

SOUTH PLATTE NATURAL RESOURCES DISTRICT

Annual Report of Water Use Activities in the South Platte Natural Resources District

For the 2024 Basin-Wide Meeting

Report Year: 2023

Meeting Date: August 1, 2024

Table of Contents

General Summary	3
Introduction	3
Certified Acres	4
Approved Transfers.....	5
Well Construction Permits.....	5
Variances.....	6
Industrial Accounting and Municipal Accounting.....	6
Irrigation Flow Meter Data	7
Retired Acres and Other Stream Flow Accretion Activities.....	7
Excess Flow Diversions.....	7
Municipal Conservation Plans.....	8
Other Activities.....	8
Ground Water Levels.....	8
Map 1 – Overappropriated, Fully Appropriated and Nebraska New Depletion Plan Areas.....	9
Map 2 – Allocation Subareas and Allocations for 2019 through 2021	10
Appendix A – SPNRD Certified Irrigated Acres.....	11
Appendix B – 2022 SPNRD Approved Transfers	12
Appendix C – SPNRD Non-Baseline Industrial Certifications.....	13
Appendix D – 2022 SPNRD Active Industries with Baselines.....	14
Appendix E – SPNRD Municipal Baselines and 2021 Usage.....	15
Appendix F – SPNRD Irrigation Allocation History.....	16
Appendix G – SPNRD Irrigation Water Usage Report.....	17
Appendix H – SPNRD Municipal Water Conservation Plans.....	18

**ANNUAL REPORT OF WATER USE ACTIVITIES
IN THE SOUTH PLATTE NATURAL RESOURCES DISTRICT
TO MEET THE REQUIREMENTS OF THE INTEGRATED MANAGEMENT PLAN
FOR THE 2024 BASIN-WIDE MEETING**

I. GENERAL SUMMARY

- A. The following is a compilation of records, statistics and historic conditions of water use which have been tracked by the South Platte Natural Resources District (SPNRD) for 2023. Information in this report summarizes all irrigation, industrial, and municipal related activities for calendar year 2023. All information supplied for this summary is available within a database, complete with the locations and attributes. This report has been compiled for the August 1, 2024, Basin-Wide meeting.

II. INTRODUCTION

- A. This report is intended to satisfy the SPNRD tracking and reporting requirements as described by the Monitoring and Evaluation section of the SPNRD Integrated Management Plan (IMP). The SPNRD will be responsible for tracking the following activities within the District on an annual basis:
- Certification of groundwater uses and any changes to these certifications
 - Approved transfers, including all the information provided with the application and used in the approval of the transfer, the location of the land area or well that is being transferred, and the location of the land area or well that will replace the original
 - Relevant flow meter data collected by SPNRD staff on groundwater certified acres, by physical inspection or inspection using telemetry equipment and calculated water used on those acres; data is collected at the end of the water year so reporting may not align with other annual tracking
 - Any water well construction permits issued
 - Any other permits issued by the SPNRD
 - Any conditions associated with any permits issued
 - Information gathered through the municipal and non-municipal industrial accounting process
 - Any variances issued, including the purpose, the location, any required offset, the length of time for which the variance is applicable and the reasoning behind approval of the variance
 - Any retirements of irrigated acres or other activities by the SPNRD for the purpose of returning to a fully appropriated condition
 - Information related to any water banking transactions
 - Offsets provided for depletions resulting from increased consumptive use related to the above listed items
 - This includes reporting on offsets and mitigation activities for the purpose of addressing post-1997 depletions and for the purpose of sustaining

previous increment progress and reaching a fully appropriated condition. Such activities to be reported include canal diversions for the purposed of groundwater recharge, operation of stream augmentation projects, and irrigated acre retirements

- Summary of available conservation plans of municipalities and industries within the basin including strategies that could be applied to other municipalities in the basin (at the Basin-Wide Annual Meeting).

The items tracked and reported will subsequently be used by the SPNRD and the Nebraska Department of Natural Resources (NeDNR) to measure the success of the controls, incentive measures and other action items contained in the IMP at meeting the goals and objectives of the IMP. Evaluation processes for measuring success are described in the IMP. The first evaluation process is an annual review that will assess the progress being made toward achieving the goals and objectives of the current IMP's ten-year increment.

The second evaluation process is a more robust review occurs periodically. This analysis will be developed to meet the requirements of reporting for the Nebraska New Depletions Plan as well as Neb. Rev. Stat. 46-715(5)(d)(iii) to determine whether the measures adopted in the IMP are sufficient to offset depletions due to post-July 1, 1997, water uses and sustain progress toward a fully appropriated level of water use. The next robust reviews will be completed in 2023 (now going into 2024) and again in 2027.

Additional evaluation processes are described in the IMP including measuring the success of reaching a fully appropriated condition, measuring the success of maintaining a fully appropriated condition, and the need for a subsequent IMP increment. These evaluation processes are described in more detail in the Monitoring and Evaluation section of the IMP.

The SPNRD during the second ten (10) year increment of the IMP will maintain both short- and long-term accretion credit targets. The short-term accretion credits are 200 acre-feet to the South Platte River, 4,500 acre-feet to the Lodgepole Creek, and 0 acre-feet to the North Platte River. The long-term accretion credits are 100 acre-feet to the South Platte River, 5,000 acre-feet to the Lodgepole Creek, and 0 acre-feet to the North Platte River.

III. CERTIFIED ACRES

- A. The SPNRD began certifying ground water irrigated acres in October 2002 and completed the certification process in 2006. The SPNRD certified irrigated acres are based on historically irrigated acres proven by Farm Service Agency (FSA) maps, tax records or other appropriate documentation.

The SPNRD has two types of certified acres: active and inactive. Inactive acres are any certified acres that belong to wells that are inactive and do not have a flow meter installed and do not receive an allocation. These unused wells are enrolled in a SPNRD program called Temporary Deferment. Active acres are all acres that are being irrigated or have a

flow meter installed and therefore receive an allocation. Detailed data regarding the number of certified irrigated acres can be found in Appendix A. Map 1 provides a look at the state designated areas in the SPNRD.

IV. APPROVED TRANSFERS

- A. For 2023, the District approved six (6) transfers. See Appendix B for a more detailed look at the transfers.
 - 1. Two transfers the SPNRD Board approved dealt with industrial transfers. Both transfers dealt with Interstate 80 improvement projects. None of the transfers required a NeDNR permit/notice. Both transfers were offset by existing irrigation allocations.
 - 2. One transfer involved moving irrigation allocation from one certified irrigated acre tract to a separate irrigated acre tract.
 - 3. Three transfers involved moving around existing certified acres to allow for new pivots to be installed. No expansion of acres occurred, just moving existing acres to new locations to make the operators more efficient.

V. WELL CONSTRUCTION PERMITS

- A. Supplemental Ground Water Wells
 - 1. The SPNRD issued no supplemental ground water well permits.
- B. Supplemental Surface Water Wells
 - 1. The SPNRD issued no supplemental surface water well permits.
- C. Replacement Wells
 - 1. The SPNRD issued four (4) replacement well permits. All four were for irrigation wells that had casing go bad or were no longer producing like they previously did.
- D. Temporary Wells
 - 1. The SPNRD issued no temporary well permits.
- E. De-Watering Wells
 - 1. The SPNRD issued no de-watering well permits.
- F. Other Permits
 - 1. The SPNRD issued no other well permits.

VI. VARIANCES

- A. The SPNRD considers any request that is contrary to existing rules or regulations of the SPNRD or NeDNR as a variance. The SPNRD has a Variance Advisory Group that reviews and makes recommendations to the SPNRD Board of Directors on all irrigation related variances requested. All industrial and municipal variance requests go directly to the SPNRD Board of Directors. The Board reviews variances on a case-by-case basis, and as the elected governing body; the Board makes the final determination.

The SPNRD did not approve any variance requests in 2023.

VII. INDUSTRIAL ACCOUNTING AND MUNICIPAL ACCOUNTING

- A. The SPNRD began implementing the Industrial Accounting portion of the IMP in early 2010. Industrial wells were identified through the NeDNR registered well database and had to pump greater than 50 gallons per minute. The SPNRD decided that for an industrial user to obtain a baseline certification they must have pumping history for every year during the five-year period from August 1, 2001, through July 31, 2006. Unless a variance is granted, a user that has not met this five-year pumping history criterion will be given a non-baseline certification, and that user will be responsible for offsetting the water use. The SPNRD allows industrial users who have a non-baseline certification to offset new or expanded uses through transfers including irrigation allocation(s), certified irrigated acres or the District's water bank.

Currently, the SPNRD has twenty-nine (29) non-baseline certifications. Thirteen of the twenty-six had or could have had active industrial use in 2023 and all water pumped will be offset by an existing irrigation allocation as agreed upon by the user and the SPNRD Board of Directors. Non-baseline certifications can change annually as temporary transfers expire and get removed from the list, and new temporary transfers are approved by the Board and are added to the list. See Appendix C table for a breakdown of non-baseline industrial uses.

Nineteen industries now have established baselines. These industries either had records of water sales, tax receipts, flow meter readings, electrical power records, previous irrigation pumping history, etc., which could be documented back to August 1, 2001, and used to establish the approved baseline or have had baselines approved through a variance. The baselines were determined in one of three ways. First was by figuring the amount of water consumed by the industry between August 1, 2001, and July 31, 2006; second was by converting certified irrigated acres into an industrial baseline by board approval; and third was by board approval of a variance request. These industries have flow meters installed which are read monthly. None of the previously mentioned industries discharge any water and all pumping is looked at as one hundred (100) percent consumptive use. The SPNRD had previously tracked industrial use on an August 1st to July 31st timeframe; however, in 2019 with an update to the Integrated Management Plan the SPNRD now tracks industrial use on a calendar year. See Appendix D for a list of existing industries and how their baselines compare with current pumping.

- B. The SPNRD has certified baselines for all ten municipal water systems in the District. Municipal baselines include information from all wells the municipality uses that pump over 50 gallons per minute. The Chappell, Potter, and Sidney golf courses are all figured into their municipal baselines. Baselines were figured with the best-known data at the time.

Sidney and Kimball discharge some of or all their treated wastewater back into Lodgepole Creek. Chappell and Lodgepole previously had discharged wastewater back into the creek but in 2015 and 2012, respectively, went to full retention lagoons. The rest of the remaining municipalities' wastewater is held in full retention lagoons.

Municipal baselines were calculated by documenting usage between August 1, 2001, and July 31, 2006. The highest one-year period (August 1st to July 31st) during this time was then used as that municipality's baseline. Like industrial use, the SPNRD had previously tracked municipal use on an August 1st to July 31st timeframe; however, in 2019 with an update to the Integrated Management Plan the SPNRD now tracks municipal use on a calendar year. Appendix E shows the municipal baselines, per capita use, and current year usage.

VIII. IRRIGATION FLOW METER DATA

- A. The SPNRD Board in January 2004 required flow meters to be installed on all irrigation wells. Flow meters were then installed incrementally through March 2009. All certified irrigated acres located in the Lodgepole Creek Valley have had an allocation in place beginning in 2007. The remainder of the District (Tablelands and South Platte Valley) has had an allocation in place since 2009.

The SPNRD Board in April 2021 decided the irrigation allocations for all subareas within the district for the years 2022-2024. Map 2 has a breakdown of allocation amounts per subarea through the end of 2024. Appendix F summarizes the allocation history of the SPNRD. Appendix G provides a rough draft look at irrigation water usage for the entire SPNRD from 2020 through 2023.

IX. RETIRED ACRES AND OTHER STREAM FLOW ACCRETION ACTIVITIES

- A. In 2023 the SPNRD did not retire any irrigated acres. However, through 2023 the SPNRD retired or decertified a total of 2,243.07 acres. The acres retired include 1,940.27 acres located in the over appropriated Lodgepole Creek Valley and 302.8 acres located in the fully appropriated area.

X. EXCESS FLOW DIVERSIONS

- A. Excess flow diversions in the SPNRD come from the Western Irrigation District via Western Canal. The SPNRD uses thirteen pits located off the canal, along with the canal itself to retine flows to the river and recharge groundwater to aid in reaching a fully appropriated condition. The pits can be used for credit toward reaching fully appropriated anytime there is excess flow in the river. The canal can only be used for credit when excess flow occurs outside the historical irrigation season for Western

Irrigation District, or if outstanding circumstances are approved by NeDNR – such as an abnormally wet year when the irrigation season may end earlier than average.

In 2023 the SPNRD was able to take advantage of excess flows during two separate events. The first event was May 16th to May 24th (9 days), and the second event was June 9th to July 24th (46 days) for a total of 55 days. During both events recharge credit was available only for the pits, with no credit obtained from the canal.

Start Date	End Date	Total Days	Canal Credit Available	Pit Credit Available
5/16/2023	5/24/2023	9	No	Yes
6/9/2023	7/24/2023	46	No	Yes

Total acre-feet of credit has not yet been calculated for these events. Credit will be calculated during or before the 2027 Robust Review.

XI. MUNICIPAL CONSERVATION PLANS

- A. The municipalities within the SPNRD were surveyed to find out their individual conservation plans. Many of the municipalities sent in portions of their ordinances that they consider their conservation plan. The SPNRD has ten municipalities and five have a conservation plan. The plans vary quite a bit, so instead of trying to summarize them they are all attached in Appendix H.

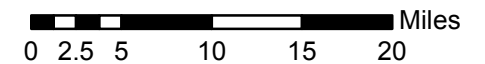
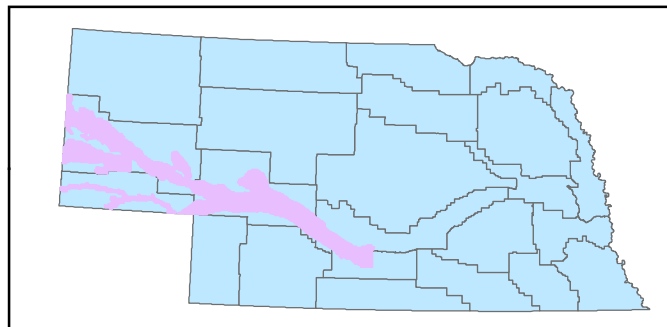
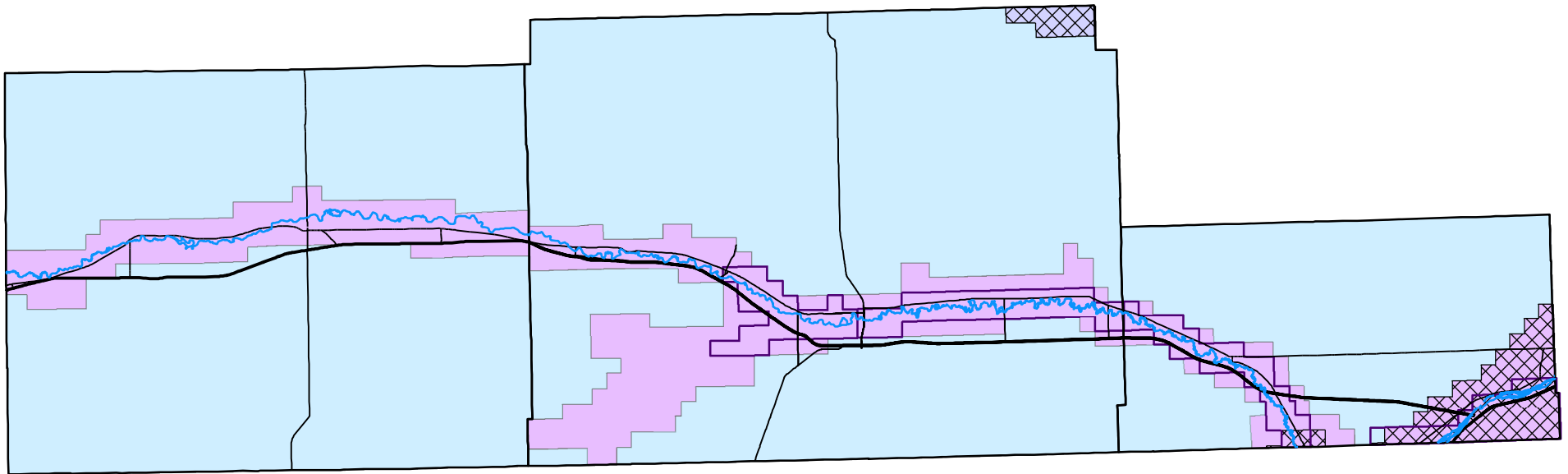
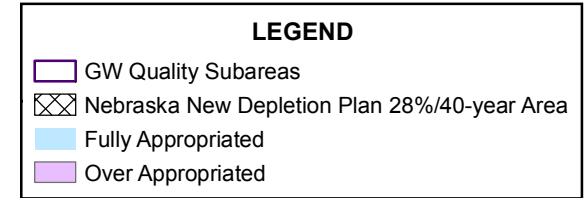
XII. OTHER ACTIVITIES

- A. The SPNRD and North Platte Natural Resources District (NPNRD) began work on a regional ground water model, Western Water Use Model (WWUM), for the two Districts in 2009. This regional model builds upon the modeling work that was completed during SPNRD and NPNRD's time spent participating in COHYST. The SPNRD and NPNRD share a ground water modeler, Thad Kuntz, P.G., with Adaptive Resources, Inc.

XI. GROUND WATER LEVELS

- A. Tracking and reporting of ground water levels is not required in the IMP. The SPNRD measures 204 observation wells in the spring and fall annually.

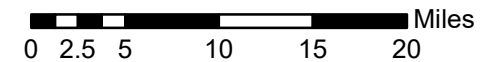
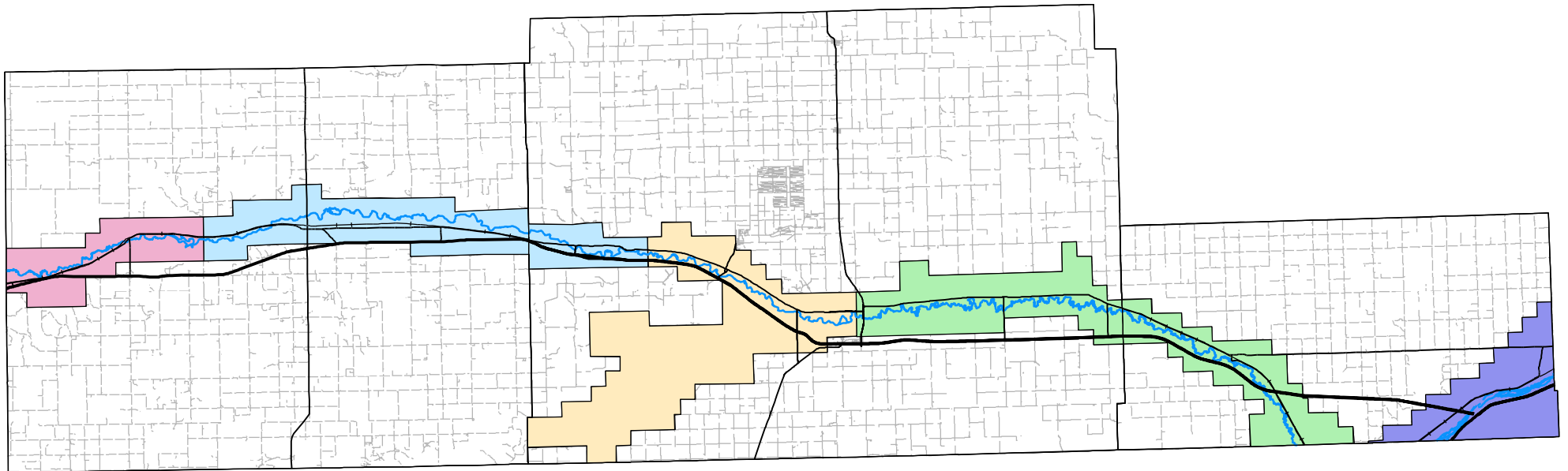
Overappropriated, Fully Appropriated and Nebraska New Depletion Plan Areas



Allocation Subareas and Allocations for 2022 through 2024



Explanation	
	Pine Bluffs to Oliver Reservoir; 14"/year or 42"
	Oliver Reservoir to Buffalo Bend; 14"/year or 42"
	Buffalo Bend to Sidney; 14"/year or 42"
	Sidney to Colorado; 16"/year or 48"
	South Platte Valley; 16"/year or 48"
	Tablelands; 13"/year or 39"



Appendix A

SPNRD Certified Irrigated Acres

	Kimball	Cheyenne	Deuel	Total	Percentage
Active Overappropriated	16,549	17,820	14,510	48,879	37%
Inactive Overappropriated	219	1,665	583	2,467	2%
Active Fully-Appropriated	25,643	43,857	9,465	78,965	60%
Inactive Fully-Appropriated	57	993	458	1,508	1%
Total Certified	42,468	64,335	25,016	131,819	100%
Total Cert. Acres in Nebraska New Depletion Plan 28%/40- year Area	0	56	10,499	10,555	

Appendix B

2023 SPNRD Approved Transfers

NRD PERMIT #	NeDNR PERMIT #	To/From	TOWNSHIP	RANGE	SECTION	ACRES
TR-IND-23-Shoemaker		To From	15 15	57 57	24 24	0
TR-IND-DCN-23		To From	14 14	56 56	17 17	0
TR-AI-Derry-23		To From	15 15	46 46	17 18	0
PVT-23-Sutton		To From	15 15	52 52	10 4	23.1
PVT-23-Hopkins		To From	16 16	50 50	27 27	177
PVT-23-Stone		To From	13 13	52 52	31 31, 32	31

Appendix C

SPNRD Non-Baseline Industrial Certifications 2023

Well Reg. #	Legal	Industrial Use	Offset Provided By
G-021823	Sec. 12 T16N R57W	Oil Fields	To Be Determined (TBD)
G-022051	Sec. 24 T13N R56W	Oil Fields	TBD
G-014546	Sec. 34 T14N R53W	Oil Fields	TBD
G-022281	Sec. 11 T14N R53W	Oil Fields	TBD
G-134511	Sec. 22 T17N R52W	Oil Fields	TBD
A-002770	Sec. 28 T15N R54W	Oil Fields	TBD
G-022347	Sec. 23 T13N R57W	Oil Fields	TBD
G-022048	Sec. 34 T17N R51W	Oil Fields	TBD
G-023351	Sec. 27 T14N R50W	Oil Fields	TBD
A-004712	Sec. 11 T14N R59W	Oil Fields	Irrigation allocation on tract 14N59W110001*
G-022050	Sec. 19 T14N R55W	Oil Fields	TBD
G-022049	Sec. 19 T14N R55W		
G-074242	Sec. 1 T12N R44W	Sand & Gravel Mine	TBD
A-004408	Sec. 28 T15N R55W	Sand & Gravel Mine	Irrigation allocation on tract 15N55W280004*
G-054269	Sec. 12 T13N R56W	TBD	Irrigation allocation on tract 13N56W120001*
G-019421	Sec. 21 T14N R55W	Oil Fields	TBD
G-019973	Sec. 21 T14N R55W		
G-019423	Sec. 21 T14N R55W		
G-154988	Sec. 6 T12N R43W	Sand & Gravel Mine	TBD
G-154989	Sec. 6 T12N R43W		
G-154990	Sec. 6 T12N R43W		
G-039899	Sec. 5 T15N R52W	Oil Fields	TBD
G-021179	Sec. 23 T17N R52W	Oil Fields	TBD
G-021621	Sec. 23 T17N R52W		
G-146042	Sec. 13 T15N R56W	Sand & Gravel Mine	Irrigation allocation on tract 15N56W230005*
G-030434	Sec. 2 T12N R55W	Oil Fields	TBD
G-026066	Sec. 2 T12N R55W		
G-041796	Sec. 13 T14N R51W	Sand & Gravel Mine	Irrigation allocation on tract 14N51W130001*
G-003090	Sec. 5 T14N R52W	Interstate Construction	Irrigation allocation on tract 14N52W050002*
G-094357B	Sec. 15 T12N R49W	Wind turbines & Roads	Irrigation allocation on tract 12N49W150001*
G-108153	Sec. 11 T14N R58W	Interstate Construction	Irrigation allocation on tract 14N58W110001*
G-067208	Sec. 7 T15N R54W	Road Construction	Irrigation allocation on tract 15N54W070001*
G-056322	Sec. 17 T14N R56W	Interstate Construction	Irrigation allocation on tract 14N56W170001*
G-020878	Sec. 26 T15N R56W	Road Construction	Irrigation allocation on tract 15N56W260006*
G-076417	Sec. 26 T15N R54W	Road Construction	Irrigation allocation on tract 15N54W260004*
G-109142	Sec. 24 T15N R57W	Sand & Gravel Mine	Irrigation allocation on tract 15N57W240001*

* Total combined usage of both industrial and irrigation water is reported as totals in the SPNRD Irrigation Water Usage Report found in Appendix G.

Appendix D

2023 SPNRD Active Industries with Baselines

Well Reg. #	Legal	Use	Baseline Gallons	Baseline Year	2023 Gallons
G-157945 G-157946 G-031351	Sec. 5 T13N R50W Sec. 5 T13N R50W Sec. 5 T13N R50W	Livestock	299,315,624	2005-2006	117,875,624
G-091299	Sec. 30 T16N R55W	Sand & gravel mine	22,154,542	2001-2002	0
G-013034	Sec. 19 T15N R55W	Oil fields	88,605	2004-2005	0
G-058832	Sec. 6 T13N R55W	Oil fields, roads, wind turbines	2,203,750	2003-2004	247,842
G-117269	Sec. 5 T14N R52W	Water well drilling	655,763	2002-2003	5,461
G-059572 G-119599	Sec. 15 T13N R51W Sec. 11 T14N R51W	Oil fields	2,333,334	2005-2006	0
G-041367*	Sec. 23 T15N R56W	Sand & gravel mine	5,650,134	2005-2006	21,848,029
G-058331 G-064838	Sec. 34 T15N R55W	Golf Course	189,569,845	2001-2002	81,176,232
A-003167A	Sec. 29 T15N R55W	Oil fields	6,348,605	2013	479,200
G-059901	Sec. 3 T13N R49W	Sand & gravel mine	41,925,776	2014	452,929
G-116176	Sec. 32 T14N R49W	Ponds & landscape/ turf	55,000,000	2014	0
G-131190 G-083186	Sec. 14 T13N R45W	Livestock	26,952,200	2013-2014	13,813,900
G-123698	Sec. 4 T12N R45W	Livestock	3,940,100	2012-2013	533,300
G-077801	Sec. 29 T14N R55W	Hazardous Waste Incinerator	35,227,000	2009-2010	34,837,000
G-003169	Sec. 22 T13N R45W	Coop	884,822	2012-2013	368,317
G-002327	Sec. 2 T12N R42W	Aerial Spraying	581,102	2010-2011	577,600
G-164174 G-164175	Sec. 18 T12N R43W	Golf Course	9,437,798	2014	8,336,400
G-054015	Sec. 6 T15N R57W	Oil Fields	1,613,291	2016-2017	0
G-101853	Sec. 23 T16N R50W	Coop	968,600	2014-2015	533,500

* Well G-041367 received a variance to establish a partial baseline because pumping did not occur during all five baseline years. If the baseline amount of 5,650,134 gallons is exceeded, all offsets will be automatically deducted from certified irrigated tract #15N56W230005. See 2/5 variance request in the 2010 report.

Appendix E

SPNRD Municipal Baselines and 2023 Usage

Municipality	DNR Transfer Permit Gallons	Baseline Gallons	Baseline Per Capita Use* gallons/ person/ day	2023 Gallons	2023 Per Capita Use** gallons/ person/day
Big Springs	164,574,899	154,986,748	1,016	48,458,000	337
Bushnell	N/A	13,092,375	221	4,914,745	117
Chappell	N/A	116,968,411	326	107,945,800	350
Dalton	N/A	70,382,300	580	20,745,300	200
Dix	N/A	72,023,100	739	14,163,000	208
Gurley	N/A	46,085,050	554	23,270,339	341
Kimball	N/A	243,050,000	260	114,510,024	137
Lodgepole	N/A	53,443,494	421	28,763,000	253
Potter	N/A	135,421,817	951	78,624,932	630
Sidney	1,300,000,000	633,042,003	276	390,247,000	167

* Based on 2000 census population numbers

** Based on the 2020 census population numbers

Appendix F

SPNRD Irrigation Allocation History

Allocation Subarea	2007-2009	2009-2012	2010-2012	2013-2015	2016-2018	2019-2021	2022-2024
Pine Bluffs to Oliver Reservoir	48"/acre		42"/acre	42"/acre	42"/acre	42"/acre	42"/acre
Oliver Reservoir to Buffalo Bend	54"/acre		48"/acre	42"/acre	42"/acre	42"/acre	42"/acre
Buffalo Bend to Sidney	48"/acre		42"/acre	42"/acre	42"/acre	42"/acre	42"/acre
Sidney to Colorado	54"/acre		48"/acre	48"/acre	48"/acre	48"/acre	48"/acre
South Platte Valley		80"/acre		54"/acre	48"/acre	48"/acre	48"/acre
Tablelands		80"/acre		42"/acre	39"/acre	39"/acre	39"/acre

Appendix G

South Platte Natural Resources District Water Usage Report

Districtwide Water Usage Analysis Period: 2020-2023

	2020	2021	2022	2023
High	35.73	28.31	39.17	
Median	11.87	8.02	11.35	8.35
Total Acre-Feet Pumped	122,671.64	116,130	144,910	7,260
Total Acres-Inches Pumped	1,472,059.74	1,393,530.17	1,738,877.08	1,044,906.17
Total Acres-Inches Pumped / By Total Acres	11.4	10.8	13.6	8.19
Total Number of Inactive Certified Irrigated Acres**	3,091.1	3,014.5	3,974.8	4,177.8
Total Number of Active Certified Irrigated Acres	128,727.6	128,801.2	127,843.9	127,640.9
Total Number of Certified Irrigated Acres	131,818.7	131,818.7	131,819	131,818.7

Range of Inches Used:

Scale	2020	2021	2022	2023
0 - 4	13%	33%	28%	22%
4.01 - 8	13%	17%	10%	30%
8.01 - 12	26%	23%	15%	29%
12.01 - 16	26%	19%	23%	13%
16.01 - 20	16%	7%	18%	4%
20+	6%	2%	5%	2%

Crop Water Usage*:

Crop	2020 Avg. In.	2020 Percent of Acres	2021 Avg. In.	2021 Percent of Acres	2022 Avg. In.	2022 Percent of Acres	2023 Avg. In.	2023 Percent of Acres
Alfalfa	13.9	10%	9.3	10%	12.1	10%	9.7	6%
Corn	13.1	48%	10.5	49%	13.5	45%	10.2	51%
Dry Beans	10.8	6%	7.9	4%	10.3	5%	7.8	4%
Fallow	0	1%	0	1%	0.3	0%	0	1%
Grain Sorghum	0	0%	0	0%	7.2	1%	6.7	1%
Grass	11	3%	7.5	4%	8.7	4%	5.9	9%
Millet	8.5	8%	5.6	8%	6.5	6%	8.6	4%
Oats	0	0%	0	0%	8	1%	5.8	2%
Other	2.4	0%	2.8	1%	3.1	0%	5.1	1%
Small Grains	6	7%	5.5	7%	7.8	1%	10.9	1%
Sorghum Sudan Grass	0	0%	0	0%	7.4	3%	7	4%
Soybeans	10.8	6%	7.9	4%	10.2	5%	4.6	1%
Sugar Beets	16.1	4%	13.8	4%	23.6	4%	11	8%
Sunflowers	8.3	2%	8.7	1%	4.7	1%	10.2	1%
Wheat	6	7%	5.5	7%	6.4	11%	5.6	10%

Appendix H
SPNRD Municipal Water Conservation Plans

DRAFT

DRAFT

WATER CONSERVATION, DROUGHT AND EMERGENCY CONTINGENCY PLAN**§ 51.080 DEFINITIONS.**

For the purpose of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

CONSUMER. The customer of record using water for any purpose from the city distribution system and for which a regular charge is made.

DRAW DOWN. The distance between the static water level and the pumping level.

PLAN. The plan refers to the Water Conservation, Drought and Emergency Contingencies Plan.

PUMPING WATER LEVEL. The level of water in a well when the pump is pumping.

STATIC WATER LEVEL. The level of water in a well when the pump is not pumping.

TRIGGERS. Significant events which indicate the implementation of the different stages of the Plan.

WASTE OF WATER. Waste of water includes but not limited to permitting water to escape down a gutter, ditch, or other surface drain; failure to repair a controllable leak of water due to defective plumbing; or as determined by the water system operator with concurrence of the City Administrator.

WATER. Water available to the city by virtue of its water rights introduced by the city into its water distribution system.

WATER OPERATOR. The person who is licensed by the State Department of Health and Human Services to operate the city water system.

WATER SYSTEM CAPACITY. Determined by aggregate production of all wells in gallons per minute times 60 minutes in an hour times 24 hours per day divided by the population the system serves. This value is expressed in gallons per capita per day (gpcd). The water system operator shall determine the water system capacity on a monthly basis.

WATER SYSTEM DEMAND. Water well readings are accomplished daily by reading in person Monday through Friday (holidays not included and weather permitting), readings are also taken daily electronically. Water consumption is determined by dividing the daily consumption by the current population number and then expressed in gallons per capita per day (gpcd).
(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.081 WATER PLAN ESTABLISHED.

In order to assure the continued supply of safe drinking water to the citizens of the city, the Board of Public Works and the City Council adopts the following plan addressing conservation, drought and emergency contingencies. The plan is based upon demand on the system and implements a series of stages depending upon the severity of the demand.

(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.082 FINDINGS.

(A) The city has undertaken a number of steps to ensure a dependable water supply for our citizens. The water supply for the city is obtained from 3 wells north of the city, at this time only 1 well is used year around, and the other 2 are used as seasonal wells. When all 3 wells are pumping the water pumps directly into the distribution system when the distribution system is full, water is then pumped into the city's 1,000,000 gallon storage tank, which was built in 1955.

(B) The city water supply and distribution system has the capacity to meet current customer demands and future projected demands even in times of drought. The city believes that our Water Conservation Plan represents an additional step so our customers have a dependable water supply in the future.

(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.083 OBJECTIVES.

The primary objectives of the Water Conservation Plan for the city are to develop long-term water conservation plans and short-term water emergency plans to assure city customers of adequate water supply to meet their needs. The efficient use of water also has the beneficial effect of limiting or postponing water distribution system expansions and thus limiting or postponing the resulting cost increases, in addition to conserving the water resource of the state.

(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.084 WATER PROTECTION PROGRAMS.

The city has put several programs in place in the past several years in an effort to protect the city's drinking water both short- and long-term. One of the programs put into place by the city is a Well Head Protection Plan which was accepted by the Nebraska Department of Environmental Quality on June 8, 2011, this plan began in 1995 and is a program that delineates a Well Head Protection area that the city's well water travels from within with the city attempting to protect this delineated area. Another program that has been adopted by Ordinance 623 on May 17, 2005 is an Anti-Backflow Program that is intended

to protect the city's drinking water by surveying city water customers at least once every 5 years and then assessing surveys and requiring customers (as needed) to take the appropriate steps necessary for protection of public health and safety by installation of an anti-backflow device.
(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.085 WATER CONSERVATION PRACTICES.

This section of the plan summarizes the current education, management and regulation efforts that relate to the long-term conservation of water by the city. Specific practices will be undertaken to conserve water.

(A) *Education.* The city will supply local media with water conservation tips throughout the year and during drought periods. Also, the government television channel 13 (for Charter customers) along with the city web page (www.kimballne.org) will be used to supply customers with water conservation tips and updates on water schedules as needed (such as even/odd lawn watering system can be imposed on city water customers).

(B) *Management.*

(1) The city has meters installed at every connection to the system. Customer meters are monitored for accuracy and possible repair or replacement upon receiving a citizen request or notification from city staff of an anomaly.

(2) Meters are read once a month (weather permitting) to help assure proper accountability for the amount of water used.

(3) The city has an independent contractor perform well efficiency tests every year with repairs done as needed.

(4) The water rate structure for the city was passed on October 11, 2011. Water rates are available at the city office at 223 South Chestnut Street and are reviewed annually and adjusted as needed per the Department.

(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.086 DROUGHT/EMERGENCY CONTINGENCY; GENERALLY.

The city addresses its short-term water shortage problems through a series of stages based on conditions of supply and demand with accompanying triggers, goals and actions. Each stage is more

restrictive in water use than the previous stage as water level conditions deteriorate. The city will be authorized by ordinance to declare a water emergency once this plan and ordinance are in place and whenever the following occur.

(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.087 STAGE 1: WATER WATCH.

(A) *Triggers.* This stage is triggered by any of the following conditions:

- (1) The city storage has fallen below 70% capacity (300,000 gallons).
- (2) Ground water levels have fallen an average of 5 feet below a rolling 5-year average.
- (3) Demand for one day is in excess of 1,250,000 gallons per day.

(B) *Goals.* The goals of this stage are to heighten awareness of the public on water conditions, maintain the integrity of the water supply system and use the ordinances in place if necessary.

(C) *Management actions.*

- (1) The city will monitor and maintain its wells to assure an efficient condition exists.
- (2) System pressure will be maintained throughout the entire system.

(D) *Regulation actions.* The public will be asked to voluntarily curtail some outdoor water use if necessary.

(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.088 STAGE 2: WATER WARNING.

(A) *Triggers.* This stage is triggered by any of the following conditions:

- (1) The city storage has fallen below 50% capacity (500,000 gallons).
- (2) Ground water levels have fallen an average of 10 feet from a rolling 5-year average.
- (3) Demand for one day is in excess of 1,250,000 gallons.

(B) *Goals.* The goals of this stage are to reduce peak demands and to reduce overall weekly consumption.

(C) *Education actions.* The city will release to the local media, also channel 13 (government channel for Charter customers) and the city web page (www.kimballne.org) present conditions and what actions to take, if applicable. Water conservation articles will be released to local media.

(D) *Management actions.*

- (1) The city water supplies will be monitored weekly.
- (2) Pumping at affected wells will be reduced to decrease draw-down and maintain current levels.
- (3) The city will curtail its own use of water including sprinklers, hose reels, hydrant flushing, and the like.

(E) *Regulation actions.*

- (1) An odd/even outside watering system can be imposed on all city residents.
 - (2) Residents will be asked to voluntarily curb daytime watering during windy days to avoid evaporation.
 - (3) Waste of water will be prohibited.
- (Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.089 STAGE 3: WATER EMERGENCY.

(A) *Triggers.* This stage is triggered by any one of the following conditions:

- (1) The city storage has fallen below 50% capacity (500,000 gallons).
- (2) Groundwater levels have fallen an average of 15 feet from a rolling 5-year average.
- (3) Demand for one day is in excess of 1,500,000 gallons.

(B) *Goals.* The goals of this stage are to reduce peak demands by 75% and to reduce overall weekly consumption by 50%.

(C) *Education actions.*

- (1) The city will make press releases to the local media, the government TV channel (channel 13 for Charter customers) and the city web page (www.kimballne.org) describing present conditions and what action is being taken.

- (2) Water conservation tips provided to local media.

(D) *Management actions.*

- (1) The city water supplies will be monitored daily.
- (2) System pressure will be maintained throughout the system.
- (3) Pumping will be reduced at the affected wells to maintain current levels.
- (4) The city will seek help from the state and federal governments if needed.

(E) *Regulation actions.*

(1) Outdoor watering (including no car washing) will be 1 day per week between set hours, or no watering at all.

- (2) Waste of water prohibited.

(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.090 LONG-TERM WATER USE EFFICIENCY.

(A) The city used approximately 216 gallons per person per day in 2010. This figure included:

- (1) Water sold to residential customers.
- (2) Water distributed for governmental use (parks, swimming pool, street sweeper, sewer jet, water truck, and the like).
- (3) Water lost by leaks in the distribution system.
- (4) Water sold to commercial and industrial customers.

(B) The city desires to set a water use conservation goal not to exceed 300 gallons per person per day based on projecting current usage. The city anticipates not exceeding this goal by implementing the specific actions outlined in this plan.

(Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

§ 51.091 PLAN REVISION, MONITORING AND EVALUATION.

(A) The city will establish a monthly management practice of reviewing monthly totals for production, residential/commercial sales, and unaccounted for water (AWWA standard for average water loss of 10%- 15%). Problems noted during the monthly review will be solved as soon as possible.

(B) The Water Conservation Plan will be reviewed during the month of April each year and on a more frequent basis during drought or other water shortage problems. If water conservation goals for the previous year are not met, the city will review the data collected from the previous year in relationship to the status and effectiveness of the conservation practices that are outlined in our plan and will provide status reports which will also include any additional water conservation practices that may need to be taken in order for the city to achieve and maintain its water use conservation goals. (Ord. 680, passed 3-21-2012; Am. Ord. 706, passed 2-18-2014)

ADMINISTRATION AND ENFORCEMENT**§ 51.900 FEES; COLLECTION.**

(A) The Board of Public Works has the power and authority to fix the rates to be paid by the water consumers for the use of water from the Water Department. All such fees shall be on file for public inspection at the office of the City Clerk.

(B) The City Clerk shall bill the consumers and collect all money received by the city on the account of the Water Department.

(Neb. RS 17-540) (1992 Code, § 3-210) (Am. Ord. 706, passed 2-18-2014)

§ 51.901 MINIMUM RATES.

All water consumers shall be liable for the minimum rate provided by ordinance unless and until the consumer shall, by written order, direct the Water and Wastewater Superintendent to shut off the water at the stop box, in which case he or she shall not be liable thereafter for water rental until the water is turned on again.

(Neb. RS 17-542) (1992 Code, § 3-211) (Am. Ord. 706, passed 2-18-2014)

DRAFT

INTRODUCTION

The City of Sidney has undertaken a number of steps to ensure a dependable water supply for our citizens. The water supply for the City of Sidney is obtained from four wells in Lodge pole Valley, three wells in the northeast well field and four wells in the northwest well field. These wells pump into the City's 1.5 million gallon tank and are blended together to create nitrate levels below 10ppm. Two additional wells, #4 and #8, pump directly into the system as these wells have nitrate levels below 10ppm. The city also has Well #7, which is an emergency well only, due to a nitrate level above 10ppm.

The city water supply and distribution system has the capacity to meet current customer demands and future projected demands even in times of drought. The City of Sidney believes that our Municipal Water Conservation Plan represents an additional step in ensuring that our customers have a dependable water supply in the future.

MUNICIPAL WATER CONSERVATION PLAN

The primary objectives of the Water Conservation Plan for the City of Sidney are to develop long term water conservation plans and short-term water emergency plans to assure City customers of adequate water supply to meet their needs. The efficient use of water also has the beneficial effect of limiting or postponing water distribution system expansions and thus limiting or postponing the resulting cost increases, in addition to conserving the water resource of the State of Nebraska.

The City of Sidney believes that its adoption of an escalating rate schedule has been the best conservation practice as the City's annual pumping has dropped after the establishment of this rate schedule for users.

LONG-TERM WATER USE EFFICIENCY

The City of Sidney has a population of 6757. The City pumped 572,135,000 gallons in 2014. Our average usage was 231 gallons per person per day in 2014.

This figure included:

- a) water sold to residential customers
- b) water that is distributed for governmental use (parks, swimming pool, etc.)
- c) water lost by leaks in the distribution system
- d) water sold to commercial and industrial customers (including Sioux Meadows Park)

This figure did not include the well # 6 (golf course), cemetery or well # 5 (power plant)

Well #6 pumped 69,015,000 gallons in 2014

Cemetery pumped 11,850,000 in 2014

Well #5 247,000 in 2014

The City of Sidney's total pumping for 2014 653,247,000 gallons

The City desires to set a water use conservation goal for usage not to exceed 400 gallons per person per day based on projecting current usage. The City anticipates not exceeding this goal by implementing the specific actions outlined in this plan.

WATER CONSERVATION PRACTICES

This section of the plan summarizes the current education, management and regulation efforts that relate to the long-term conservation of water by the City of Sidney. Specific practices will be undertaken to conserve water.

EDUCATION

The city will supply local media with water conservation tips throughout the year and during drought periods. The City will also supply information about well depths and other action needed such as daily water schedules during drought periods.

The City of Sidney is a Groundwater Guardian Community and has participated in this program for the past 12 years. The City will continue to participate in this program.

MANAGEMENT

The City has meters installed at every connection to the system. Customer meters are monitored for accuracy and possible repair or replacement upon receiving a citizen request or notification from City staff of an anomaly.

Meters are read once a month to help assure proper accountability for the amount of water used.

The City monitors well levels monthly. During times of drought or other times of concern the city may monitor well levels more frequently.

The City has an independent contractor perform well efficiency tests every year. The City also has an independent contractor perform leak audits in different sections of the distribution system every year.

Effective October 1, 2011, the following water service rates shall be applicable to all customers, either within or outside of the corporate limits of the City, connected to the municipal water system on a monthly billing basis;

CAPACITY CHARGE PER MONTH

Size of Meter or Connection:	Charge
Up to ¾"	\$12.00
1-inch	\$13.50
1-1/2-inch	\$16.45

2-inch	\$27.35
3-inch	\$42.05
4-inch	\$57.00
6-inch	\$111.00
8-inch	\$232.00

For customers with more than one additional capacity connection, a separate charge will be made for each connection as per the forgoing additional capacity charge schedule.

WATER USAGE RATES

Monthly Water Usage	Charge/1000 Gallons
First 30,000 Gallons	\$1.30
Next 30,000 Gallons (30,000 to 60,000)	\$1.50
Next 30,000 Gallons (60,000 to 90,000)	\$2.00
Next 50,000 Gallons (90,000 to 140,000)	\$2.25
Next 50,000 Gallons (140,000 to 190,000)	\$2.50
Next 50,000 Gallons (190,000 to 240,000)	\$2.75
Any amount above 240,000 Gallons	\$3.00

The City believes this rate schedule greatly aids in the conservation of water.

DROUGHT/EMERGENCY CONTINGENCY

The City of Sidney addresses its short-term water shortage problems through a series of stages based on conditions of supply and demand with accompanying triggers, goals and actions. Each stage is more restrictive in water use than the previous stage as water level conditions deteriorate. The City is authorized by ordinance to declare a water emergency whenever the following occur.

STAGE 1: WATER WATCH

Triggers

This stage is triggered by any one of the following conditions:

- 1) The City storage has fallen below 70% capacity (2,082,500 gallons)
- 2) Ground water levels have fallen an average of 5-feet below normal seasonal levels.
- 3) Demand for one day is in excess of 4 million gallons per day.

Goals

The goals of this stage are to heighten awareness of the public on water conditions, maintain the integrity of the water supply system and use the ordinances in place if necessary.

Management Actions

- 1) The City will monitor and maintain its wells to assure an efficient condition exists.
- 2) Leaks will be repaired within 24 hours of detection

- 3) System pressure will be maintained throughout the entire system.

Regulation Actions

The City will stop all unnecessary use of water. The public will be asked to voluntarily curtail some outdoor water use if necessary.

STAGE 2: WATER WARNING

Triggers

This stage is triggered by any one of the following conditions:

- 1) The City storage has fallen below 50% (1.5 million gallons)
- 2) Groundwater levels have fallen an average of ten feet below normal seasonal levels.
- 3) Demand for one day is in excess of 5 million gallons.

Goals

The goals of this stage are to reduce peak demands and to reduce overall weekly consumption.

Education Actions

- 1) The City will release to the local media present conditions and if applicable what actions to take.
- 2) Water conservation articles will be released to local media.

Management Actions

- 1) The City water supplies will be monitored weekly.
- 2) Leaks will be repaired within 24 hours of detection.
- 3) Pumping at affected wells will be reduced to decrease draw-down and maintain current levels.
- 4) The City will curtail its own use of water including sprinklers, hydrant flushing, etc.

Regulation Actions

- 1) An odd/even lawn watering system can be imposed on City residents.
- 2) Residents will be asked to voluntarily curb daytime watering during windy days to avoid evaporation.
- 3) Waste of water will be prohibited.

STAGE 3: WATER EMERGENCY

Triggers

This stage is triggered by any one of the following conditions:

- 1) The City storage has fallen below 40% capacity (1.1 million gallons)
- 2) Groundwater levels have fallen an average of 15-feet from seasonal averages.
- 3) Pumping lowers water levels to within 10-feet of the pump on two or more wells.
- 4) Demand for one day is in excess of 6.5 million gallons.

Goals

The goals of this stage are to reduce peak demands by 75% and to reduce overall weekly consumption by 50%.

Education Actions:

- 1) The City will make press releases to the local media describing present conditions and what action is being taken.
- 2) Water conservation tips provided to local media.

Management Actions

- 1) The City water supplies will be monitored daily.
- 2) Leaks will be repaired within 24 hours of detection.
- 3) System pressure will be maintained throughout the system.
- 4) Pumping will be reduced at affected wells to maintain current levels.
- 5) The City will seek additional emergency supplies from other users, the state and federal governments if needed.

Regulation Actions

- 1) Outdoor watering will be 1 day per week between set hours, or no watering at all.
- 2) Waste of water prohibited.

PLAN REVISION, MONITORING & EVALUATION

The City of Sidney will establish a monthly management practice of reviewing monthly totals for production, residential/commercial sales, and “unaccounted for water” (AWWA standard for average water loss of 10%-15%). Problems noted during the monthly review will be solved as soon as possible.

The Municipal Water conservation Plan will be reviewed during the month of April each year and on a more frequent basis during drought or other water shortage problems. If water conservation GPCD goals for the previous year are not met, then the City will review the data collected from the previous year in relationship to the status and effectiveness of the conservation practices that are outlined in our plan and will provide status reports which will also include any additional water conservation practices that may need to be taken in order for the City to achieve and maintain its water use conservation GPCD goals.

DRAFT

ORDINANCE NO. 497

WATER DROUGHT/EMERGENCY ORDINANCE

An ordinance authorizing the adoption of a drought emergency contingency plan to establish declaration of a water watch, warning, or emergency; establishing procedures and voluntary and mandatory water conservation measures; authorizing the issuance of administrative regulations; and prescribing certain penalties; and to repeal prior and conflicting provisions.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF CHAPPELL, NEBRASKA

Section 1. Purpose. The purpose of this ordinance is to provide for the declaration of a water supply watch, warning, or emergency, and the implementation of voluntary and mandatory water conservation measures throughout the city in the event such a watch, warning, or emergency is declared.

Section 2. General Definitions:

- a) "Water" as the term is used in this ordinance shall mean water available to the City of Chappell for treatment by virtue of its water rights or any treated water introduced by the City into its water distribution system, including water offered for sale at any coin-operated site.
- b) "Customer" as the term is used in this ordinance shall mean the customer of record using water for any purpose from the City's water distribution system and for which either a regular charge is made or, in the case of coin sales, a cash charge is made at the site of delivery.
- c) "Waste of water," as the term is used in this ordinance, includes, but is not limited to: (1) permitting water to escape down a gutter, ditch, or other surface drain; or (2) failure to repair a controllable leak of water due to defective plumbing.
- d) The "Classes" of uses of water are defined as follows:

Class 1:

Water used for outdoor watering; either public or private, for gardens, lawns, trees, shrubs, plants, parks, golf courses, playing fields, swimming pools or other recreational areas; or the washing of motor vehicles, boats, trailers, or the exterior of any building or structure.

Class 2:

Water used for any commercial or industrial, including agricultural, purposes; except water actually necessary to maintain the health and personal hygiene of bona fide employees while such employees are engaged in the performance of their duties at their place of employment.

Class 3:

Water used for domestic purposes, other than those uses which would be included in either Class 1 or 2.

Class 4:

Water necessary only to sustain human life and the lives of domestic pets and maintain standards of hygiene and sanitation.

Section 2. Definitions of Water Stages:

STAGE ONE: WATER WATCH

Whenever the governing body of the City finds that conditions indicate that the probability of a drought or some other condition causing a major water supply shortage is rising, it shall be empowered to declare, by resolution, that a water watch exists and that it shall take steps to inform the public and ask for voluntary reductions in water use. Such a watch shall be deemed to continue until it is declared by resolution of the governing body to have ended. The resolutions declaring the existence and end of a water watch shall be effective upon their publication in the official city newspaper.

This stage is triggered by any one of the following conditions:

1. Ground water levels have fallen five (5) feet below normal seasonal levels.
2. System pressure falls below thirty-five (35) pounds per square inch.
3. Demand for one day is in excess of seven hundred fifty thousand (750,000) gallons per day.

GOALS: The goals of this stage are to heighten awareness of the public of the water conditions and to maintain the integrity of the system.

EDUCATION ACTIONS:

1. The City will make news releases to local media describing current conditions and indicate the water supply outlook for the City.

MANAGEMENT ACTIONS:

1. Leaks will be repaired within forty-eight (48) hours of detection.
2. The City will monitor its use of water and will curtail activities such as hydrant flushing and street cleaning.
3. The City will inform the public of the voluntary conservation measures.

STAGE TWO: WATER WARNING

Whenever the governing body of the City finds that drought conditions or some other condition causing a major water supply shortage are present and supplies are starting to decline, it shall be empowered to declare by resolution that a water warning exists and that it will recommend restrictions on nonessential uses during the period of warning. Such a warning shall be deemed to continue until it is declared by resolution of the governing body to have ended. The resolutions declaring the beginning and ending of the water warning shall be effective upon their publication in the official City newspaper.

This stage is triggered by any one of the following conditions:

1. Ground water levels have fallen ten (10) feet below normal seasonal levels.
2. System pressure falls below thirty-five (35) pounds per square inch.

3. Plant operations are at eighty percent (80%) capacity for more than three (3) consecutive days.
4. Demand for one day is in excess of 1,000,000 gallons per day.

GOALS: The goals of this stage are to reduce peak demands by twenty percent (20%) and to reduce overall weekly consumption by ten percent (10%).

EDUCATION ACTIONS:

2. The City will make news releases to local media describing current conditions and indicate the water supply outlook for the City.
3. The City will hold public meeting(s) to discuss the emergency, the status of the water supply and further actions which need to be taken.

MANAGEMENT ACTIONS:

1. Water supply will be monitored daily.
2. Leaks will be repaired within twenty-four (24) hours of detection.
3. Pumpage at wells will be reduced to decrease drawdown and to maintain water levels over well screens.
4. The City will curtail its water usage, including watering the City grounds and washing of vehicles.
5. The City will inform the public of the voluntary conservation measures.

REGULATION ACTIONS: In addition to the regulation actions under STAGE ONE, the following regulatory authority may be exercised by the Mayor or City Administrator, following approval of the governing body of the City of Chappell, Nebraska:

1. An alternating lawn watering system will be imposed on City residents. Residents with odd-numbered home addresses will water on odd days, even-numbered houses, on even days.
2. Outdoor water use, including lawn watering and car washing will be restricted to before 10:00 AM and after 9:00 PM.
3. Refilling of swimming pools will be limited to one day a week after sunset.
4. Excess water use charges for usage of water over the amount used in the winter will be imposed at a rate twice the normal rate for water usage.
5. Waste of water will be prohibited.

STAGE THREE: WATER EMERGENCY

Whenever the governing body of the City finds that an emergency exists by reason of a shortage of water supply needed for essential uses, it shall be empowered to declare by resolution that a water supply emergency exists and that it will impose mandatory restrictions on water use during the period of the emergency. Such an emergency shall be deemed to continue until it is declared by resolution of the governing body to have ended. The resolutions declaring the existence and end of a water supply emergency shall be effective upon their publication in the official City newspaper.

This stage is triggered by any one of the following conditions:

1. Ground water levels have fallen fifteen (15) feet below normal seasonal levels.
2. System pressure falls below thirty-five (35) pounds per square inch.

3. Pumping lowers water levels to within five (5) feet of the top of the well screens.
4. Plant operations are at ninety percent (90%) capacity for more than three (3) consecutive days.
5. Demand for one day is in excess of 1,200,000 gallons per day.

GOALS: The goals of this stage are to reduce peak demands by fifty percent (50%) and to reduce overall consumption by twenty-five percent (25%).

EDUCATION ACTIONS:

1. The City will make news releases to local media describing current conditions and indicate the water supply outlook for the City.
2. The City will hold public meeting(s) to discuss the emergency, the status of the water supply and further actions which need to be taken.

MANAGEMENT ACTIONS:

1. The City water supplies will be monitored daily.
2. Leaks will be repaired within twenty-four (24) hours of detection.
3. Standby wells will be activated for contingency operation.
4. Pumpage at wells will be reduced to decrease drawdown and to maintain water levels over well screens.
5. The City will seek additional emergency supplies from other users, the state and federal government.

REGULATION ACTIONS: In addition to the regulation actions available under STAGE TWO, the following regulatory authority may be exercised by the Chairman of the Board;

1. Outdoor water use will be banned, except for businesses which require outdoor water use to operate.
2. Waste of water will be prohibited.

Section 4. Voluntary Conservation Measures. Upon the declaration of a water watch or water warning as provided in STAGE ONE and STAGE TWO, the Mayor or the City Administrator is authorized to call on all water consumers to employ voluntary water conservation measures to limit or eliminate nonessential water uses including, but not limited to, limitations on the following uses:

- a) Sprinkling of water on lawns, shrubs or trees (including golf courses).
- b) Washing of automobiles, trucks, and recreations vehicles.
- c) Use of water in swimming pools, fountains and evaporative air conditioning systems.
- d) Waste of water.

Section 5. Mandatory Conservation Measures. Upon the declaration of a water supply emergency as provided in STAGE THREE, the Mayor or the City Administrator is authorized to implement certain mandatory water conservation measures, including, but not limited to, the following:

- a) Suspension of new connections to the City's water distribution system, except connections of fire hydrants and those made pursuant to agreements entered into by the City prior to the effective date of the declaration of the emergency;
- b) Restrictions on the uses of water in one or more classes of water use, wholly or in part;
- c) Restrictions on the sales of water at coin-operated facilities or sites;
- d) The imposition of water rationing based on any reasonable formula including, but not limited to, the percentage of normal use and per capita or per consumer restrictions;
- e) Complete or partial bans on the waste of water; and
- f) Any combination of the foregoing measures.

Section 6. Emergency Water Rates. Upon the declaration of a water supply emergency as provided in STAGE THREE, the governing body of the City shall have the power to adopt emergency water rates by ordinance designed to conserve water supplies. Such emergency rates may provide for, but are not limited to:

- a) Higher charges for increasing usage per unit of use (increasing block rates);
- b) Uniform charges for water usage per unit of use (uniform unit rate); or
- c) Extra charges in excess of a specified level of water use (excess demand surcharge).

Section 7. Regulations. During the effective period of any water supply emergency as provided for in STAGE THREE, the Mayor, City Administrator, or Water Superintendent is empowered to promulgate such regulations as may be necessary to carry out the provisions of this ordinance, any water supply emergency resolution, or emergency water rate ordinance. Such regulations shall be subject to the approval of the governing body at its next regular or special meeting.

Section 8. Violations, Disconnections, and Penalties. If the Mayor, City Administrator, Water Superintendent, or other city official or officials charged with implementation and enforcement of this ordinance or a water supply emergency resolution learn of any violation of any water use restrictions imposed pursuant to Sections 5 or 7 of this ordinance, a written notice of the violation shall be affixed to the property where the violation occurred and the customer of record any other person known to the City who is responsible for the violation or its correction shall be provided with either actual or mailed notice. Said notice shall describe the violation and order that it be corrected, cured, or abated immediately or within such specified time as the City determines is reasonable under the circumstances. If the order is not complied with, the City may terminate water service to the customer subject to the following procedures:

- a) The City shall give the customer notice by mail or actual notice that water service will be discontinued within a specified time due to the violation and that the customer will have the opportunity to appeal the termination by requesting a hearing scheduled before the City governing body or a city official designated as a hearing officer by the governing body;

- b) If such a hearing is requested by the customer charged with the violation, he or she shall be given a full opportunity to be heard before termination is ordered; and
 - c) The governing body or hearing officer shall make findings of fact and order whether service should continue or be terminated.
1. A fee of FIFTY DOLLARS (\$50.00) shall be paid for the reconnection of any water service terminated pursuant to Section 8. In the event of subsequent violations, the reconnection fee shall be TWO HUNDRED DOLLARS (\$200.00) for the second reconnection and THREE HUNDRED DOLLARS (\$300.00) for any additional reconnections.
 2. Violations of this ordinance shall be a municipal offense and may be prosecuted in County Court. Any person so charged and found guilty in County Court of violating the provisions of this ordinance shall be guilty of a municipal offense. Each day's violation shall constitute a separate offense. The penalty for an initial violation shall be a mandatory fine of ONE HUNDRED DOLLARS (\$100.00). In addition, such customer may be required by the Court to serve a definite term of confinement in the county jail which shall be fixed by the Court and which shall not exceed thirty (30) days. The penalty for a second or subsequent conviction shall be a mandatory fine of TWO HUNDRED DOLLARS (\$200.00). In addition, such customer shall serve a definite term of confinement in the county jail which shall be fixed by the Court and which shall not exceed thirty (30) days.

Section 9. Emergency Termination. Nothing in this ordinance shall limit the ability of any properly authorized city official from terminating the supply of water to any or all customers upon the determination of such city official that emergency termination of water service is required to protect the health and safety of the public.

Section 10. Severability. If any provision of this ordinance is declared unconstitutional, or the application thereof to any person or circumstance is held invalid, the constitutionality of the remainder of the ordinance and its applicability to other persons and circumstances shall not be affected thereby.

Section 11. This ordinance shall become effective upon its publication in the official City newspaper.

Passed by the governing body this 19th day of June, 2006.

Larry W. Rahe, Mayor

Heidi Jobman, CMC
City Administrator/Clerk

DRAFT

§ 52.37 CLASSES OF USES OF WATER ESTABLISHED.

The following classes of water use are hereby established for users of water on the village water system:

(A) *Class 1.* Water used for outdoor watering; either public or private, for gardens, lawns, trees, shrubs, plants, parks, golf courses, playing fields, swimming pools or other recreational areas; or the washing of motor vehicles, boats, trailers or the exterior of any building or structure;

(B) *Class 2.* Water used for any commercial or industrial, including agricultural, purpose: except water actually necessary to maintain the health and personal hygiene of bona fide employees while the employees are engaged in the performance of their duties at their place of employment;

(C) *Class 3.* Domestic usage, other than that which would be included in either Classes 1 or 2; and

(D) *Class 4.* Water necessary only to sustain human life and the lives of domestic pets and maintain standards of hygiene and sanitation.
(1976 Code, § 3-126) (Ord. 347, passed 8-5-2002)

§ 52.38 WATER CONSERVATION.

(A) *Definitions.* For the purpose of §§ 52.36 through 52.38, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

CONSUMER. The customer of record using water for any purpose from the village distribution system and for which a regular charge is made.

DRAW DOWN. The distance between the static water level and the pumping water level.

PLAN. The Water Conservation, Drought and Emergency Contingencies Plan adopted by the village.

PUMPING WATER LEVEL. The level of water in a well when the pump is pumping.

STATIC WATER LEVEL. The level of water in a well when the pump is not pumping.

TRIGGERS. Significant events which indicate the implementation of the different stages of this plan.

WASTE OF WATER. Includes but is not limited to:

- (a) Permitting water to escape down a gutter, ditch or other surface drain;

- (b) Failure to repair a controllable leak of water due to defective plumbing; or
- (c) As determined by the Utilities Superintendent.

WATER. Water available to the village by virtue of its water rights introduced by the village into its water distribution system.

WATER SYSTEM CAPACITY. For the purposes of this plan, water system capacity is determined by aggregate production of all wells in gallons per minute times 60 minutes in an hour times 24 hours per day divided by the population the system serves. This value is expressed in gallons per capita per day (gpcd). The Utilities Superintendent shall determine the **WATER SYSTEM CAPACITY** on a weekly (or daily) basis from the months of May through October.

WATER SYSTEM DEMAND. Master water meters on each well must be read daily. Daily consumption is calculated by subtracting the previous day reading from the current day and added together for each well. **WATER SYSTEM DEMAND** is determined by dividing the daily consumption by the same population number used in determining the water system capacity. This value is expressed in gallons per capita per day (gpcd). (1976 Code, § 3-127)

(B) *Water plan established.* In order to assure the continued supply of safe drinking water to the citizens of the village, the Board of Trustees adopts the following plan addressing conservation, drought and emergency contingencies. The plan is based upon demand on the system and implements a series of stages depending upon the severity of the demand. (1976 Code, § 3-128)

(C) *Water conservation; exit strategy.* It shall be the responsibility of the Board of Trustees to monitor changing conditions and notify consumers of the end of each stage by posting in three prominent places throughout the community.

(1) *Stage 1: Water Watch.*

(a) *Triggers.* This stage is triggered by any one of the following conditions:

1. When the calculated water system demand equals 50% of the calculated water system capacity; and/or
2. When the draw down of the wells is more than normal for that time of year as determined by the Utilities Superintendent.

(b) *Goals.* The goals of this stage are to heighten awareness of the public on water conditions and to maintain the integrity of the water supply system.

(c) *Education actions.*

1. The village will make occasional news releases to the local media, as well as posting in prominent locations, describing present conditions and indicating the regulatory

action.

2. The triggers necessitating the Stage 1: Water Watch will also be made available to the public along with an explanation of terms.

(d) *Management action.*

1. The village will ascertain that each well is operating at peak efficiency.
2. Leaks detected will be repaired within 48 hours.
3. The village and the Potter Dix Public School will curtail its use of Class 1 uses.

(e) *Regulatory action.* The public will be asked to voluntarily curtail the use of water as defined in Class 1 and go to an odd/even watering schedule. Residents with odd numbered addresses will water on odd days, even addresses will water on even days.

(f) *Declaration of Water Watch.* Whenever the governing body of the village finds that conditions exist as described in the plan under Stage 1: Water Watch, Triggers, it shall be empowered to declare, by resolution, that a Stage 1: Water Watch exists and implement the steps outlined under this section. The resolution declaring the existence and end of a Stage 1: Water Watch shall be effective upon posting in three prominent places throughout the community.

(2) *Stage 2: Water Warning.*

(a) *Triggers.* This stage is triggered by any one of the following conditions:

1. When the calculated water system demand equals 70% of the calculated water system capacity; and/or
2. When the draw down of the wells increase significantly over and above the level determined in Stage 1, as determined by the Utilities Superintendent.

(b) *Goals.* The goal of this stage is to reduce overall weekly consumption by 15%.

(c) *Education actions.*

1. The village will make weekly news releases to the local media and by posting, describing present conditions and projecting the outlook for the coming week.
2. The triggers necessitating the Stage 2: Water Warning will also be made available to the public along with an explanation of terms.
3. Water conservation articles will be provided to the local newspaper and

posted.

(d) *Management actions.*

1. The village will continue to monitor water supplies on a daily basis.
2. Leaks will be repaired within 24 hours.
3. The village and the Potter-Dix Public School will terminate its usage of water classified in Class 1 and Class 2.

(e) *Regulation action.*

1. Water classified as Class 1 and Class 2 will be terminated except as follows:
 - a. An odd/even lawn watering system will be imposed on village residents. Residents with odd numbered addresses will water on odd days, even addresses will water on even days;
 - b. Outdoor water use, including lawn watering and car washing will be restricted to before 10:00 a.m. and after 6:00 p.m.; and
 - c. Refilling of swimming pools will be allowed on Saturday each week only after sunset.
2. Waste of water is strictly prohibited.

(f) *Declaration of a Water Warning.*

1. Whenever the governing body of the village finds that conditions exist as described in the plan under Stage 2: Water Warning, Triggers, it shall be empowered to declare, by resolution, that a Stage 2: Water Warning exists and implement the steps outlined under this section.
2. The resolution declaring the existence and end of a Stage 2: Water Warning shall be effective upon posting in three prominent places throughout the community.

(3) *Stage 3. Water Emergency.*

(a) *Triggers.* This stage is triggered by any of the following conditions:

1. When the calculated water system demand equals 85% of the calculated water system capacity; and/or
2. When the draw of the wells increases significantly over and above the level determined in Stage 2 as determined by the Utilities Superintendent.

(b) *Goals.* The goals of this stage are to reduce the overall weekly consumption by 25% and maintain the integrity of the system.

(c) *Education actions.*

1. The village will make weekly news releases to the local media and by posting, describing present conditions and projecting the outlook for the coming week.

2. The triggers necessitating the Stage 3: Water Emergency will also be made available to the public along with an explanation of terms.

3. Water conservation articles will be provided to the local newspaper and posted.

4. The village will conduct public meetings to discuss the emergency, the status of the village water supply and further actions which may need to be taken.

(d) *Management actions.*

1. The village water supplies will be monitored daily.

2. Leaks will be repaired within 24 hours.

3. The village will seek additional emergency supplies from other users, the state or federal government.

4. The village engineer will be consulted for possible alternatives.

5. The village will notify the Region 21 Emergency Management Agency and advise them of the status of the system.

(e) *Regulation actions.*

1. Uses of water in Class 1, 2 and 3 is prohibited.

2. Waste of water will be prohibited.

(f) *Declaration of a Water Emergency.* Whenever the governing body of the village finds that conditions exist as described in this plan under Stage 3: Water Emergency, Triggers, it shall be empowered to declare, by resolution, that a Stage 3: Water Emergency exists and implement the steps outlined under this plan. The resolution declaring the existence and end of a Stage 3: Water Emergency shall be effective upon posting in three prominent places throughout the community. In the event of a system failure, the Board Chair or the Utilities Superintendent shall have the authority to declare a Stage 3: Water Emergency. (1976 Code, § 3-129)

(D) *Administrative enforcement provisions.*

(1) *Warning.* The Chairperson of the Board of Trustees, the Utilities Superintendent or his or her agent can issue a written warning to any consumer violating Stage 2: Water Warning and Stage 3: Water Emergency. The warning shall advise the consumer that a second violation at the same premises within a six-month period shall result in the issuance of an administrative notice of violation for which a penalty of doubling of the water rate to the premises shall be imposed for six months. The Village Clerk shall weekly post the names of the consumers issued a written warning during the previous week. The names of the consumers given a warning shall be posted in the same locations as the declaration.

(2) *Administrative notice of violation.* The Chairperson of the Board of Trustees or the Utilities Superintendent or his or her agent shall issue a written administrative notice of violation to any consumer violating Stage 2: Water Warning and Stage 3: Water Emergency for a second time. The notice shall advise the consumer that his or her water rate to the premises shall be double for the next six months and that a subsequent violation at the same premises within a six-month period shall result in the immediate termination of all water service to the premises. The consumer shall further be notified that they have a right to appeal the issuance of the administrative notice of violation by filing a notice of appeal with the Village Clerk within ten days of the issuance of the notice. The appeal shall be heard at the next regular or special meeting of the Board of Trustees. The action shall be final if no appeal is filed within the ten-day period.

(3) *Notice of termination of service.* The Chairperson of the Board of Trustees or the Utilities Superintendent or his or her agent shall issue a written notice of termination of service to any consumer violating Stage 2: Water Warning and Stage 3: Water Emergency for a third time. The notice shall advise the consumer that all water service to the premises in violation shall be discontinued, beginning not less than 48 hours after the notice and not more than 72 hours after the notice, unless a further violation is found to have occurred at which time termination shall be immediate for the protection of the municipal water system. If service is terminated, then service may be reconnected only upon the filing of a new water application with the Clerk and the payment of the reconnection fee. Additionally, the applicant must file a written statement advising that they are aware that a water warning or water emergency is in effect and that a subsequent violation of its provisions will result in the termination of water service for a period of not less than 30 days unless the termination would pose a health hazard to the occupants of the premises as determined by the Board of Trustees. The Utilities Superintendent or his or her agent shall cause the termination of water service of the violating consumer as provided above or directed by the Board of Trustees.

(1976 Code, § 3-130)

(E) *Emergency termination.* Nothing in §§ 52.36 through 52.38 shall limit the ability of the Board Chair or Utilities Superintendent from terminating the supply of water to any or all customers upon the determination of the officials that emergency termination of water service is required to protect the health and safety of the public.

(1976 Code, § 3-131) (Ord. 347, passed 8-5-2002)

DRAFT

VILLAGE OF DALTON, NEBRASKA
ORDINANCE NO. 2002-1

AN ORDINANCE ESTABLISHING A WATER CONSERVATION, DROUGHT AND EMERGENCY CONTINGENCY PLAN.

BE IT ORDAINED BY THE CHAIRMAN AND THE BOARD OF TRUSTEES OF THE VILLAGE OF DALTON, NEBRASKA THAT THE MUNICIPAL CODE OF THE VILLAGE BE AMENDED TO READ AS FOLLOWS:

The primary objectives of the Water Conservation Plan for the Village of Dalton are to develop long-term water conservation plans (Long-Term Water Use Efficiency Section) and short-term water emergency plans (Drought/Emergency Contingency Section) to assure the Village customers of an adequate water supply to meet their needs. The efficient use of water has the beneficial effect of conserving the water resources of the State of Nebraska.

LONG-TERM WATER USE EFFICIENCY

The Village of Dalton desires to set a water use conservation goal for usage, by carrying out the specific actions that are outlined in our plan.

WATER CONSERVATION PRACTICES

This subsection of the plan summarizes the current education, management and regulation efforts that relate to the long-term conservation of water in the Village of Dalton. Specific practices that will be undertaken to conserve water are listed.

Water leaks from the Village public water distribution systems are repaired when customers report significant leaks from the water mains. Water pressure is not checked unless customers complain that their water pressure is too low.

The water rate structure for the Village was passed in 1996. Water and sewer charges are set by the Village Council.

DROUGHT/EMERGENCY CONTINGENCY

The Village of Dalton addresses its short-term water shortage problems through a series of stages based on conditions of supply and demand with accompanying triggers, goals and actions. Each stage is more stringent in water use than the previous stage since water supply conditions are more deteriorated. The Village of Dalton is authorized by ordinance to implement the appropriate conservation measures.

✓ STAGE 1: WATER WATCH

Trigger: This stage is triggered by the following condition: The Village water table has fallen below 85 percent of original levels.

Goal: The goal of the stage is to heighten awareness of the public on water conditions and to maintain the integrity of the water supply system.

Education Actions: The Village may make occasional news releases to the local media or post in three locations within the Village, information describing present conditions and indicating the water supply outlook for the upcoming season.

Management Actions:

1. The Village wells will be cleaned and flushed to maintain them at their most efficient condition.
- ✓ 2. Leaks will be repaired within 48 hours of detection.
3. System pressure will be maintained at approximately 40 pounds.
- ✓ 4. The Village will monitor its use of water and will curtail activities such as hydrant flushing and street cleaning.

Regulation Actions:

The public will be asked to curtail some outdoor water use and to make efficient use of indoor water, i.e. wash full loads, take short showers, don't let faucets run, etc.

✓ STAGE 2: WATER WARNING

Trigger: This stage is triggered by the following condition: The Village water table has fallen below 70 percent of original levels.

Goal: The goals of this stage are to reduce peak demands by 20% and to reduce overall weekly consumption by 10%.

Education Action:

The Village will make weekly news releases to the local media or post in three locations within the Village, information describing present conditions and indicating the water supply outlook for the upcoming week.

Management Actions:

1. The Village water supplies will be monitored daily.
2. Leaks will be repaired within 24 hours of detection.
3. The Village will curtail its water usage, including operation of fountains, watering of Village grounds and washing of vehicles.

Regulation Actions:

1. An odd/even lawn watering system will be imposed on Village residents. Residents with odd-numbered addresses will water on odd days; even addresses will water on even days.
2. Outdoor water use, including lawn watering and car washing will be restricted to before 10:00 am and after 9:00 pm.

STAGE 3: WATER EMERGENCY

Triggers: This stage is triggered by the following condition: The Village water table has fallen below 50 percent of original levels.

Goals: The goals of this stage are to reduce peak demands by 50% and to reduce overall weekly consumption by 25%.

Education Actions:

1. The Village will make daily new releases to the local media and post in three locations within the Village, information describing present conditions and indicating the water supply outlook for the next day.
2. The Village will hold public meetings to discuss the emergency, the status of the Village water supply and further actions which need to be taken.

Management Actions:

1. The Village water supplies will be monitored daily.
2. Leaks will be repaired within 24 hours of detection.
3. System pressure will be maintained at 30 pounds per square inch.

Regulation Actions:

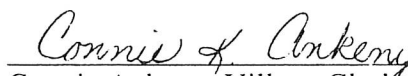
1. Outdoor water use will be banned.
2. Waste of water will be prohibited.

This ordinance shall take effect and be in full force from and after its passage, approval and posting according to law.

PASSED AND APPROVED this 5th day of August, 2002

ATTEST:


Wayne Phillips, Board Chairman


Connie Ankeny, Village Clerk

VILLAGE OF DALTON, NEBRASKA
AMENDMENT OF ORDINANCE NO. 2002-1

BE IT ORDAINED BY THE CHAIRMAN AND THE BOARD OF TRUSTEES OF THE VILLAGE OF DALTON, NEBRASKA THAT THE MUNICIPAL CODE OF THE VILLAGE ORDINANCE NO. 2002-1, EFFECTIVE AUGUST 5, 2002, ESTABLISHING A WATER CONSERVATION, DROUGHT AND EMERGENCY CONTINGENCY PLAN SHALL BE AMENDED TO READ AS FOLLOWS:

STAGE 1: WATER WATCH

Management Actions:

NO. 4. SHALL READ: The Village will monitor its use of water and will curtail activities such as hydrant flushing.

STAGE 2: WATER WARNING

Management Actions:

NO. 2. SHALL READ: Leaks will be repaired as soon as possible.

Regulation Actions:

THE ADDITION OF NO. 3. SHALL READ:

Watering schedule of the Leyton Public School athletic field shall be determined upon consultation with the Village Water Superintendent.

STAGE 3: WATER EMERGENCY

Management Actions:

THE ADDITION OF NO. 4 SHALL READ:

Penalty for noncompliance:

First Offense: Warning

Second Offense: Fine imposed of \$50.00

Third Offense: Water service will be terminated

This Amendment to Ordinance No. 2002-1 shall take effect and be in full force from and after its approval and posting.

APPROVED this 9th day of September, 2002

ATTEST:

Wayne Phillips, Board Chairman

Connie Ankeny, Village Clerk

I, Connie Ankeny, do hereby certify that the foregoing is a full, true and correct copy of the Amendment of Ordinance No. 2002-1, and that three copies were duly posted by me on the 10th day of September, 2002, as follows: Dalton Post Office, First National Bank, ⁵⁰Village of Dalton, Office. _____