City of Carroll

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MEMO TO: Mike Pogge-Weaver, City Manager MJP-W

FROM: Randall M. Krauel, Director of Public Works RMK

DATE: December 4, 2019

SUBJECT: Code of Ordinances Section 170.33 Amendment
Water Supply Wells Separation Distances

The Iowa Department of Natural Resources (DNR) is requiring amendment of the City Code of Ordinances prior to processing new water supply well siting and permitting. The Code amendment relates to minimum required separation distances between water supply wells and potential sources of contamination. Application for siting a new well, as a replacement for existing Well No. 11, has initiated this requirement.

Current Code of Ordinances Section 170.33, Paragraph 5 is as follows:

5. Prohibited Uses with Respect to Public Water Supply Wells. In all zoning districts, it shall be prohibited to construct on or utilize land surrounding any public water supply well for any of the following uses when said use would be located within the following distance of said water supply well:

   A. Within 100 feet hereof:

      (1) Storage of chemicals and minerals on or underground, excluding public potable water treatment chemicals.

      (2) Application of chemicals to ground, excluding lawn fertilizer.

   B. Within 200 feet thereof:

      (1) Mechanical Wastewater Treatment Plants.

      (2) Cesspools and earth privies.

      (3) Soil absorption fields.

      (4) Solid stockpiles of animal wastes.

      (5) Cemeteries.

      (6) Private Wells.

C. Within 400 feet thereof:

(1) Point discharge to ground surface of sanitary and industrial wastes.

(2) Wastewater Lagoons.

(3) Storage basins or Lagoons for animal wastes.

D. Within 1,000 feet thereof:

(1) Private water disposal sites.

The DNR is requiring that the City Code adopt, by reference, the Separation Distances contained in the Iowa Administrative Code. Those Separation Distances are included as an attachment to the attached, proposed ordinance.

RECOMMENDATION: Mayor and City Council consideration of adoption of the ordinance amending the Code relating to water supply well separation distances.

RMK:ds

attachment

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF CARROLL, IOWA, BY AMENDING PROVISIONS PERTAINING TO WATER SUPPLY WELL SEPARATION DISTANCES.

BE IT ENACTED by the City Council of the City of Carroll, Iowa:

SECTION 1. SECTION MODIFIED. Section 170.33, Paragraph 5 of the Code of Ordinances of the City of Carroll, Iowa, is repealed and the following adopted in lieu thereof:

5. Water Supply Well Separation Distances. No construction of any source of contamination shall be permitted within 100 feet of any City water supply well, except as provided in the section of the Iowa Administrative Code cited below.

   Applicable definitions of terms and requirements for separation distances shall be controlled by Chapter 43 of Part 57 of the Iowa Administrative Code (455B.), specifically subrule 43.3(7) and Table A as amended and implemented by the Iowa Department of Natural Resources. For the purposes of reference, the current Table A is attached to this paragraph, but should be checked for updates prior to reliance thereon.

SECTION 2. SEVERABILITY CLAUSE. If any section, provision, or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision, or part thereof not adjudged invalid or unconstitutional.

SECTION 3. WHEN EFFECTIVE. This Ordinance shall be in effect from and after its final passage, approval, and publication as provided by law.

Passed by the Council the _____ day of _____, 2019, and approved the _____ day of _____, 2019.

_____
Eric P. Jensen, Mayor

ATTEST:

By: _____
Laura A. Schaefer, City Clerk

First Reading: _____
Second Reading: _____
Third Reading: _____

I certify that the foregoing was published as Ordinance No. _____ on the _____ day of _____ _____, 2019.

_____
Laura A. Schaefer, City Clerk

TABLE A: SEPARATION DISTANCES

SOURCE OF CONTAMINATION	REQUIRED MINIMUM DISTANCE FROM WELL, IN FEET	
	Deep Well[1]	Shallow Well[1]
WASTEWATER STRUCTURES:		
Point of Discharge to Ground Surface		
Sanitary & industrial discharges	400	400
Water treatment plant wastes	50	50
Well house floor drains	5	5
Sewers & Drains[2]		
Sanitary & storm sewers, drains	0-25 feet: prohibited 25-75 feet if watermain pipe 75-200 feet if sanitary sewer pipe	0-25 feet: prohibited 25-75 feet if watermain pipe 75-200 feet if sanitary sewer main pipe
Sewer force mains	0-75 feet: prohibited 75-400 feet if watermain pipe 400-1,000 feet if watermain or sanitary sewer pipe	0-75 feet: prohibited 75-400 feet if watermain pipe 400-1,000 feet if watermain or sanitary sewer main pipe
Water plant treatment process wastes that are treated onsite	0-5 feet: prohibited 5-50 feet if sanitary sewer pipe	0-5 feet: prohibited 5-50 feet if sanitary sewer main pipe
Water plant wastes to sanitary sewer	0-25 feet: prohibited 25-75 feet if watermain pipe 75-200 feet if sanitary sewer pipe	0-25 feet: prohibited 25-75 feet if watermain pipe 75-200 feet if sanitary sewer main pipe
Well house floor drains to sewers	0-25 feet: prohibited 25-75 feet if watermain pipe 75-200 feet if sanitary sewer pipe	0-25 feet: prohibited 25-75 feet if watermain pipe 75-200 feet if sanitary sewer main pipe
Well house floor drains to surface	0-5 feet: prohibited 5-50 feet if sanitary sewer pipe	0-5 feet: prohibited 5-50 feet if sanitary sewer main pipe
Land Disposal of Treated Wastes		
Irrigation of wastewater	200	400
Land application of solid wastes[3]	200	400
Other		
Cesspools & earth pit privies	200	400
Concrete vaults & septic tanks	100	200
Lagoons	400	1,000
Mechanical wastewater treatment plants	200	400
Soil absorption fields	200	400
CHEMICALS:		
Chemical application to ground surface	100	200
Chemical & mineral storage above ground	100	200
Chemical & mineral storage on or under ground	200	400
Transmission pipelines (such as fertilizer, liquid petroleum, or anhydrous ammonia)	200	400

SOURCE OF CONTAMINATION	REQUIRED MINIMUM DISTANCE FROM WELL, IN FEET	
	Deep Well[1]	Shallow Well[1]
ANIMALS:		
Animal pasturage	50	50
Animal enclosure	200	400
Earthen silage storage trench or pit	100	200
Animal Wastes		
Land application of liquid or slurry	200	400
Land application of solids	200	400
Solids stockpile	200	400
Storage basin or lagoon	400	1,000
Storage tank	200	400
MISCELLANEOUS		
Basements, pits, sumps	10	10
Cemeteries	200	200
Cisterns	50	100
Flowing streams or other surface water bodies	50	50
Railroads	100	200
Private wells	200	400
Solid waste landfills and disposal sites[4]	1,000	1,000

[1]Deep and shallow wells, as defined in 567-40.2(455B): A deep well is a well located and constructed in such a manner that there is a continuous layer of low permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn. A shallow well is a well located and constructed in such a manner that there is not a continuous layer of low permeability soil or rock (or equivalent retarding mechanism acceptable to the department) at least 5 feet thick, the top of which is located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

[2]The separation distances are dependent upon two factors: the type of piping that is in the existing sewer or drain, as noted in the table, and that the piping was property installed in accordance with the standards.

[3]Solid wastes are those derived from the treatment of water or wastewater. Certain types of solid wastes from water treatment processes may be land-applied within the separation distance on an individual, case-by-case basis.

[4]Solid waste means garbage, refuse, rubbish, and other similar discarded solid or semisolid materials, including but not limited to such materials resulting from industrial, commercial, agricultural, and domestic activities.