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GOVERNOR

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DEPARTMENT FOR ENVIRONMENTAL PROTECTION

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KENTUCKY DIVISION OF WATER
WELLHEAD PROTECTION PLAN
5-YEAR UPDATE FORM

Update Requirements:

This form should be used for the 5-year update submittal requirements of the Kentucky Wellhead Protection Program (WHPP) in compliance with 401 KAR 4:220 and SDWA Section 1428. Once the form is complete, please sign and send to:

Kentucky Division of Water
Watershed Management Branch
Attention: Chip Zimmer
300 Sower Boulevard, 3rd Floor
Frankfort, Kentucky 40601 or edward.zimmer@ky.gov

For assistance, contact Chip Zimmer at (502) 782-7141 or edward.zimmer@ky.gov

System Information:

PWS Name: **City of Barlow**

PWS ID Number: **Ky0040020**

AI Number: **45**

Contact Person/Title: **Peggy Meriedeth, Mayor**

Mailing Address: **PO Box 189, Barlow Ky 42024**

Telephone: **270-334-3500** Email: **pmeriedeth@brtc.net**

System Type*: **Community**

Source*: **Wells**

AKGWA #(s): **0005-9166 0003-3877**

County: **Ballard** ADD: **Purchase**

WWD Permit #: **0731** (mgd): **0.430**

MGD Population Served: **400**

Overall Susceptibility Rating*: **Medium** *High, Medium or Low

WHPP Changes Summary: Updated CSI and management strategies

Update Form Instructions:

Please complete each section that applies to any system or WHPP updates and submit the supporting documentation. Please indicate if a section is not applicable to this update. **Sections 4 and 6 through 11 are required for every 5-year update.**

Please sign certification on the last page upon completion.

Section Updates:

Section 1: Treatment Plant

If the treatment plant location has changed then provide a new location map below. This can be a county roadmap or a GIS-produced map. Please use the area below to provide relevant details, or to indicate that no change has occurred.

No Changes

Section 2: Water Withdrawal and Water Quality

If there have been changes in water withdrawal rates or water quality since the last submittal, provide a discussion of the relevant details in the space below (include new Water Withdrawal Permit Number if applicable). Include supporting documentation as an attachment.

No Changes

Section 3: Change or Modification to Groundwater Source

If the system has changed or modified the wells or springs being used, provide the following: 1) a description of changes/modifications; 2) copies of the relevant form(s) (Kentucky Water Well Record, Well Maintenance & Plugging Record, Well Inspection Form or Spring Inventory Record); and 3) any other information relating to well construction (i.e., installation logs, driller's logs, lithological or geophysical logs), below.

No Changes

Section 4 (REQUIRED): Planning Team

Effective water supply protection requires community involvement and public awareness. Identify the planning team consisting of a leader and at least two team members, with their respective titles, below.

Leader:

Peggy Meriedeth, Mayor

Team Members:

Connie Dalton, City Clerk

Jody Brown, Brown Management Group

Section 5: WHPA Delineation

If the system is revising a Wellhead Protection Area (WHPA) delineation, or if a new groundwater source has been added since the last submittal, provide a site-specific description of the local geology and aquifer. Include references for published literature. Provide a summary of any aquifer tests (i.e. pumping tests, slug tests, tracer tests), including data gathering and evaluation methods. Show calculations and supporting data for each WHPA delineated or revised. Include the detailed hydrogeologic report as an attachment.

No Changes

Section 6 (REQUIRED): WHPA Map

Provide a WHPA map that shows each groundwater source labeled with the appropriate AKGWA #, all protection zones identified and the Contaminant Source Inventory (CSI) point locations. If no changes have occurred since the last submittal, then a copy of the most recent WHPA/CSI map can be resubmitted. To view the most recent delineations for your system, please visit the [Source Water Protection Viewer](#). Please contact program staff for assistance.

Map is attached

Section 7 (REQUIRED): Contaminant Source Inventory

Provide an updated CSI in table format. This can be created using the spreadsheet template provided, and copied into the space below. If no changes occurred since the last update, the table can be pulled from previous WHPP documents. Each contaminant source listed should have a Contaminant Source ID # that corresponds to the WHPA map in Section 6. The CSI table must show the susceptibility determination ranking for each contaminant source. Include a brief narrative discussion of the overall system susceptibility. For more information on

potential sources of contamination, please visit the DOW's [Web Tools for SWP Planning website](#). Please contact program staff for assistance.

Contaminant Source Inventory attached

Section 8 (REQUIRED): Management Strategies

Provide a discussion of the previous and newly proposed management strategies to prevent source water contamination. This discussion must include the previous management strategies that were implemented as well as the goals that were met. Next, include any NEWLY proposed management strategies, associated goals, implementation plans and the party responsible for implementation. For information about wellhead protection strategies please visit the DOW's [Source Water Protection Strategies website](#).

Previous Management Strategy Update:

Since the city of Barlow does not own most of the land within the wellhead protection area, the city will use a combination of regulatory compliance and public education to promote protection within the wellhead area. The rationale for this decision is to use as many management strategies as possible to prevent contamination to the aquifer. Regulatory compliance management strategies will be used for those potential contaminant sources identified through the contaminant source inventory that are subject to Groundwater Protection Planning regulations (401 KAR 5:037). The purpose of a groundwater protection plan is to ensure protection for all current and future uses of groundwater and to prevent groundwater pollution. Public awareness will be used to educate the residents and business owners.

Most of the area surrounding the wells are agricultural in nature. Land owners in the area will be encouraged to use best management practices to reduce the amount of pesticide and herbicide runoff. Landowners with water wells or septic systems will also be asked to develop a generic groundwater protection plan for their systems. Businesses within the protection area will also be required to develop a groundwater protection plan if there is not one currently in place.

Newly Proposed Management Strategies:

Regulatory Compliance- Businesses and landowners will comply with Groundwater Protection Planning (401 KAR 5:037)

Public Education-The system has made a brochure attached available to its residents detailing wellhead protection.

Section 9 (REQUIRED): Contingency and WHP Planning

Contingency planning is important for all public water systems. Even with careful planning unforeseen contamination can occur due to leaks, spills, accidental releases, illegal discharges, and other activities that occur within the Wellhead Protection area. A contingency plan helps ensure the water supplier and its customers that an emergency plan is in place for the facility.

Emergency Response Phone List

Local Emergency Response	Phone Number
Plant Operator Jody Brown	270-748-5176
Barlow Fire	911
Sheriff Department	270-335-3561
Ballard	270-335-5176
Local Emergency Dispatch Ballard E911	270-335-5411

State and Federal Assistance	Phone Number
Kentucky DOW (Frankfort)	(502)564-3410
Kentucky DOW Associated Field Office (Paducah)	(270)442-2746
Kentucky Environmental Response Team 24-hour response line	(502) 564-2380 (800) 928-2380
Kentucky State Fire Marshall	(502) 573-0382

Any Other Pertinent Contacts	Any Other Pertinent Numbers
Ballard County Emergency Management	270-665-5411

Procedures for Public Notification:

In the event of a water system emergency that would threaten the health or life of the public, use the following procedure. Prepare and broadcast an advisory, including directions for the public. Describe the public notification process and provide contacts for those media outlets. If the system uses methods other than traditional media, please list them.

Newspaper, Television, and Radio Stations	Phone Numbers
Advance Yeoman News Paper	270-908-2001

Potential Future Problems:

The most likely source of contamination is from failing septic systems or run off from row crops. Both scenarios would lead to increased nitrate levels within the well. Implementation of a treatment process such as reverse osmosis or a bio-reactor would be costly for the city, therefore an alternate water source would be used.

Alternative Water Supply (Short and Long Term):

If contamination occurs, depending on the nature and extent of the contaminant, long and short-term contingency plans should be in place. Long term contingency plans may include modifying their treatment process, drilling new water supply wells, or purchasing water from a neighboring system. Short term contingency plans may include boil water notification to customers and blending water from different wells.

In the event of a long-term contamination problem with their wells, Barlow would look into interconnecting with neighboring systems. Barlow is located in between La Center and Wickliffe and interconnects with either system may be possible. The water system could also look into drilling new wells. Short term contingency plans include issuing a boil water notice to customers and purchasing water from a neighboring system.

Schedule for Update and Review:

The Wellhead Protection Plan will be reviewed regularly and updated every five years as required by regulation.

Section 10 (REQUIRED): Copies of Public Notices and Education Materials

Provide copies of wellhead protection public notices and education materials distributed.

Click here to enter text.

Section 11 (REQUIRED): Public Meeting Documentation***

Provide the record of WHPP public meeting attendance, minutes and comments.

NA

***Non-Community Water Systems are not required to have public meetings for 5-year updates, but must post a public notice in a conspicuous place. A public notice template is provided as a separate document. However, public input and associated documentation are encouraged. Please contact program staff if you have any questions.

Certification Signature (TO BE COMPLETED BY PLANNING REPRESENTATIVE):

"I certify that this document and all attachments were prepared under my direction or supervision. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete."

Signature:  Date: 09/20/2023

Printed Name/Title: Mayor

Assistance:

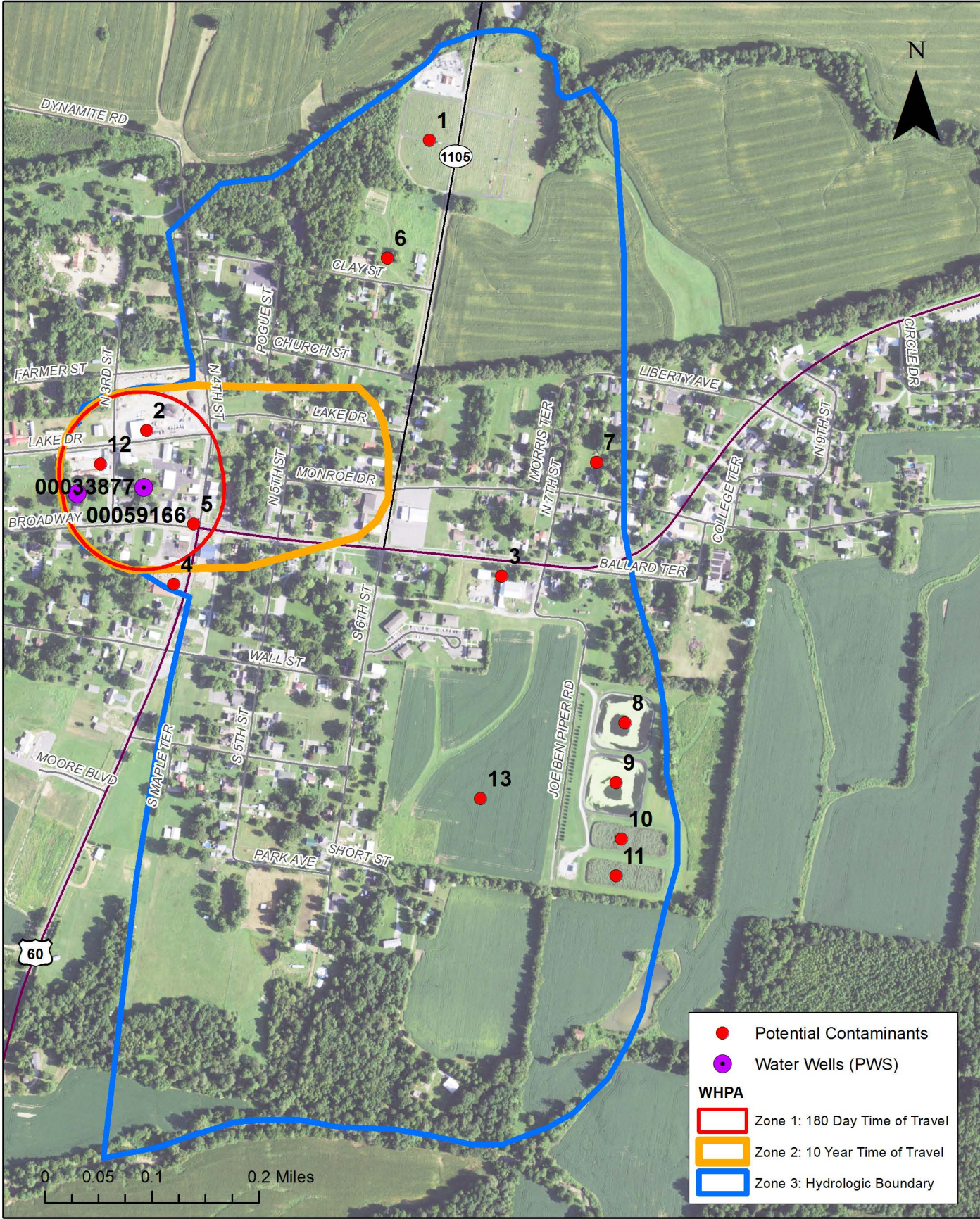
For any assistance, please contact Wellhead Protection Staff:

Chip Zimmer
(502) 782-7141
Edward.Zimmer@ky.gov

Dale Booth
(502) 782-6895
Dale.Booth@ky.gov

Please sign and return completed form to:

Kentucky Division of Water
Watershed Management Branch
Attention: Chip Zimmer
300 Sower Boulevard, 3rd Floor
Frankfort, Kentucky 40601
or Edward.Zimmer@ky.gov



Contaminant Source Inventory and Susceptibility Analysis for

City of Barlow(KY0040020)

CSI Map ID #	Site ID	Contaminant Source Type	CS CODE	Name	Address	Lat	Lon	Quantity	Zone	Proximity Value	Contaminant Value	Hydrologic Sensitivity	Numeric Rating	Susceptibility Ranking	Contaminant Notes
1		Cemeteries*	C-8	Barlow Cemetery	Barlow, KY	37.057177	-89.043422	1	2	1	2	1	9	LOW	Cemetary
2		Garages (Municipal)	M-4	Ballard County Road Department	326 Lake Drive, Barlow, KY	37.053117	-89.048028	1	1	3	3	1	16	HIGH	Shop w/ASTs
3		Other Municipal Sources	M-10	Barlow City Maintenance	105 South 7th Street	37.051312	-89.041943	1	3	1	3	1	12	MED	
4		Other Commercial Sources	C-27	Go Lightly Equipment	159 South 4th Street	37.051048	-89.047477	1	2	2	2	1	11	MED	Heavy Equip
5		Major Roadways	M-7	HWY US60	Barlow, KY	37.051871	-89.047176	1	3	1	3	1	12	MED	
6		Residential Septic	R-4	Septic System	Barlow, KY	37.055561	-89.044065	1	3	1	2	1	9	LOW	
7		Residential Septic	R-4	Septic System	Barlow, KY	37.052897	-89.040406	1	3	1	2	1	9	LOW	
8		Wastewater Treatment Plant*	M-15	Settling Lagoon	Barlow, KY	37.049384	-89.039775	1	3	1	3	1	12	MED	
9		Wastewater Treatment Plant*	M-15	Settling Lagoon	Barlow, KY	37.04857	-89.039888	1	3	1	3	1	12	MED	
10		Wastewater Treatment Plant*	M-15	Aeration Lagoon	Barlow, KY	37.04781	-89.039765	1	3	1	3	1	12	MED	
11		Wastewater Treatment Plant*	M-15	Aeration Lagoon	Barlow, KY	37.047307	-89.039833	1	3	1	3	1	12	MED	

12		Hardware/ Lumber/ Parts stores	C-19	Cooper Lumber and Supply	163 North 3rd Street	37.052636	-89.048788	1	1	3	2	1	13	MED	Lumber Yard
13		Row Crops : Corn, Soybean, Wheat	A-5	Agriculture Row Crops	Barlow, KY	37.048291	-89.042167	1	3	1	3	1	12	MED	

CSI Totals	Low	3
	Med	9
	High	1

Overall Susceptibility Ranking	Med
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