Butler County Conservation District

Abandoned Water Well Plugging

For Fiscal Year 2022
July 1, 2021 to June 30, 2022

Information Packet

Contact:
Sandy Koontz
Water Quality Coordinator
Butler County Conservation District
2503 Enterprise, Suite B
El Dorado KS 67042
316-320-3549
sandy.koontz@ks.nacdnet.net
www.butlercountyconservationdistrictks.com

Plugging Abandoned Water Wells

Why Plug an Abandoned Water Well?

Plugging an abandoned well eliminates direct flow of potentially contaminated surface water into the groundwater. It also prevents children and animals from falling into the well and being seriously injured or killed. A plugged well reduces liability problems and makes the property easier to maintain and sell.

When is a Well Considered Abandoned?

A well is considered abandoned if it hasn't been used for two years, is in such disrepair that it cannot be used, or if it poses a groundwater contamination hazard.

How do I Plug my Well?

You can plug the well yourself, or hire a contractor to do it for you. A list of licensed contractors can be found at:
http://www.kdheks.gov/waterwell/download/ActiveKansasLicensedWaterWellContractors2016-2017_sorted_by_city.pdf, or call the Conservation District for a list.

If you choose to plug the well yourself, please review the bulletin (also enclosed in this packet) entitled "Plugging Abandoned Wells" (MF-935) from K-State Research and Extension. http://www.ksre.ksu.edu/bookstore/pubs/MF935.pdf

For assistance with well plugging you can contact Butler County Conservation District at 316-320-3549

How Much Does it Cost to Plug a Well?

Cost varies depending on the depth and diameter of the well. Hand dug wells take considerably more materials to plug than cased wells. As a general guideline, hand dug wells cost about $20 to $30 per foot. Cased wells cost about $8 to $10 per foot to plug.

What Materials do I Need to Plug a Well?

Refer to the worksheet and the KSU Bulletin, "Plugging Abandoned Wells" included with this packet to figure the amounts of materials needed to properly plug the well. Chlorine bleach (ie. Clorox) is recommended to disinfect the water in the well if water is present. Sand is placed into the water up to the water level. The sand allows movement of the water through the aquifer. After the sand is placed, a natural clay material or subsoil low in organic matter is placed. The actual plug for the well can be bentonite, cement grout or neat cement. Topsoil is then placed last to complete the plugging.

Instructions for Well Plugging (Cased Wells)

Step 1: All pumping equipment should be removed from the well. Any foreign objects or debris in the work area should also be removed to prevent accidental contamination.

Step 2: Measure depth of well, depth to water and diameter of well. If the well is a hand dug well, contact the Conservation District for instructions.

Use KSU Extension Bulletin MF-935 to determine the cubic feet/foot and the ounces of chlorine/foot needed based on the diameter of the well. Refer to the document online for instructions: http://www.ksre.ksu.edu/bookstore/pubs/MF935.pdf. Use the well plugging worksheet on the next page to enter calculations.

Step 3: Note: If water is present in the well, chlorine and sand would be added first. If no water is present in the well, chlorine and sand aren't needed.

Disinfect water with choline (ie. Clorox). Add clean sand and/or gravel up to the original water level. To assure that the correct amount of sand is placed in the well, mark the normal water level. Use a weighted string – drop the weight into the well until it touches the water surface. Mark the water level with a knot on the string using the top of the casing as a reference. Add sand until the weight touches the top of the sand at the marked spot.

Step 4: Fill the non-water bearing portion of the well with clay or a suitable subsoil. Don't use soil that is high in organic matter or that might be contaminated with other pollutants. The clay should be compacted every 2 feet or less to 6 feet above the ground surface.

Step 5: Place the plug material. The plug in the well should be at least 3 feet thick. You may need additional plug material if the well was not properly grouted *(see step 7)*.

Step 6: Remove the well casing. If possible, remove all the casing. If casing can't be removed, excavate around the casing to 3 feet below ground surface and then cut off the casing below the ground at 3 feet.

Step 7: You may discover when excavating around the old casing that the well was never grouted properly. To prevent contaminants from migrating alongside the casing, extend the plug material beyond the edges of the original bore hole (at least 1 ½ feet beyond the casing). This is called a mushroom plug. See KSU Bulletin MF-935 for additional options.

Step 8: Backfill the excavated area with compacted material and finish of the last foot with topsoil.

Step 9: File form WWC-5P with the Kansas Department of Health and Environment.
http://www.kdheks.gov/waterwell/download/FILLABLE_WWC-5P_Instructions.pdf
http://www.kdheks.gov/waterwell/download/WWC-5P__fillable_form_pdf.pdf

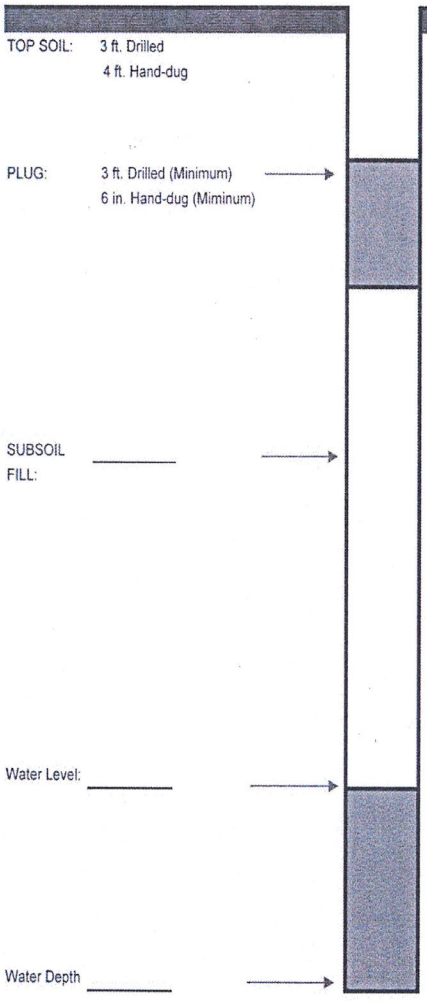
NPS POLLUTION CONTROL FUNDS
ABANDONED WATER WELL COST-SHARE PROGRAM
(WELL PLUGGING WORKSHEET)

WORKSHEET: (Use water quality bulletin to complete this worksheet, available through Cooperative Extension Service)

Name: _____ County _____ Date _____

Type of Well: Drilled ___or Hand-Dug ___

Diameter (Inside) _____ (Outside) _____ Depth to water _____ Total Depth: _____



TOP SOIL: Material Needed * *

_____ cu. ft. _____ ft. of fill = _____ cu.ft.

_____ / 27 = _____ cu. yd.

PLUG:

_____ cu. ft. * / ft. x _____ ft. of plug = _____ cu. ft. / plug

_____ cu.ft. outside drilled well to restore grout seal.

_____ / 0.7 = 0.0 bags of bentonite

Note: Handug well, use diameter of well after removal of rock lining.

SUBSOIL

_____ cu.ft./ft. * x _____ ft. of will = _____ cu.ft.

_____ / 27 = _____ cu. yd.

CHLORINE:

_____ oz./ft. x _____ ft. of water = _____ oz.

_____ / 128 = _____ gal.

SAND:

_____ cu.ft*/ft. x _____ ft. of sand = _____ cu. ft.

_____ / 27 = _____ cu. yd.

** 27 cu. ft. = 1 yard

**128 oz./gal.

SITE PREPARATION: REMOVE PUMP AND COLUMN PIPE AND DEBRIS. EXCAVATE AROUND DRILLED WELL CASING AND CUT CASING 3 FEET BELOW GROUND LEVEL. STOCKPILE FILL MATERIAL ON SITE. LEAVE IN TRUCK IF POSSIBLE. HANDDUG WELLS NEED TRACTOR WITH FRONT END LOAD OR LARGE PRY BARS TO CAVE IN ROCK LINING.

*Obtain cu. ft/ft. value from Extension Bulletin "Plugging Abandoned Wells.xls"

Example Form WWC-5P

WATER WELL PLUGGING RECORD **Form WWC-5P** **KSA 82a-1212** **ID NO.**

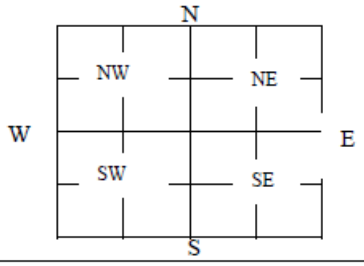
1 LOCATION OF WATER WELL: County: | Fraction ¼ ¼ ¼ ¼ | Section Number | Township Number T S | Range Number ☐ E ☐ W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☐

Global Positioning Systems (GPS) information:
Latitude: _____(in decimal degrees)
Longitude: _____(in decimal degrees)
Elevation: _____
Horizontal Datum: ☐ WGS84, ☐ NAD83, ☐ NAD27
Collection Method:
☐ GPS unit (Make/Model: _____)
☐ Digital Map/Photo, ☐ Topographic Map, ☐ Land Survey
Est. Accuracy: ☐ < 3 m, ☐ 3-5 m, ☐ 5-15 m, ☐ > 15 m

2 WATER WELL OWNER:
RR#, St. Address, Box #:
City, State ZIP Code:

3 MARK WELL'S LOCATION WITH AN "X" IN SECTION BOX:



4 DEPTH OF WELL _____ **ft.**

WELL'S STATIC WATER LEVEL _____ ft

WELL WAS USED AS:

☐ Domestic ☐ Irrigation ☐ Feedlot ☐ Industrial
☐ Public Water Supply ☐ Oil Field Water Supply ☐ Domestic (Lawn & Garden) ☐ Air Conditioning
☐ Dewatering ☐ Monitoring ☐ Injection Well ☐ Other _____

Was a chemical/bacteriological sample submitted to Department? Yes ☐ No ☐

5 TYPE OF BLANK CASING USED:

☐ Steel ☐ PVC ☐ RMP (SR) ☐ ABS ☐ Wrought ☐ Asbestos-Cement ☐ Fiberglass ☐ Concrete Tile ☐ Other (Specify below) _____

Blank casing diameter _____ in. Was casing pulled? Yes ☐ No ☐ If yes, how much _____
Casing height above or below land surface _____ in.

6 GROUT PLUG MATERIAL: ☐ Neat cement ☐ Cement grout ☐ Bentonite ☐ Other _____

Grout Plug Intervals: From _____ ft. to _____ ft., From _____ ft. to _____ft., From _____ ft. to _____ ft.

What is the nearest source of possible contamination:

☐ Septic tank ☐ Sewer lines ☐ Watertight sewer lines ☐ Lateral lines ☐ Cess pool
☐ Seepage pit ☐ Pit privy ☐ Sewage lagoon ☐ Feedyard ☐ Livestock pens
☐ Fuel storage ☐ Fertilizer storage ☐ Insecticide storage ☐ Abandoned water well ☐ Oil well/Gas well
☐ Other (specify below) _____
Direction from well? _____
How many feet? _____

FROM	TO	PLUGGING MATERIALS	FROM	TO	PLUGGING MATERIALS

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was plugged under my jurisdiction and was completed on (mo/day/year) _____ and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. _____. This Water Well Record was completed on (mo/day/year) _____ under the business name of _____ by (signature) _____

Send one white copy to Kansas Department of Health & Environment, Geology Section, 1000 SW Jackson Street, Ste. 420, Topeka, KS 66612-1367. Send one copy to WATER WELL OWNER and retain one for your records.
Visit us at http://www.kdheks.gov/waterwell/index.html Telephone 785-296-5524.

KSA82a-1212 **Revised 1/20/2015**

Butler County Conservation District
Application Procedure
Abandoned Water Well Plugging
Non-Point Source Cost Share Program

1. For information regarding cost share, or to request technical assistance in plugging abandoned water wells, call the Conservation District Office at 316-320-3549. If eligible, the state pays 70% of the cost of plugging the well, up to $1,000.00 per well.
2. Several forms are required for this program:
   - Application for Financial Assistance/Priority Ranking Worksheet *(provided below)*
   - KSU Water Quality Bulletin, *Plugging Abandoned Water Wells – MF 935* http://www.ksre.ksu.edu/bookstore/pubs/MF935.pdf
   - Well Plugging Worksheet *(provided in this packet)*
   - WWC-5P – Water Well Plugging Record (Required to be submitted to KDHE). http://www.kdheks.gov/waterwell/download/WWC-5P__fillable_form_pdf.pdf

Note: The water quality coordinator is available to assist in measuring the well and filling out the required paperwork. In order to measure the well, the pump and pipe need to be removed from the well.

3. When the forms mentioned above are completed, we can process the contract application. The local conservation district board approves the application, then the application is sent to the Kansas Department of Agriculture, Division of Conservation (DOC) where final approval is given. You will be notified when we receive approval from DOC.

Note: Except for site preparation, don't start on the actual plugging of the well till you receive approval by formal letter or phone call from the conservation district office. Your contract can be cancelled if work begins before the contract is approved.

4. The contract expiration date is typically 3 months from the date of the signed contract. If the landowner needs additional time to complete the well plugging, they can contact the conservation district office at 316-320-3549 for an extension.
5. The landowner can plug the well or the landowner can hire a licensed well contractor to plug the well. Call the Conservation District for a copy of licensed well contractors for this area, or go to this website to see all licensed well contractors for Kansas: http://www.kdheks.gov/waterwell/download/ActiveKansasLicensedWaterWellContractors2016-2017_sorted_by_city.pdf
6. Components eligible for cost share include:
   - Pump and pipeline removal (site preparation)
   - Excavation and/or shaping, backhoe or bulldozer use.
   - Grout material (bentonite/bag, neat cement/cy, cement grout/cy)
   - Subsoil fill
   - Aggregate fill, ie. sand, gravel
   - Disinfection agent, ie chlorine.
   - Labor

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Non-Point Source Cost Share Program
Priority Ranking Worksheet

(*Landowner: Fill out where indicated by *)

Application Form

Return to:
Butler County
Conservation District
2503 Enterprise, Suite B
El Dorado KS 67042
316-320-3549

*Name: _____

*Mailing Address: _____

Property Address (if different than mailing address: _____

*City, State, Zip: _____ Email (optional) _____

*Social Security Number: _____ *Phone Number: _____

*Section-Township-Range: _____ HUC: _____

Cost Share Practice: **Abandoned Water Well Plugging** TMDL: _____

Note: Cost share is considered income. If your cost share is $600 or more, you will receive a 1099G form from the State of Kansas.

Score from Ranking Worksheet _____

The cost share program has been reviewed with me and I understand the procedure required for cost share eligibility and payment. I understand that if I begin construction or installation of the cost share practice before I sign a contract sent by the Conservation District, I am no longer eligible for cost share.

I agree to:

- Follow Butler County Planning and Zoning requirements if the application is for repairing an on-site waste system.
- Follow Kansas Department of Health and Environment requirements if plugging abandoned water well.
- Follow Natural Resources Conservation Service (NRCS) standards and specifications for installing agricultural practices.
- Secure any permits required for project completion.
- I understand that the identified management practices are to be maintained for 10 years or the lifespan of the practice, whichever is greater.

*Producer Signature: _____

*Date: _____

Practice Components	Estimated Units Required
_____	_____
_____	_____

Computed by: _____ Date: _____