posted on permitted property
Irrigation system	Install of sprinkler system	None, if permit obtained from Building & Safety Dept.	Outdoor water use permitted for 10 days according to permit, otherwise by mandatory designated days, signs must be posted on permitted property
Swimming pools	Swimming pools used or intended to be used by owner, operator, or public, having a depth of 18 inches or more, see L.M.C. <u>8.36</u> , <u>8.38</u>	Mandatory designated day refilling, drain at end of season or for emergency repairs	Health and safety purposes to avoid hazardous, unsafe, unhealthy, unsanitary condition or threat to the health, safety, and welfare of persons
Fountains, ponds	Only those over 20,000 gallons	Filling or replenishment PROHIBITED	No prohibition for filling or replenishment of fountains or pond under 20,000 gallons
Water-cooled A/C	Air conditioner using water to cool interior of dwelling	NONE	Signs must be posted on each property utilizing water-cooled A/C
Golf courses	Area of land landscaped for playing golf	<ul style="list-style-type: none"> • Greens permitted daily • Fairways permitted Monday-Friday with dormancy hydration • Tees on designated days using clubhouse address 	NONE
Ball fields	USGA-styled sand-based athletic fields, infields, ballfields with agrilime	NONE	All use permitted every day
Private wells	Property owners with private wells not using LWS water	NONE	Signs must be posted on each property utilizing well water

PHASE 3: CRITICAL SHORTAGE: LIMITED OUTDOOR WATER USE

(SIGNAL: LESS THAN 200 CFS RIVER FLOW, GREATER THAN 55 MGD USAGE)

A. Signal(s) for Implementation

Phase 3 may be implemented when the river flow of the Platte River is less than 200 cfs and water usage exceeds 55 MGD or generally when system usage steadily exceeds the ability to supply as provided above. This phase shall be implemented in emergency situations to sustain life and maintain the health of the community. All actions will focus on preserving lifeline indoor water use and fire reserves in the reservoirs. Lifeline indoor water use shall be that use of water necessary for drinking, cooking, commercial, industrial, medical, and sanitary facilities and such other water use determined by the Lincoln-Lancaster County Health Department as necessary to maintain sanitary and health conditions. Other considerations such as remaining operational volume (ROV), well field modeling, time of year, number of days under or over the operative cfs or MGD signal, weather forecast, river flow forecast, previous rainfall, temperature, past experience, and agricultural and economic considerations may factor into implementation of this phase. The Director of Public Works and Utilities shall use his or her best professional judgment, considering weather conditions, weather forecasts, river flow conditions and water system operations, to make a recommendation to the Mayor for acceleration to this phase in the Plan.

B. Restrictions for Reduction in Use

Restrictions shall be implemented for water shortage and may vary based on the situation. Phase 3 shall continue or implement the restrictions in Phase 2 together with further stringent restrictions. Restrictions may involve reducing mandatory designated days to one (1) day per week, limitation of water use to indoor usage only, voluntary or mandatory twenty-five to fifty percent (25-50%) curtailment in usage, shutdown of operation of all public ornamental fountains and ponds, shutdown of commercial car washes, limitation of time and time period for washing of certain vehicles for health and safety purposes, prohibition of operation or filling of swimming pools, limitation of use of fire hydrants for firefighting and water quality control activities, and communication and assistance from other governmental agencies and resources to assist with the emergency conditions that exist at that time.

After an emergency water restriction is publicly declared pursuant to L.M.C. 17.26.010 under Phase 2 or 3, City shall provide public notice of whatever water restrictions are imposed through this phase and the effective date of the restrictions, enacting an Executive Order outlining the restrictions, providing announcement of the emergency and restrictions in available local news media, and filing with the City Clerk and posting the Executive Order in the official bulletin board of the City at or near the City Clerk's office at 555 S. 10th Street, Lincoln, Nebraska.

IV. CATASTROPHIC WATER SHORTAGE LEVELS

Catastrophic Water Shortage Levels may be implemented as described below upon occurrence of one or more of the events described in Section II (B). These levels shall be used in emergency situations to sustain life and maintain the health of the community. Each of the levels shall remain in effect until the current level is rescinded to a less restrictive level or accelerated to a more restrictive level by the Mayor. The Mayor shall have authority to enact any level and need not proceed in order through the levels. Other measures may be implemented at the Mayor's discretion.

Level 1 - Water Use Restriction Alert

A. Signal(s) for Implementation

Level 1 may be implemented when system usage exceeds the ability to supply or reservoirs do not refill above 25 percent (25%) reservoir operational storage level overnight; or a major transmission/distribution link is disrupted; or a system failure occurs which causes a loss of capability to provide adequate services. This Level shall be implemented in emergency situations to sustain life and maintain the health of the community.

B. Restrictions for Reduction in Use

1. **The use of water shall be limited to indoor usage only unless otherwise prescribed.**
2. **Request a voluntary** 25 percent (25%) curtailment of residential/industrial/ commercial/institutional usage.
3. A **mandatory** shutdown of all commercial car washes shall be implemented.
4. Washing of vehicles such as garbage trucks, vehicles transporting food and perishables, emergency, and sludge vehicles shall be permitted only **between the hours of midnight and 6 a.m.**
5. Eating and drinking establishments shall serve water to customers **upon request only.**
6. Retailers, suppliers, and manufacturers on the AEmergency Water Resources List@ will be contacted to provide **increased supplies of bottled water, non-alcoholic beverages, and shall use disposable place settings** for supply through normal market outlets.

Level 2 - Water Use Restriction Emergency

A. Signal(s) for Implementation

Level 2 shall be implemented when circumstances exist that cause the system supply to fall below the average winter day usage (i.e., approximately thirty million gallons per day (30 MGD)). All actions will focus on preserving Alifeline® indoor water use and fire reserves in the reservoirs.

B. Restrictions for Reduction in Use

All measures implemented in previous Levels shall continue with the following **additions**:

1. A **mandatory** 25 percent (25%) curtailment of all industrial/commercial/ institutional usage shall be implemented.
2. A **mandatory** 50 percent (50%) curtailment of all residential indoor usage shall be implemented. The Citizen Information Center, working with Lincoln/Lancaster County Health Department, shall provide citizens with specific information via local and area media for meeting mandatory water curtailment actions.
3. Golf course watering which utilizes Lincoln Water System sources may be **prohibited**.
4. All air-conditioning utilizing Lincoln Water System sources are **prohibited**.
5. All restaurants and institutional users shall begin using **non-washable disposable table settings**. All bars and liquor serving establishments shall use **single service glasses** to reduce water usage.
6. If water used for drinking purposes is disrupted, the Director of Public Works and Utilities may arrange for the **trucking of drinking water** from surrounding areas using sources on the AEmergency Water Resource List.® This emergency drinking water may be distributed to the public from City park locations to be determined as appropriate to the situation.
7. **Nebraska National Guard** will be contacted and assistance sought to provide support should either of the above actions prove inadequate or the situation continues to deteriorate.

Level 3 - Water Use Restriction Crisis

A. Signal(s) for Implementation

Level 3 shall be implemented when system usage has depleted lifeline indoor water use and fire reserves in the reservoirs, and/or water quality in the distribution system poses a threat to the health and safety of users.

B. Restrictions for Reduction in Use

All measures implemented in previous Levels shall continue, with the following **additions**:

1. A **mandatory** 50 percent (50%) curtailment in all industrial/commercial/ institutional usage shall be implemented.
2. The Mayor, utilizing emergency powers, shall implement **specific mandatory industrial/commercial/institutional/residential shutdowns** if necessary based on recommendations from Lincoln Water System.
3. **Nebraska National Guard** will be requested to provide support to the community in the area of water purification, storage and transport, based on exhaustion of local/regional resources and the continued threat to human life and health.

V. ACTIONS ON BEHALF OF CITY

City shall use best efforts to comply with the restrictions similar to those implemented for the public to the extent possible and not inconsistent with the restrictions provided for City in this section. City will work with those governmental agencies and entities with property in the city limits for cooperation with the water restrictions imposed by this phase or other phases.

The watering of newly planted street, park and/or golf course trees, street medians, and general irrigation, all on City property, should be limited to a designated day schedule. Non-potable water from wastewater treatment shall be used by City personnel if available for such purposes. In Phase 2 or 3 mandatory restrictions, public ornamental fountains and waterfalls greater than twenty thousand (20,000) gallons shall not be replenished if supplied by LWS water. Tee boxes on public golf courses shall be watered on designated days using clubhouse address. Watering of golf course greens shall be permitted daily including syringing as needed during all Phases of restrictions. During Phase 2, watering of public golf course fairways shall be conducted using dormancy hydration rates during week days (Monday – Friday) at the discretion of the course superintendent.

During Phase 2 or 3, the decision to fill or refill City swimming pools or continued operation of said pools shall be approved by the Mayor with input from the Director of Parks and Recreation and designees in a manner that is safe and expeditious separate from the restrictions in the Plan. Hydrant flushing maintenance program shall be limited except as deemed necessary by the Director of Public Works and Utilities and designees to enhance water quality, fire flow tests, and large meter tests. Jet flushing of sanitary sewers, storm sewer flushing, and street sweeping shall be limited except as deemed necessary for health, safety, sanitation, or general welfare purposes.

City has a May 15th through September 15th seven-hundred and one (701) cfs induced recharge ground water right on the Platte River for its wellfield at Ashland. If the Platte River flows at the Ashland wellfield are below 700 cfs for five (5) continuous days, City shall consider asking the State of Nebraska to administer its water rights.

VI. ENFORCEMENT

Enforcement of these restrictions shall be in accordance with Lincoln Municipal Code Chapters 17.26 and 10.06 and Section 1.24.010, as amended, and provisions of the Nebraska Civil Defense Act. Where signs are required for any reason, such signs shall be provided or permitted by the City of Lincoln upon request or application. The use of any other signs to indicate an allowed use shall be a violation of these requirements.

VII. RESOURCES

City will endeavor to provide Lincoln Water System customers and citizens of the City of Lincoln with information about the Plan and any restrictions imposed through press releases or press conferences, newspaper advertisements or articles, public electronic billboards or signs, website updates, brochures, public service announcements, television and radio interviews/appearances, and/or other means. During implementation Phases 2 or 3 of drought water restrictions, call center(s) for questions and violation reporting will be available for citizens. For additional resources on drought conditions and water conservation:

- The Groundwater Foundation for sustainable groundwater: <http://www.groundwater.org/>
- UNL Nebraska Water Center: <http://watercenter.unl.edu/>
- Nebraska Water maps: <http://watercenter.unl.edu/watermap/>
- Lower Platte South Natural Resources District: <http://www.lpsnrd.org/>
- The National Drought Mitigation Center at UNL: <http://drought.unl.edu/>
- The North American Drought Monitor from NOAA:
<http://www.ncdc.noaa.gov/temp-and-precip/drought/nadm/index.html>
- U.S. Drought Portal (National Integrated Drought Information System):
http://nidis1.ncdc.noaa.gov/portal/server.pt/community/drought_gov/202
- U.S. Department of Agriculture Natural Resources Conservation Service:
<http://www.wcc.nrcs.usda.gov>
- U.S. Environmental Protection Agency, Water Sense Program: <http://www.epa.gov/watersense>
- Alliance for Water Efficiency: www.allianceforwaterefficiency.org
- UNL Extension Service: _____