# WELLHEAD PROTECTION PLAN FIVE YEAR UPDATE 2023



MURRAY WATER SYSTEM
PWSID # KY0180306
CALLOWAY COUNTY, KENTUCKY



Andy Beshear GOVERNOR

# ENERGY AND ENVIRONMENT CABINET DEPARTMENT FOR ENVIRONMENTAL PROTECTION

300 Sower Boulevard Frankfort, Kentucky 40601

Phone: (502) 564-2150 Fax: 502-564-4245 Rebecca Goodman

Anthony R. Hatton

### 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, 3<sup>rd</sup> Floor Frankfort, Kentucky 40601 or <u>edward.zimmer@ky.gov</u>

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

### **System Information:**

PWS Name: Murray Water System

PWS ID Number: **KY0180306** Al Number: **516** 

Contact Person/Title: Paul Wood / Plant Supervisor

Mailing Address: 200 Andrus Drive Murray, KY 42071

Telephone: (270)762-0345 Email: paul.wood@murrayky.gov

System Type\*: Community

\*Community; Non-Transient/Non-Community; Transient/Non-Community

Source\*: Wells (6) \*Well(s) or Spring(s) and total number of each

AKGWA #(s): 0003-3965, 0003-3966, 0004-4442, 0003-3968, 0003-3969 & 0006-8462

County: Calloway ADD: Purchase

WWD Permit #: **0436** Permitted Amount (mgd): <=**3.30** - <=**4.80** 

Population Served: 22,588



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

WHPP Changes Summary: Added three new contaminate sources, updated raw water well and contaminate sources GPS coordinates, updated contaminate source owners/ business names and updated emergency response contacts.

### **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.

N/A

### 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.

N/A

### **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.

N/A

### 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:

Paul Wood / Plant Supervisor

**Team Members:** 

Seth Rollins / Plant Operator Greg Roberts / Plant Operator Jeff Kirks / Distribution Crew Leader

### 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.

N/A

### 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 <u>Source Water Protection Viewer</u>. Please contact program staff for assistance.

Please see attachment Section 6

### 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 <u>Web Tools for SWP Planning website</u>. Please contact program staff for assistance.

Please see attachment Section 7

### 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 <u>Source Water Protection Strategies website</u>.

### **Previous Management Strategy Update:**

Please see attachment Section 8

### **Newly Proposed Management Strategies:**

Please see attachment Section 8

### Section 9 (REQUIRED): Contingency and WHP Planning

Provide a description of Contingency and WHP Planning. Complete the Emergency Response Phone List, Procedures for Public Notification, identification of Potential Future Problems and the procedures to establish Alternative Water Supplies. This section must also address how often the WHPP will be reviewed and updated.

### **Emergency Response Phone List**

Fill in all Blanks and Phone Numbers with appropriate information.

Local Emergency Response	Phone Number
Plant Operator	PHONE NUMBER
Nearest fire department.	PHONE NUMBER

Nearest city police or law enforcement	PHONE NUMBER
COUNTY	PHONE NUMBER
Local Emergency Dispatch Click here to enter text.	PHONE NUMBER

State and Federal Assistance	Phone Number
Kentucky DOW (Frankfort)	PHONE NUMBER
Kentucky DOW Associated Field Office (FO) ENTER FO NAME	PHONE NUMBER
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
Click here to enter text.	PHONE NUMBER
Click here to enter text.	PHONE NUMBER
Click here to enter text.	PHONE NUMBER

### **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.

Please see attachment Contingency Plan

Newspaper, Television, and Radio Stations	Phone Numbers
Click here to enter text.	PHONE NUMBER
Click here to enter text.	PHONE NUMBER

### **Potential Future Problems:**

Describe the most likely scenarios that could threaten the water supply.

Please see attachment Contingency Plan

### Alternative Water Supply (Short and Long Term):

Describe the short term and long-term water supply alternatives that address each of the potential future problems identified above. List all current interconnections with other water systems. Discuss the capacity of each potential alternative water supply to sustain normal operations.

Please see Attachment Contingency Plan

### 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.

Please see attachment Section 10

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

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

Please see attachment Section 11

\*\*\*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."

Date: Click here to enter text. 10-11-23

Printed Name/Title: Paul Wood/Plant Supervisor

### Assistance:

For any assistance, please contact Wellhead Protection Staff:

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

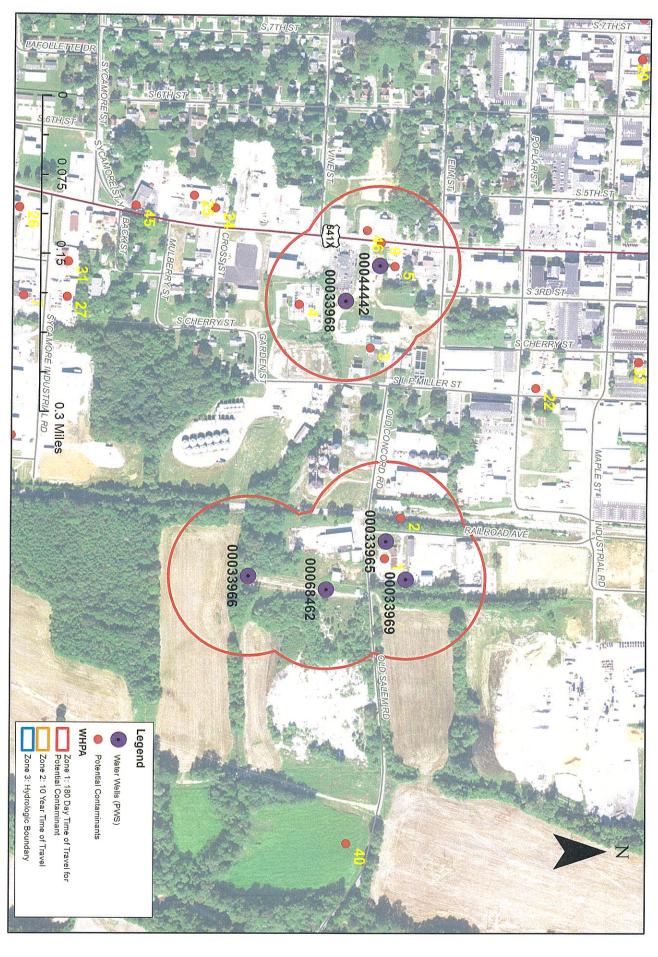
Dale Booth (502) 782-6895 Dale.Booth@ky.gov

### 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

# **SECTION 6:** WHPA MAP

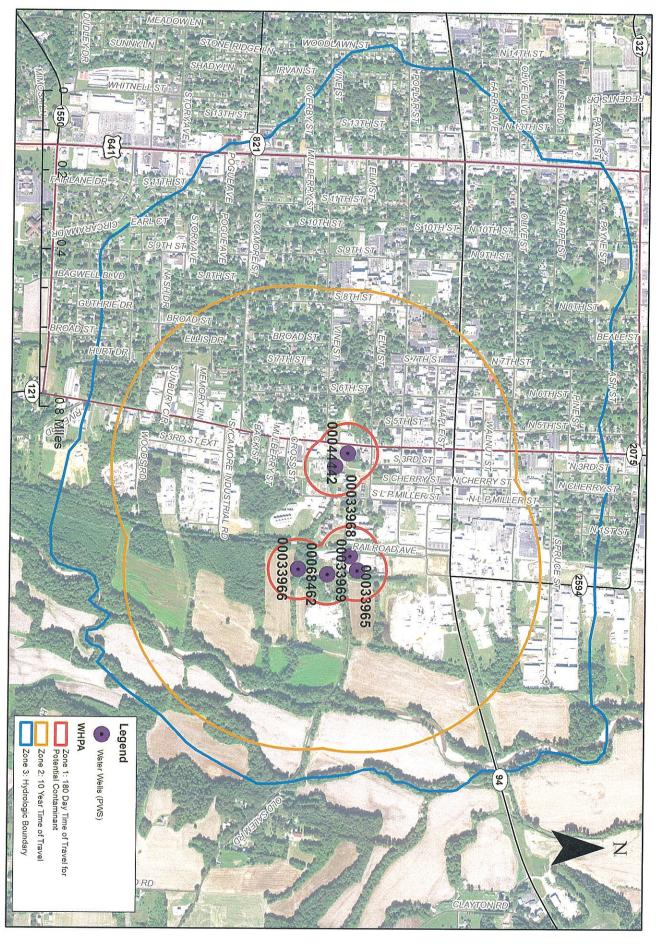
# Murray Water System 2023 Contaminant Source Inventory



WHPA Legend Potential Contaminants Zone 3: Hydrologic Boundary Zone 1: 180 Day Time of Travel for Potential Contaminant Zone 2: 10 Year Time of Travel DORD

Murray Water System 2023 Contaminant Source Inventory

Murray Water System 2023 Contaminant Source Inventory



# <u>SECTION 7:</u> CONTAMINANT SOURCE INVENTORY

# Contaminant Source Inventory and Susceptibility Analysis for

Murray Water System(KY0180306)

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		10.00											Site ID	
	Garages (Municipal)	Other Commercial Sources	Roadways	Major Roadways	(existing & abandoned/	Car Washes	Funeral Services/ Crematories	Auto Repair Shops/ Body Shops	Electric Substations	Wastewater Treatment Plant*	Railroad Lines	(Municipal)	Contaminant Source Type	
	M-4	C-27	M-7	M-7	C-16	5.7	C-14	C-2	-5	M-15	C-32	M-4	CS CODE	
	Calloway Co. Road Dept	Hollobus	KY Hwy 94	KY Hwy 121	Shell/Pockets	Duffy's Detail Shop	lmes Funeral Home	Hollands Garage	Murray Elec. Substation	Murray Water Treatment	Kentucky - W. Tenn Railroad	City of Murray Street Dept.	Name	
	200 Industrial Rd.	110 Main Street			620 S 4th Street	201 Sycamore	311 N 4th Street	407 S 4th Street		400 LP Miller Street		Railroad Ave	Address	
	36.6016	36.6110	36.6106	36.6067	36.6013	8109.98	36.6139	36.6069	36.6056	36.6066	36.6071	36.6069	Lat	
	-88.2996	-88.2976	-88.2963	-88.3021	-88.3033	-88.3010	-88.3024	-88.3017	-88.3010	-88.3003	-88.2974	-88.2967	Lon	
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	ω	ω	ω	ω	ω	3	ω	ω	ω	ω	ω	ω	Hydrologic Sensitivity	
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Car/ Boat/ Camper Dealerships	Auto Repair Shops/ Body Shops	Lawn/ Farm Stores	Auto Repair Shops/ Body Shops	Car/ Boat/ Camper Dealerships	Car/ Boat/ Camper Dealerships	Auto Repair Shops/ Body Shops	Laundromats	Gas stations (existing & abandoned/ historic)	Food Processing	Other Municipal Sources	Hospitals*	Funeral Services/ Crematories	Other Commercial Sources	Other Commercial Sources
C-6	C-2	C-24	C-2	C-6	C-6	C-2	C-23	C-16	C-13	M-10	C-21	C-14	C-27	C-27
Hyway Motors	Cunningham Auto Repair	Maley Lawn Service	Quality Auto Body	Parker Ford	Kendall Auto Sales	Grease Monkey	Boones Laundry	Gas Mart	Kenlake Foods	Calloway Fire & Rescue	МССН	Blalock Coleman & York	Murray Paving	Perry Enterprises
200 E. Sycamore	619 S. 4th St	512 S. 4th St.	510 S. 4th St.	701 Main St.	200 Poplar St.	102 S. 12th St.	605 Main St.	636 S. 4th St. 36.5999	300 N. LP Miller	101 E. Sycamore	803 Poplar St.	713 S. 4th St.	81 Main St.	87A Spruce Street
36.6024	36.6017	36.6041	36.6044	36.6102	36.6089	36.6097	36.6102	36.5999	36.6135	36.6017	36.6075	36.5969	36.6106	36.6140
-88.3010	-88.3025	-88.3028	-88.3026	-88.3061	-88.2997	-88.3155	-88.3054	-88.3035	-88.2979	-88.2986	-88.3093	-88.3029	-88.2943	-88.2929
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Car/ Boat/ Camper Dealerships	Row Crops : Corn, Soybean, Wheat	Unknown Status Landfills	Junk Yards (Scrap and Auto)	Other Commercial Sources	Car Washes	Auto Repair Shops/ Body Shops	Gas stations (existing & abandoned/ historic)	Other Commercial Sources	Auto Repair Shops/ Body Shops	Car Washes	Auto Repair Shops/ Body Shops	Auto Repair Shops/ Body Shops	Furniture Repair/ Finishing/ Manufacturing Shops
C-6	A-5	W-2	C-22	C-27	C-5	C-2	C-16	C-27	C-2	C-5	C-2	C-2	C-15
Mathis Transmission	Cultivated Crops	Kenny Bogard Landfill	Murray Recycling	Murray Elec. Warehouse	Finish Line	Harlan Automotive	Hucks	Swift Roofing	Economy Tire	The Body Wash	Buck's Body Shop	Ed's Wheel Alignment	Jerry's Cabinets
515 S. 12th St.		River Rd.	201 Woods Rd.	N. Cherry St.	1312 Main St.	408 N. 4th St.	411 S. 12th St.	404 Industrial Rd.	203 Main St.	300 E. Sycamore	900 Sycamore	301 Olive St.	409 Sunbury 36.5996
36.6011	36.6065	36.5970	36.5984	36.6125	36.6105	36.6157	36.6031	36.6150	36.6103	36.6024	36.6030	36.6125	36.5996
-88.3144	-88.2918	-88.3006	-88.3001	-88.3006	-88.3177	-88.3018	-88.3147	-88.2955	-88.3002	-88.3016	-88.3110	-88.3015	-88.3047
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Other Commercial Sources	Other Commercial Sources	Paint Stores	Other Commercial Sources	Auto Repair Shops/ Body Shops		
C-27	C-27	C-28	C-27	C-2		
Interstate Batteries	Vance HVAC	M&T Painting	Thorton Tile & Marble   612 S. 9th St.   36.6002   -88.3109	Stories Automotive Paint		
410 S. 4th St. 36.6065 -88.3023	520 S. 4th St. 36.6033   -88.3026	402 Sunbury 36.6001 -88.3042	612 S. 9th St.	317 N. 4th St.		
36.6065	36.6033	36.6002 36.6001	36.6002	36.6145		
-88.3023	-88.3109 -88.3042 -88.3026		-88.3109	36.6145 -88.3024		
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MED	HIGH	MED	MED	MED		

	CSI Totals	
High	Med	Low
24	22	0

Overall Susceptibility Ranking
HGH

# WELLHEAD PROTECTION AREA (WHPA) CONTAMINANT SOURCE INVENTORY



## Facility Information

Resident/Business Name Acc	cets convenie	nce store					
Address 722 5.4th 2	street			Phone		· ·	
City Murray	County	HOWAY	State	KV.	7in 42	2071	<del>"</del>
Landowners Name				Phone	-ip -79	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>	•
Address		-					•
City	State	Zip				## 	
Name of Person Surveyed							•
Title of Person Surveyed					• .		
	•		•				
Nature of Property	•		_				
O Agricultural O Industria Commercial O Manufac	ul O Residential cluring O Rental	O Federal Govt S O Military Installal		O State Gov		O Other	
				-			
Historical Information							
•	<b>.</b>		1		**		
How long has the site been used. What was the site used for prior to			y ears				
What was the site used for prior t	o its present usage?	- Emyty	Lot	· · · · · · · · · · · · · · · · · · ·			
Did septic tanks or underground s	dorage tanks ever ev	ist on site?		٠ - ١			
		or on site ?	o Yes	STAO O	No Info		
				pragramme to the		and the second	
Miscellaneous Information						- 4	,v
Does the facility have a Groundw	ater Protection Plan (	GPP) on file?	o Yes	o No			
If "Yes", is the GPP a O Generi					a # · · · *	• • •	
·			96		• •	a. 4 ·	•
Are any wells or springs on site?		JONO.	•	••		• •	
	indoned/Unused	& Monitoring V	Vell	•	1 - 1 - 1 - 1 - 1 - 1		
	inage Well ction Well	o Water o Other		•			
*	ation Well		<del></del>	<u></u> • ```	, "		
Are all walls togged with assist to				•			
Are all wells tagged with official K Well tag #(s)	Y well tag numbers?	OYes ONo		· -			
Name of waste hauler (if applicab	le)						•
is spill containment used (curbing		t materials)		••			4 (2 - 42 A)
- op additup odmbritett avanat	le? OYes ONo	t materials)	o Yes	ONO O	Partial	. e	

Potential Contact			a a	•
Potential Contaminant So	urces - Mark all that a	pply		-
O About O	Quantity	pply.	*	
O Above Ground Storage Tank		<b>a</b>	•	Quantity
O Fuel Oil  O Diesel/Kemsene		O Municipal Sev	vage Une	Quality
and an industrial	*	O Print Shop		
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O Waste Oil	t set of the set of th	O Railroad	The second of the second of the second	
O Other		O Septic Tank		67
O w/secondary containment	<del>Promising the second of the s</del>	O Service Station		
O Airport	The Police Control of the Control of	O Sewage Plant	Sludge Disposal	
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Animal Waste Handling/Storage/Applica	allon	- Common Applica	tion of	
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Dry Cleaning	**************************************	in Dune of oth	er Containers	
Fertilizer/Pesticide Application	garan a managaran garan gar	O Sump	·	
Fertilizer/Pesticide Storage		O Surface Impoun	dments/Pits/Ditches	-
Floor Drains		U ransier Station		
Golf Course		O Transmission of	potential pollutants in	, saturation
Holding Pond/Lagoon		pipelines	er in the second of the second	
Hydraulic Elevator	The second secon	Underground St	иage Tank	مراب إربعوده
Landfill/Dump	Military de contractor de la contractor	C Frei Oil		
Land Treatment /Land Disposal of Polluta	nle	Diesel/Kero	sene to the second of the seco	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Cawn Chemical Application	*	. Gasoline		
Loading/Unloading Areas				
b officerating Puleas		O Other		
Mining or Associated Activities		O w/sec	ndary containment comments section)	
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Approved Back flow is section to be completed prior /s ID No	and Cross-connection a	O Wisecx O Other (Explain in	ndary containment comments, section)	
Approved Back flow is section to be completed prior	and Cross-connection a	O Wisecc O Other (Explain in	rictary containment comments, section)  Test Date:	

# WELLHEAD PROTECTION AREA (WHPA) CONTAMINANT SOURCE INVENTORY



Facility Information		• .		17	
Resident/Business Name VA	nce HVAC		··		
Address <u>520 5 44h st</u>			Phone	e 270. 7	53.0112
City Murray	County _CA	110 WAY	State <u>Ky</u>		
Landowners Name			Phone		•
Address	· · · · · ·		· .		
City		Zip			
Name of Person Surveyed					
Title of Person Surveyed			,	•	
Nature of Property					
O Agricultural O Industr	ial O Residential	O Federal Gov't Site O Military Installation		Gov't Site	O Other
				· · · · · · · · · · · · · · · · · · ·	
Historical Information					
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How long has the site been used What was the site used for prior		Unknow	ears '		
Did septic tanks or underground	storage tanks ever ex	ist on site? c	Yes ONo	A No Info	
	en en Error e (f. 1904), por grande	The second secon			
Miscellaneous Information	7				
Does the facility have a Groundw	<del>-</del>	GDD) on filed	. V	gera e kere i i e i i i G	• • • •
If "Yes", is the GPP a O Gener			Yes ONo	a existe	
/ Are any wells or springs on site?	- Van				
Type of Well: OAb	o res besund Nhannhus	Monitoring Wel	1		
	ainage Well	o Water	, ,		
	ection Well	o Other			
olmi	gation Well				and the second s
Are all wells tagged with official h	Y well tan numbers?	OYes ONs			•••
Well tag #(s)					
Name of waste hauler (if applicat	•			**************************************	<b>3</b>
is spill containment used (curbing	•				
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# WELLHEAD PROTECTION AREA (WHPA) CONTAMINANT SOURCE INVENTORY



Facility Information			
Resident/Business Name	-cotata Dattowal		
Address 410 54th 5t	STAIC BAILENCS	Ph. 2.	170 753 11-17
City MUTTAY	County CAllowAJ		ne <u>270. 753-6677</u> Zip <u>4207)</u>
Landowners Name		Phon	
Address			
City			
Name of Person Surveyed	**************************************		
Title of Person Surveyed			
			general and the second
Nature of Property			
O Agricultural O Industrial	O Residential O Federal Gov	't Site O State	Gov't Site O Other
Commercial O Manufacturing	O Rental O Military Instal	dation O Muni	cipal Gov1 Site
Historical Information	-		
How long has the site been used by its	s current occupant?	3 Years	
What was the site used for prior to its			•
Did septic tanks or underground storage	ge tanks ever exist on site?	oYes oNo	No Info
Miscellaneous Information		The second secon	<ul> <li>A second of the s</li></ul>
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Does the facility have a Groundwater			en en la servició de la companya de
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/ Are any wells or springs on site?	2000		•
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o Drainag	, ,	vvca	
o Injection			
o Irrigatio	n Well		and the second second second second
Are all wells tagged with official KY we	ell tag numbers? OYes ONo	)	••••
Well tag #(s)		,	
Name of waste hauler (if applicable)	· ·	A COLUMN TO SERVICE STREET, SE	
· · · · · · · · · · · · · · · · · · ·			•
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Is spill cleanup equipment available?	n-place absorbent materials)  Yes O No	oYes oNo	o Partial

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### Section: 8 Management Strategies

Previous Management Strategies Implemented:

- Educate City employees and City residents about possible contaminants points. This way we can have more "eyes and ears" to spot abandoned wells, old septic tanks, dump sites and et cetera. Water Plant and Storm Water employees will implement this.
   During city meetings and staff meetings we made a point to educate staff and the public to be aware of potential contaminant points.
- 2. WHPP Pamphlets. Create a unique educational pamphlet for Murray. To be available at City Hall, Health Department, schools, Chamber of Commerce and Etc. Water Plant and Storm Water employees will implement this. Pamphlets were made available to the public in various areas.
- 3. Signs at Well Fields. Signs to notify the public of the well fields and to be mindful of contaminants in this area. Water Plant employees will implement this. Signs created at each well field.

New Management Strategies Goals:

- 1. Install security cameras at the well fields and tanks. Water plant employees will implement this.
- 2. Develop a slide or overhead presentation for local groups. Water plant employees will implement this.
- 3. Free hazardous waste disposal day. Water plant & sanitation employees will implement this.

# Wellhead Protection Management Strategies Agenda

- 1. Introduction
  - a. What is a wellhead protection program?
  - b. Purpose for meeting
- 2. Review old business
  - a. Minutes of last meeting
  - b. What proposed plans were carried-out?
    - Signs at well fields.
    - Wellhead Protection Pamphlets.
  - Employee and Citizen contaminants awareness.

### 3. New Business

- a. Install security cameras at the well fields and tanks. Water plant employees will implement this.
- b. Develop a slide or overhead presentation for local groups. Water plant employees will implement this.
- c. Multiple free hazardous waste disposal days. Water plant & sanitation employees will implement this.
- d. Include more information on the City's website concerning wellhead protection. Water plant and IT employees will implement this

### 4. Question & Answer Period

# Wellhead Protection Meeting Sign in Sheet

Name/Title	Signature	Date
PAUL Wood Plant Supervisor	Paul Alood	10-3-23
Jeff Kirks Distribution	Supervisor Allin	1013-23
Seth Kollins operator	SURPOLS	10-3-23
Grey Roberts Operator	Grey Robus	10-3-23
	0	



This Contingency plan shall be reviewed and updated annually. If any key personnel changes please update immediately.

Last updated 8-28-23

### Murray Water & Wastewater System 200 Andrus Drive, Murray, KY 42071 (270) 762-0336

### Disaster Contingency Plan

The Murray Municipal Utilities, Water and Wastewater Division, consists of four departments:

- 1) Engineering and Maintenance 500 Main St & 200 Andrus Dr.
- 2) Billing and Collecting 500 Main Street
- 3) Water Treatment Plant 400 South LP Miller Street
- 4) Wastewater Treatment Plant- 90 CC Lowery Drive

Our System serves approximately 26,000 persons in the City limits and county as well as customers served through two (2) water districts in the county.

- The most probable disaster in the Murray and Calloway County area would be tornado. Murray State University is equipped with emergency air raid sirens which will be used during disaster and emergency situations.
- The hospital, nursing homes, and residential customers will remain our top priority in keeping continuous water service.
- Threatening phone calls (see Threat Identification Checklists and DOW Response card.)
  - 1) Immediately notify the chain of command.
  - a. Plant personnel will notify plant supervisor.
  - b. Plant supervisor will notify main utility office.

Speak only to one of the personnel who will activate the emergency plan:

Shane Knight- Director

Jim Osborne-City Administrator

(270)762-0336

### A. System Survey

The following are pre-determined locations to be checked immediately for damages to property and/or for contaminant placement:

- 1) Sedimentation Basin at Water Plant
- 2) Clear wells at Water Plant
- 3) Raw water wells
- 4) Standpipe #1 North 18<sup>th</sup> Street
- 5) Standpipe #2 Robertson Road
- 6) Elevated tank Hudson Road
- 7) Elevated tank HWY 641 North

All locks, hasps, gates, hatches, etc. are to be kept in working condition.

- B. <u>Emergency Operation Plan:</u> The EMERGENCY OPERATIONS CENTER (EOC) is the main utility office located at 200 Andrus Drive. Utilize the telephone and radio communication as is.
- C. <u>News release</u>: Only one staff member from the EOC will issue bulletins and new releases. **See Appendix B.**

This will be the Director or his assistant. Plant personnel are not allowed to make any comments. The Director or his assistant will notify the Division of Water. See Appendix C- Pg. 1 & 2.

### D. Key Telephone List:

### 1) Water System Personnel

Shane Knight **Director** (270)762-0336/ Paul Wood **Water Plant Supervisor** (270)762-0345/ Jaimey Erwin **Field Operations** (270)762-0336/

2)	City and County Officials	
	Bob Rogers, <b>Mayor</b>	(270) 762-0300
	Eric Pologruto, Fire Chief	(270) 762-0320
	Interim, Police Chief	(270) 762-0313
	Larry Elkins, <b>Judge Executive</b>	(270) 753-2920
3)	County Health Officials	
	Calloway County Health Department	(270) 753-3381
4)	Disaster and Emergency Services (DES)	
,	Bill Call, Emergency Management	(270) 753-7870
5)	Supplemental Water Supplies	
	Independent Water Haulers- Sam Harris	(270) 753-8061
	Hardin Water System	(270) 437-4361
	Benton Water & Sewer System	(270) 527-249
	<u>Plastic Tanks for Hauling Water</u>	
	Falder's	(270) 247-7790
	McKeel Equipment	(270) 753-3062
	Tractor Supply	(270) 753-5288
	Orscheln Farm & Home	(270) 759-8150
6)	Hospitals	
9)	Murray Calloway County Hospital	(270) 762-1100
	Fast Pace Urgent Care	(270) 873-2022
	_	
	Village Medical Center	(270) 759-9200

7)	Emergency Numbers for Police and Fire 911	
	Fire Department	(270) 762-0322
	Police Department	(270) 753-1621
	Sheriff	(270) 753-3151
	Kentucky State Police Post 1	(270) 856-3721
8)	Kentucky Division of Emergency Services	
	Disaster & Emergency Service	(502) 564-7815
	Division of Water, Field Office	(270) 898-8468
9)	<u>Laboratory Services</u>	
	Microbac Laboratory	(270) 898-3637
10)	<u>Schools</u>	
•	Murray State University	(800) 272-4678
	Murray City School	(270) 753-4363
	Calloway County School	(270) 762-7300
	Daycare Centers	
	Room to Grow Preschool	(270) 753-6578
	Murray Head Start	(270) 753-6031
	Shining Stars Daycare	(270) 759-0010
	Apple Tree Daycare	(270) 753-9356
	Lily Pad Learning Center	(270) 761-5459
	Busy Bee Child Care	(270) 753-5050
	Canterbury Day School	(919) 522-7488
	Christian Child Care Center	(270) 767-1177
	Creative Beginnings	(270) 753-2077

	Willis Early Childhood Center	(270) 767-9229
11)	Nursing Homes	
	Spring Creek Health Care	(270) 752-2900
	Fern Terrace Lodge	(270) 753-7109
	Brookdale Assisted Living	(270) 759-1555
	Hickory Woods	(270) 759-8700
	Wesley at Murray	(270) 753-7735
12)	<u>Large Industries</u>	
	Saputo Dairy Foods USA	(270) 753-3021
	Pella Windows and Doors	(270) 767-2500
	Schwarz Paper Co.	(270) 767-1881
	Vanderbilt Chemical	(270) 753-4926
	Kenlake Foods	(270) 762-5100
	TPG Plastics	(270) 992-7500
	IWIS	(270) 767-6151
13)	Kentucky Director of Water	
	ERT Supervisor	1(800) 928-2380
	Kentucky Dept. for Environmental	1(502) 564-3410
	Protection & Emergency Response	ext. 499
14)	News Media	
± ·/	Murray Ledger & Times	(270) 753-1916
	Murray State News	(270) 809-4478
	WNBS/Froggy	(270) 753-2400
	WKMS	(270) 809-4745
	WPSD	(270) 415-1900
	West Kentucky Star	(2.0) 120 2000
15)	Regional Poison Control Center	(800) 222-1222

16)	Ambulance Service	
	Murray Calloway County Hospital	(270) 753-9332
17)	<u>Distilled Water Sources</u>	
	Kroger Pharmacy	(270) 759-1288
	Medical Arts Pharmacy	(270) 753-2011
	Rite-Aid Pharmacy	(270) 753-8304
	Walter's Pharmacy	(270) 753-7688
	Wal-Mart Pharmacy	(270) 753-0287
	CVS Pharmacy	(270) 753-2044
	Walgreens Pharmacy	(270) 762-8991
	Mountain Valley Water	(270) 753-0819
18)	Groceries	
	Kroger	(270) 759-3021
	Wal-Mart	(270) 753-2195
	Save-A-Lot	(270) 753-9881
	Food Giant	(270) 753-8322
	Pockets Shell	(270) 753-0858

### E. Contamination Plan

The system will be flushed as soon as possible. The system is divided into six (6) routes for the purpose of flushing hydrants. These six (6) crews will immediately go into action to complete the system flushing. The crews will inspect the routes as they go to see if they can determine any tampering at any hydrant, valve, or meter location. Copies of each hydrant route and a hydrant and valve map are attached. The flushing will take approximately eight (8) hours. The preliminary lab results will take 2-4 hours.

F. The Drinking Water Treatment Plant has a bulk water paystation that can be utilized in an emergency located at 400 S LP Miller St.

### G. Sampling Equipment

The Water Treatment Plant is to keep at least 12 bottles on hand for emergency sampling. These are to be checked frequently for shelf life and be used on a rotating basis. We have the following emergency sampling locations:

- 1. Sedimentation Basin at Water Plant
- 2. Clear wells at Water Plant
- 3. Standpipe #1 North 18th Street
- 4. Standpipe #2 Robertson Road
- 5. Elevated tank Hudson Road
- 6. Elevated tank HWY 641 North
- 7. Water District #2, 121 South

The three (3) remaining samples are to be taken at three (3) locations where sampling is normally done, preferably at residential locations.

### I. <u>Sequence of Events</u>

A. Notification of Operational and Political Personnel

Plant Personal: Paul Wood

**Greg Roberts** 

Administrative: Shane Knight Political: Bob Rogers

Jim Osborne

Field: Jaimey Erwin

B. Notification of KY Division of Emergency Services (DES)

Frankfort	1-502-564-7815
McCracken County	1-270-442-6381
Paducah	1-270-898-8468
Emergencies	1-800-255-2587

- 1) DES will notify all news media except local.
- 2) DES will alert state laboratory that samples are on their way and they will establish emergency status with them.
- C. Water plant personnel will collect, identify, preserve and dispatch the water samples as soon as possible. Samples will then be taken to the lab via Kentucky State Police if it is possible terrorism. (If KSP is not available, local police will take the samples.) All samples collected are to be brought to the water treatment plant where the police will be on stand-by, ready to dispatch the samples to the lab.
- D. Long term power outage.
- 1) Check all generators and amount of fuel.
- 2) Make arrangements for fuel.
  - Max Arnold & Sons (270)885-8488
  - Gould Oil (270)492-8885
- 3) Generator repair.
  - CAT (270)443-3631

#### E. Contact Local and State Police IMMEDIATELY!!!

- 1) Dispatch driver to the plant site.
- 2) Begin investigation.
- 3) Begin check on all industries/businesses that might supply the contaminant and begin inventory check for missing supply.

#### F. Alert Microbac

#### G. Notify Local news Media

Call press conference and read prepared statements only. Do not answer questions at this time.

#### H. Notify Hospital, Key Industries and Schools

#### I. <u>Call Personnel to the EOC</u>

Instruct personnel who answer the telephone what to say and how to be assuring to the public.

#### J. Notify the Murray-Calloway County Hospital 270-762-1100 Give the type of contaminant. The hospital will need an immediate

source of water. The DES coordinator will be able to place the hospital's emergency plan into effect.

#### K. County Health Department

Officials will need to know the type of contaminant.

#### L. Notify County DES Coordinator

Keep this office on stand-by in the event the National Guard has to be summoned.

#### M. Field Supervisor

This person will begin a safety check of all towers and all areas of the utility system where tampering is possible.

#### N. Notify Water District Managers

Each water district will remain on as long as possible. If a contaminant is determined, the water districts will be flushed thoroughly.

Water District #4, Dexter-Almo – 270-753-9101

Water District #5, Hazel -

(Hank Stanfield)

#### II. Additional Information

- A. Public Notification is essential. However, every effort is to be made to be businesslike and to avoid panic.
- B. As soon as the preliminary lab report is received, a revised decision will be made as to the status of keeping the water service active or to put the alternative water supply plan into action. At this time, it may be required to put the comprehensive follow-up notification plan into effect. (House to House)
- C. Bottles of distilled water will be kept in storage and labeled for emergency use.
- D. The Director of Utilities or his/her assistant will give the news media information from the EOC Headquarters. No member of the utility staff will give out any information.
- E. There will be no announcement as to how and where the system became contaminated. Nor will any comment be made as to how much of the contaminant it would take to contaminate the tanks or the entire system.
- F. We will keep the possibility in mind of offering a reward for information leading to the arrest of the person(s) involved.
- G. Keep the telephone answering service at the EOC Headquarters active for several hours after the all clear alert has been issued.
- H. Keep the Police and Fire Departments informed

#### 1. General Content of Public Notices

- A. A clear and readily understandable explanation of the violation.
- B. Potential adverse health effects.
- C. The population at risk.
- D. The steps that the public water system is taking to correct the violation.
- E. The necessity for seeking alternative water supplies.
- F. Any preventive measures the consumer should take until the violation is corrected.

#### 2. Each Notice

- A. Shall be conspicuous.
- B. Shall not contain unduly technical language or other problems that frustrate the purpose of the notice.
- C. Where appropriate the notice shall be multilingual.
- D. Each notice shall include the name and telephone number of the owner, operator, or designee of the public water system as a source of additional information concerning the notice.

See Section 6 Chapter 8.070 Mandatory Language for Tier One Violations.

Boil Water Notice: Confirmed positive bacteriological

<u>Boil Water Advisory:</u> Possible adverse health effect from microbiological contamination

<u>Notice and Advisory:</u> Shall remain in effect until the cabinet determines or approves it to be lifted.

Boiling instructions shall caution to only boil drinking water for short range use by boiling water for at least five (5) minutes at rolling boil.

<u>Consumer Advisory:</u> Other conditions within a public water system indicate a possible adverse health effect from consumption of the water distributed by the system.

The advisory shall notify affected person of a required or recommended action that should be taken.

Appendix B

Department Of Water Response procedures

Immediately report to the Cabinet

Any violation of Chapter 8 502-564-3410

24Hour environmental emergency 502-564-2380

Immediately notify the local health

#### Departments

Appendix C

#### Attachment 3: Threat Identification Checklists

#### Water System Telephone Threat Identification Checklist

in the event your water system receives a threatening phone call, remain calm and try to keep the caller on the line. Use the following checklist to collect as much detail as possible about the nature of the threat and the description of the caller.

Contamination		
Biological   Bombs, explosives, etc.   Chemical   Other (explain)	1. Types of Tampering/Threat:	
Chemical Other (explain)  2. Water System Identification:  Name: Address:  Telephone:  PWS Owner or Manager's Name:  3. Alternate Water Source Available: Yes/No if yes, give name and location:  4. Location of Tampering:  Distribution Water Storage Treatment Raw Water Source Treatment Chemicals Line Facilities Plant  Other (explain):  5. Contaminant Source and Quantity:  7. Date and Time of Tampering/Threat:  8. Calter's Name/Alias, Address, and Telephone Number:	[] Contamination	Threat to tamper
2. Water System Identification: Name: Address: Telephone: PWS Owner or Manager's Name: 3. Alternate Water Source Available: Yes/No if yes, give name and location: 4. Location of Tampering: Distribution   Water Storage   Treatment   Raw Water Source   Treatment Chemicals Line Facilities Plant  3. Other (explain): 5. Contaminant Source and Quantity: 7. Date and Time of Tampering/Threat: 8. Caller's Name/Alias, Address, and Telephone Number: 9. Is the Caller (check ali that apply):	I Biological	Bombs, explosives, etc.
Name: Address: Telephone: PWS Owner or Manager's Name:  3. Alternate Water Source Available: Yes/No If yes, give name and location:  4. Location of Tampering: Distribution Water Storage Treatment Raw Water Source Treatment Chemicals Line Facilities Plant  Other (explain):  5. Contaminant Source and Quantity:  7. Date and Time of Tampering/Threat:  8. Caller's Name/Alias, Address, and Telephone Number:	☐ Chemical	Other (explain)
Name: Address: Telephone: PWS Owner or Manager's Name:  3. Alternate Water Source Available: Yes/No If yes, give name and location:  4. Location of Tampering:  □ Distribution □ Water Storage □ Treatment □ Raw Water Source □ Treatment Chemicals Line Facilities Plant  □ Other (explain):  5. Contaminant Source and Quantity:  7. Date and Time of Tampering/Threat:  8. Caller's Name/Alias, Address, and Telephone Number:	2. Water System Identification:	
PWS Owner or Manager's Name:  3. Alternate Water Source Available: Yes/No If yes, give name and location:  4. Location of Tampering:  1 Distribution   Water Storage   Treatment   Raw Water Source   Treatment Chemicals Line Facilities Plant  3 Other (explain):  5. Contaminant Source and Quantity:  7. Date and Time of Tampering/Threat:  8. Calter's Name/Atias, Address, and Telephone Number:	Name: Address:	
3. Alternate Water Source Available: Yes/No If yes, give name and location:  4. Location of Tampering:  1 Distribution   Water Storage   Treatment   Raw Water Source   Treatment Chemicals Line Facilities Plant  3 Other (explain):  5. Contaminant Source and Quantity:  7. Date and Time of Tampering/Threat:  8. Caller's Name/Alias, Address, and Telephone Number:	Telephone:	
4. Location of Tampering:  Distribution Water Storage Treatment Raw Water Source Treatment Chemicals Line Facilities Plant  Other (explain):  Contaminant Source and Quantity:  Date and Time of Tampering/Threat:  Caller's Name/Atias, Address, and Telephone Number:	PWS Owner or Manager's Name:	
Distribution	3. Alternate Water Source Availa	ible: Yes/No If yes, give name and location:
Distribution		
Line Facilities Plant  Other (explain):  Contaminant Source and Quantity:  Date and Time of Tampering/Threat:  Caller's Name/Alias, Address, and Telephone Number:  Is the Caller (check all that apply):	4. Location of Tampering:	
(explain):  5. Contaminant Source and Quantity:  7. Date and Time of Tampering/Threat:  8. Caller's Name/Alias, Address, and Telephone Number:  9. Is the Caller (check all that apply):		
7. Date and Time of Tampering/Threat:  8. Caller's Name/Alias, Address, and Telephone Number:  9. Is the Caller (check all that apply):	Îl Other (explain):	•
B. Caller's Name/Alias, Address, and Telephone Number:  9. Is the Caller (check all that apply):	5. Contaminant Source and Quar	ntity:
B. Caller's Name/Alias, Address, and Telephone Number:  9. Is the Caller (check all that apply):		
9. Is the Caller (check all that apply):	7. Date and Time of Tampering/T	hreat:
	8. Caller's Name/Alias, Address,	and Telephone Number:
] Male   [] Female   [] Foul   [] Illiterate   [] Well Spoken   [] Irrational   [] Incoherent	9. Is the Caller (check all that app	oly):
	☐ Male ☐ Female	Foul Illiterate

10	le the f	College Mail - College			
	Soft	Caller's Voice (check all t	nat apply):		
1	Slurred	☐ Calm	☐ Angry	[] Slow	[] Rapid
		[] Loud	() Laughing	[] Crylng	II Normal
ì	Deep	[] Nasal	☐ Clear	☐ Lisping	D Stuttering
00		□ High	I Cracking	0 Excited	1 Young
? F	amiliar (who d	did it sound like?)			-
? A	ccented (whic	th nationality or region?)			
11.	is the Co	onnection Clear? (Could i	t have been a wireld	ess or cell phone?)	
12.	Are The	re Background Noises?	-		······································
	D Street no	ises (what kind?)			
	☐ Machiner	y (what type?)			
···	☐ Voices (d	lescribe)			
	Children	(describe)			
	0 Animals (	what kind?)			
	Computer	r Keyboard, Office			
·	☐ Motors (d	escribe)			
······································	[] Music (wi	nat kind?)	***************************************		
	[] Other				
13.	Call Receiv	ed By (Name, Address, ar	nd Telephone Numb	er):	A.H.
	Date Call R	eceived:			
	Time of Ca	11:			
14.	Call Report	ted to:		Date/Time	
15.	Action(s) T	Taken Following Receipt (	of Call:		

#### Water System Report of Suspicious Activity

In the event personnel from your water system (or neighbors of your water system) observe suspicious activity, use the following checklist to collect as much detail about the nature of the activity.

1. Types of Suspicious A	ctivity:	
Breach of security systems open)	(e.g., lock cut, door forced	Changes in water quality noticed by customers (e.g., change in color, odor, taste) that were not planned or
Unauthorized personnel on	water system property.	announced by the water system
		☐ Other (explain)
Presence of personnel at the hours	e water system at unusual	
2. Water System Identifica	ition:	
Name: Address:		
Telephone:		•
PWS Owner or Manager's Nan	ne:	
3. Alternate Water Source	Available: Yes/No	If yes, give name and location:
4. Location of Suspicious	Activity:	
	r Storage	nt Plant
🛘 Other (explain):		,

5. If Breach of Security, What was the Nature of the Breach?
Lock was cut or broken, permitting unauthorized entry.
Specify location
Il Lock was tampered with, but not sufficiently to allow unauthorized entry.
Specify location
$\square$ Door, gate, window, or any other point of entry (vent, hatch, etc.) was open and unsecured
Specify location
① Other
Specify nature and location
6. Unauthorized personnel on site?
Where were these people?
Specify location
What made them suspicious?
☐ Not wearing water system uniforms
Something else? (Specify)
What were they doing?
7. Please describe these personnel (height, weight, hair color, clothes, facial hair, any distinguishing
marks):
8. Call Received By (Name, Address, and Telephone Number):
Date Call Received:
Time of Call:
9. Call Reported to: Date/Time:
10. Action(s) Taken Following Receipt of Call:

CHICK-HL-A	,	HAIN BAKERY & CAFE		ZAVBVIC	CHIVEDIC	DACTIVE DISSA	TOMS COULT	AUGUST VICON	ALCUST MOON.	THE CRUSSROADS	MISTER B'S PIZZA AND WINGS	JASWINE	THE KEG	MATT BS MAIN STREET PIZZA	LOS PORTALES	IOS POSTALES	THE WILLOW BISTRO	WIGGSTS HIDEOUT LLC	MILIOSYS LIDEOLIT I I O	THE ALLEY/CORVICENCE AND THE ALLEY CORVICENCE	APPLEBLES NEIGHBORHOOD GRILL & BAR	SHOGON	THE BURKHU SHACK	SIRLOIN STOCKADE	COUROU	QUOBA MEXICAN GRILL	PECASE LIC DBA HAZOLI'S	MAK I HAS RESTAURANT	Business Entity Name
1415 CHESTNUT ST	413 S 4TH ST	412 MAIN ST	1209 N 12TH ST	818 N 12TH ST	970 CHESTNUT ST	1501 N 12TH ST	715 S 12TH ST STE C	1550 LOWES DR	801 WALMART DR	808 CHESTNUT ST STE A	807 WALMART DR	506 N 12TH ST STE E	1051 N 16TH ST	1411 MAIN ST	1506 LOWES DR	305B S 12TH ST	124 N 15TH ST	410 MAIN ST	1415 MAIN ST	105 ARCADIA CIR	816 N 12TH ST	706 N 12TH ST	214 N 15TH ST	932 S 12TH ST	205 N 12TH ST	618 N 12TH	507 RUSHING WAY	1407 N 12TH ST	Physical Address
MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	Physical City
₹	₹	ΚY	₹	ΚŶ	₹	₹	ΚY	ΚΥ	₹	?	KY	₹	ΚY	Κγ	Κγ	<b>☆</b>	<b>?</b>	ΚΥ	₹	χ	₹	ΚΥ	₹	₹	KY	₹	KY	ζ	Physical State
(270)809-4600	(270)753-1155	(270)761-9453	(270)761-3333	(270)761-2858	(270)753-2975	(270)753-4521	(901)581-4029	(270)759-4653	(270)761-3888	(270)227-4604	(270)917-1111	(270)761-8424	(270)762-0040	(270)759-1234	(270)767-0315	(270)753-0000	(270)759-3233	(270)767-0020	(270)753-2202	(270)759-8866	(270)759-5551	(270)761-7486	(270)293-3237	(270)753-0440	(336)313-5226	(270)767-0300	(270)761-5555	(270)759-1648	Location Phone #

100 S 5TH ST	NEW LIFE CHRISTIAN CENTER/5th & MAIN	1100 CHESTNUT ST	402 N 12TH ST	RP/SUBWAY 622 N 12TH ST	COUNTRY STORE #460 650 N 12TH ST	668 N 12TH ST	706 N 12TH ST	HOUSE 1514 HWY 121 BYP N	GER 801 PARAMOUNT DR	317 CHESTNUT ST	DWICHES 1301 MAIN ST	110 S 12TH ST	409 N 12TH ST	1201 CHESTNUT ST	E'S 1500418 505 N 12TH ST	1111 CHESTNUT ST	1113 CHESTNUT ST	INC 110 S 12TH ST	804 CHESTNUT ST	CKS 966 CHESTNUT ST	SAMMONS BAKERY 974 CHESTNUT ST	201 N 12TH ST STE A	S LLC 1201 PAYNE ST	300 N 12TH STE B	1203 CHESTNUT ST STE C	A MEXICANA 505 S 12TH ST	700 CHESTNUT	S 107 N 12TH ST
MURRAY	Murray	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	Murray	MURRAY	MURRAY	Murray	Murray	Murray	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY
Ş	ΚΥ	ΚY	ΧΥ	ζ?	ΧY	₹	₹	~	₹	<b>₹</b>	₹	₹	Κ?	ζ/	~	ζ	ζ	ΧΥ	₹	ΚY	₹	₹	₹	₹	<b>₹</b>	<b>₹</b>	ΚΥ	₹
(270)753-1622	(270)994-1417	(270)753-9697	(270)554-8835	(270)534-4485	(270)762-0081	(270)992-6500	(270)761-7486	(270)933-8175	(270)759-2480	(270)917-4227	(270)753-7715	(270)994-5511	(770)354-3091	(270)917-7255	(270)753-3246	(270)759-4695	(270)759-9205	(270)753-3030	(270)293-0773	(270)917-2825	(270)753-5434	(270)293-7573	(270)761-4800	(270)761-3865	(270)753-0333	(270)767-1627	(270)753-9383	(270)753-5548

OFF THE HOOF	EAIS ON IZIH	EVEC ON TOTAL	FRO ITA BOWLS	FOREYES	BORFYEC	COFORDIZZA	OFF TOWN TOOM	rara JOHNS	BABA IOTRIC	BAD PORCED.	BALDAIC BALDAIC	BIIDGED KING #444F2	COVE CAFE	FAM HERNANDEZ LLC - DBA MI PUEBLO	TAN 215	TAP 226	SONIC DRIVE IN	CAIRY QUEEN	SCOOPS & SPRINKLES
912 S 12TH ST	1306 S 12 TH ST	912 S 12TH ST	506 N 12TH ST	819 N 12TH ST	317 CHESTNUT ST	501 S 12TH ST	1104 CHESTNUT ST	656 N 12TH ST	806 CHESTNUT ST	605 S 12TH ST STE C	814 N 12TH ST	1051 N 16TH STREET STE F	1306 S 12TH ST STE B	117 S 12TH	216 N 15TH ST	500 S 12TH ST STE B	217 S 12TH ST	1303 MAIN ST	1302 MAIN ST
MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	MURRAY	Murray	MURRAY	MURRAY	Murray	MURRAY	MURRAY	MURRAY	Murray
₹	?	~	?	₹	₹	?	₹	?	ΚŶ	₹	?	ΚY	~	₹	KY	₹	~	₹	₹
(270)226-1096	(270)307-2615	(270)917-1582	(270)715-3123	(270)873-4935	(270)768-7106	(270)917-1567	(270)873-4868	(270)753-6666	(270)767-0054	(270)761-2646	(270)759-8266	(270)703-7485	(270)703-4735	(270)873-1003	(270)761-4827	(270)761-7777	(270)435-4726	(270)753-4925	(310)926-7188

## SECTION 10: COPIES OF PUBLIC NOTICES AND EDUCATION MATERIALS

- Your local water utility can provide information on what contaminants, if any, have been found in the public water supply, what the community is doing to protect the water supply, and how you can help.
- Visit-www.murrayky.gov or call (270) 762-0345 for more information about Wellhead Protection.
- Contact your Solid Waste Management to find out where you can recycle motor oil, antifreeze, chemicals and other hazardous products.
  Murray Sanitation Dept. Phone: (270) 762-0380 Calloway County Solid Waste Coordinator Phone: (270) 761-5705

# What you can do

- Recycle used oil, automotive fluids, batteries, and other products. Don't dispose of hazardous products in toilet, storm drains, wastewater systems, creeks, alleys, or the ground. This pollutes the water supply.
- Reduce the amount of fertilizers, pesticides, or other hazardous chemicals that you use. Buy only what you need so that you don't have to dispose of leftovers. Read all the labels and follow directions.
- Properly dispose of outdated or unused household chemicals stored in your basement, garage, or barn.
- Properly abandon and plug water wells that are no longer in use.

## Protecting Your Drinking Water

Wellhead Protection



Murray Water System Murray, Kentucky

# What Is Wellhead Protection?

Wellhead Protection is a program designed to protect your source of drinking water through a program of pollution prevention. Ground water constantly moves through the earth toward wells. Wellhead protection is intended to prevent contamination which occurs on the land surface from reaching the well water below by protecting the land surface above.

Drinking water protection is the responsibility of all citizens. The Wellhead Protection Plan will insure that a clean water source is available for your community's current needs and a supply is preserved for future generations.





An aquifer is any type of geologic material, such as sand or sandstone, which can supply water to wells or springs.

Murray pulls water from the McNairy Aquifer at an average of 3.6 million gallons a day.

# **Ground Water**

Ground water moves slowly through soil and rock crevasses to reach underground aquifers. Slow transport through the soil filters and cleans the water.

Foreign substances, such as bacteria and chemicals can be dissolved in water at the surface and transported with ground water into the aquifer, polluting the ground water. Human activity on land can affect ground water quality. For example, agricultural practices can add fertilizers and herbicides to ground water. Industrial activities may add chemicals and metals. Septic systems may add bacteria and household chemicals.

Damaged and abandoned wells can also become a direct conduit for surface or near surface contamination to reach the underlying aquifer.

Once ground water is contaminated, it is very expensive to purify or replace. Protecting our ground water from all sources of contamination can be accomplished through the cooperation of citizens, government, and businesses.



# MURRAY KENTUCKY

CITY OF

Home

I want to... ▼ Government →

Departments -

## **Public Works**

Central Garage

Natural Gas System Sanitation

Stormwater Management Sanitary Sewer System

Street Department

Utility Taps & Fees

Fog Water System

Online Payments

Customer Service

Doing Business In Murray

Living In Murray

**Boards & Commissions** 

Wellhead Protection

Community Organizations

EPA Links for topographic maps click here

For information on Preparing a Groundwater Protection Plan click here

City Employment

Downloadable Forms

Home > Public Works > Water System > Quality

Contact Us

## Water Quality

Water Plant Supervisor - Paul Wood

available in hard copy in City Hall. This information will always be for the previous The information below is contained in one PDF that was mailed in billing and is also

### Purpose

continually improve the water treatment process and protect our water resources supply of drinking water. We want you to understand the efforts we make to delivered to you over 2022. Our goal is to provide to you a safe and dependable want to keep you informed about the quality of our water and services we have We are very pleased to provide you with the 2022 Annual Water Quality Report. We

located within the McNairy Formation Aquifer. Water systems in Kentucky must test for many contaminants Our water supply comes from a ground water source and draws from six wells level and the lowest price as we meet the needs of our community We are committed to ensuring that the quality of your water remains at the highest

treatment plant office. Murray Water System routinely monitors for contaminants in For a complete listing of the tests actually conducted you may contact the water your drinking water according to Federal and State laws. The available table shows Only those contaminants that were detected are included in the test results table the results of our monitoring for the period of January 1st to December 31st, 2022

## **Public Works Contacts**

- Drainage Issues (270) 762-0350 x4148
- Report A Leak (270) 762-0336
- Sanitation/Refuse (270) 762-0380
- Sanitation Trans (270) 489-2584
- Street Dept (270) 762-0377
- Utility Application (270) 762-0336
- Utility Problems (270) 762-0336
- Wastewater Plant (270) 762-0340
- Water Plant (270) 762-0345
- After Hours Emer (270) 753-1621

## Water System Links:

- Water System Home
- Service Area
- Tap Fees
- Backflow information

Murray Water System's wellhead protection plan is a nationally recognized model to determine the susceptibility of the wells to potential sources of contamination. The Murray Water System has been nominated by the Kentucky Division of Water to represent Kentucky for the EPA's Region 4 Award of Excellency.

## **EPA Limits**

radioactive material, and can pick up substances resulting from the presence of animals or human activity As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells

prescribes regulations that limit the amount of certain contaminants in water provided by public water systems herbicides, organic chemical contaminants, and radioactive contaminants. In order to ensure that tap water is safe to drink, EPA Special Precautions Contaminants that may be present in source water include microbial contaminants, inorganic contaminants, pesticides and

#### PREPARING A GROUNDWATER PROTECTION PLAN

Revised June 2008

This guidance document is based on 401 KAR 5:037, Section 3(3) (a) through (g).

The activities that require the development and implementation of a Groundwater Protection Plan (GPP) are listed in Section 2, pages 4-6, of the regulation. Read this section thoroughly and note any of the listed activities that are or will be conducted at your site. You will want to read Section 2(3) and 2(4) to determine whether any of your activities may be excluded from the GPP requirement.

All the activities conducted at your site that require a GPP must be included in one GPP. Paper copies of Cabinet-written generic groundwater protection plans are available from the GPP Program or may be downloaded from the GPP Program Web site for the following activities:

- On-site residential septic system
- 2. Domestic water well
- Monitoring well
- 4. Water well driller
- 5. Home heating oil

Go to <a href="http://water.ky.gov/gw/gwprotection/gwplans">http://water.ky.gov/gw/gwprotection/gwplans</a>. Click on Generic GPPs in the left-hand side bar. The regulation and bar. Fact sheets and mini-guidances are also listed in the left-hand side bar. The regulation and guidance may be accessed by clicking on the underlined words in the information on the right-hand side. If your facility operates an onsite septic system, water well, or monitoring well, you must include them in your GPP. To adapt the practices in the generic GPP to your particular GPP, contact Pat Keefe, Coordinator, GPP Program at (502) 564-3410 for instructions.

#### SITE SPECIFIC VS GENERIC GPPS

You are STRONGLY ADVISED to develop a site specific GPP, even if there are numerous facilities operating under one corporate name.

#### Site Specific GPPs

- are tailored to the site for which they are developed
- are not required to be submitted to the GPP Program for review, unless called in by a DEP inspector or the GPP Program Coordinator, or as a requirement in an Agreed Order

#### Generic GPPs

- must be approved by the EEC Cabinet prior to start up of the activity
- must be public noticed in two publications of widespread distribution
- must undergo a 30 day public comment period following public notification

#### **USING THE GUIDANCE**

#### Follow the Guidance Format.

Follow the format provided in the guidance to develop your GPP. Using this format will assure that most, if not all, of the information the GPP Program deems necessary for adequate review is included. It also organizes the information so that any member of the general public who asks to read your plan can follow it without needing additional explanation.

#### Use all Headings and Subheadings as stated in the Guidance.

Do not make up your own headings or subheadings. Use the headings and subheadings in the order provided in the guidance. Do not combine headings or leave out headings.

#### Provide all Information requested in the Guidance, where applicable.

Be sure that you have provided the information requested. The review process is delayed when necessary information has been omitted.

#### Do not reference SPCC or KPDES Best Management Practices (BMPs) Plans.

The GPP cannot contain broad referrals to SPCC or KPDES Stormwater BMP Plans. However, the practices in those plans that are protective of groundwater may be used in the GPP. See Section C of this guidance, 2<sup>nd</sup> bullet, page 4.

There are three special conditions that must be met in order to incorporate a program by reference. They are listed in Section C in this guidance.

The GPP must stand alone. The GPP may be a separate section or chapter in other BMP plans, but it must contain all the information required for a GPP. It cannot be included in bits and pieces throughout another BMP plan.

#### WHEN YOU HAVE COMPLETED THE GPP.....

When you have completed your plan, review the draft to be sure that the GPP has addressed all the activities occurring at your site that are covered by the Groundwater Protection Plan Regulation and that you have provided all the information, where applicable, for each section.

#### Implement your GPP!

To be in compliance with 401 KAR 5:037 the GPP must be implemented **immediately** following development. This applies to **all** GPPs, even when a GPP is submitted to the GPP Program for review. Implementation does not depend upon approval by the Coordinator of the GPP Program. If your GPP is in review, continue to implement the practices in the submitted GPP. If changes are required, then the new practices should be implemented.

#### Submitting the GPP

Submittal of a site specific GPP for review by the GPP Program is optional unless:

- 1. required as part of an Agreed Order
- 2. stated by a DEP inspector as a requirement in a Notice of Violation
- 3. called in by letter by the Coordinator of the GPP Program.

To submit your GPP for review and approval, send one (1) copy of the GPP to Patricia Keefe, Coordinator, Groundwater Protection Plan Program, Watershed Management Branch, Kentucky Division of Water, 14 Reilly Road, Frankfort KY 40601. You will receive a letter stating that the GPP has been received.

Your initial GPP submittal and any further drafts will not be returned. Be sure you keep a copy of each draft so that required changes can be made. The approved draft will be retained in the GPP Program files. You will receive a letter stating the GPP has been approved.

It is not necessary to include the Groundwater Protection Regulation or this guidance document with the GPP when submitting it to the GPP Program for review.

If you have any questions, please contact Patricia Keefe, Coordinator, GPP Program, Watershed Management Branch, Kentucky Division of Water, 502/564-3410.

#### Section A. GENERAL INFORMATION

#### 1. Name and Address of Facility

- a. Facility Name
- b. Facility Address
- c. County
- d. Latitude and longitude in degrees, minutes, and seconds
- e. Mailing Address of Facility, if different from Facility Address
- f. If facility is oil/gas production site, provide:
  - Division of Oil & Gas permit numbers for ALL producing wells.
  - 2. Division of Water registration number for facility.

#### 2. Person Developing GPP

- a. Name
- Address (business address, not home address unless business operates out of the home)
- Telephone Number (business phone, not home phone unless business operates out of the home)

#### 3. Person Responsible for Implementing GPP

- a. Name
- b. Address (business address)
- c. Telephone Number

#### 4. Location of Facility on Topographic Map

Only a United States Geological Survey topographic map will be accepted. Copy the 8 1/2  $\times$  11 inch section of the map that contains the location of your facility. Do <u>not</u> enlarge or reduce the size of the map. If that section does not have the <u>name</u> of the topographic quadrangle, please write it on the map. Mark your facility location with an  $\times$ .

#### 5. Brief Description of Facility Operation

#### Section B. ACTIVITIES THAT HAVE THE POTENTIAL TO POLLUTE GROUNDWATER

- In this section list all the activities that are conducted at your facility that require a GPP.
- List actual activities; do not quote the regulation.

Say: store diesel fuel in 1,000-gallon underground storage tank.

Don't say: "Storing, treating, disposing, or related handling of hazardous waste......in tanks, drums, or other containers, or in piles."

 Include all activities at your site subject to the regulation, even if protective practices are already being implemented.

For example, if an aboveground storage tank (AST) has secondary containment, it still must be listed as an activity subject to 401 KAR 5:037.

- Give complete details about aboveground and underground tanks, including
  - 1. Number of each type of tank
  - 2. Capacity of each tank
  - 3. Identification of contents of each tank
- Details about practices to protect groundwater should be addressed in the next section. The following is a sample listing of activities.
  - 1. Store diesel fuel in 500-gallon aboveground storage tank (AST)
  - 2. Operate septic system (constructed wetland or sewage lagoon)
  - 3. Apply fertilizer and herbicides to maintain golf course
  - 4. Store gasoline in 10,000-gallon underground storage tank (UST)

#### Section C. PRACTICES SELECTED TO PROTECT GROUNDWATER FROM POLLUTION

- For each activity listed in Section B, briefly describe the practice that will be used to protect groundwater. See Section 3(4)(a) through (p) and 5(a) through (e), pages 7-8 of 401 KAR 5:037 for the variety of types of practices that may be used. Note that (p) enables you to use other practices to protect groundwater that are not listed in Section 4.
- Practices given in SPCC or KPDES Best Management Plans may be
  used in the GPP provided that they are protective of groundwater. If you
  incorporate practices or information from those plans, you MUST state
  page numbers and sections in those plans in which those
  practices/information are found, and include the SPCC or BMP Plan.
- The Best Management Practices (BMPs) or practices you select must be described. Simply stating that BMPs will be used is too vague. You must briefly describe the practice and tell how it will protect groundwater.
- Information about secondary containment for ASTs must include the kind of material (metal, concrete, asphalt, compacted clay or dirt) making up the floor and berms (sides) of the containment area.
- If there is no secondary containment for an AST, state so.

- If any of your activities listed in Section B are regulated under another program, you may incorporate by reference the groundwater protection practices you are required to use by that program.
- There are special conditions that must be met to incorporate by reference.
   Only programs that meet all 3 of the following conditions may be incorporated by reference. These conditions are:
  - 1. management and design standards;
  - mandatory monitoring for groundwater pollution or leak detection methods; and
  - 3. a specific corrective action plan. (401 KAR 537, Section 3(7)(a) and (b).
- USTs are regulated by the Underground Storage Tanks Program. The practices required by this program are to be incorporated by reference. To do so, follow exactly the format below:
  - a. Cite the UST regulation you're governed by.
  - b. State that this regulation specifically requires the following:
    - 1. management and design standards;
    - mandatory monitoring for groundwater pollution or leak detection methods; and
    - 3. a specific corrective action plan.
  - c. The person responsible for implementing the plan must sign a statement that the facility is in compliance with the regulation cited in (a) above. Use the certification statement below:
    - I <u>(typed name)</u> certify that this facility is in compliance with <u>(regulation)</u>.

#### Signature Date

Use the format shown above for incorporating protective practices of other programs. Be sure to replace the UST regulation with that of the regulation of the program being incorporated by reference.

#### Section D. IMPLEMENTATION SCHEDULE

- The GPP must be implemented immediately. Implementation does NOT depend upon approval of the GPP.
  - Having a GPP, cabinet-approved or not, on file in an office somewhere does **NOT** keep a facility in compliance with 401 KAR 5:037. The GPP **must be** retained and implemented at the site for which it was developed.
- If all protective practices are already being implemented, state so. If protective
  equipment or devices (secondary containment structures, new ASTs with double
  walls and overfill alarms, etc.) must be ordered or built within budget constraints,
  list what is to be done and prospective date by which the protective practice will
  be completed.

#### Section E. EMPLOYEE TRAINING

- You are developing a <u>Groundwater Protection Plan</u>; therefore, training must focus on <u>groundwater protection</u>.
- Training must include educating the employees about the importance of groundwater protection.

Training must include all aspects of the GPP. Briefly describe topics to be covered in training the employees about groundwater protection practices.

 State the frequency of training sessions—initial and refresher sessions. Be specific, such as initially on hire and biannually or annually. "When needed" or "frequently" are too vague.

#### Section F. INSPECTION SCHEDULE

Inspections are conducted to insure that the practices selected to prevent groundwater pollution are being used and are properly functioning.

- State the frequency of the inspections (daily, monthly, quarterly, etc.) and what is to be inspected.
- Include an Inspection Checklist showing what is to be inspected, date, observations, actions taken, if any. This checklist is documentation that you are implementing the GPP.

#### Section G. CERTIFICATION STATEMENT

- The person who can make the managerial and/or financial decisions that are required to implement your plan should be the one signing the certification statement.
- Use the following certification statement verbatim.
  - I <u>(typed name)</u> certify that this Groundwater Protection Plan complies with the requirements of 401 KAR 5:037. I have read the terms of the plan and will implement its provisions.

#### Signature Date

#### Section H. REVIEW LOCATION FOR GROUNDWATER PROTECTION PLAN

Section 4(7) of 401 KAR 5:037 provides for public inspection of GPPs (See pages 11-12). Should you choose to designate the Kentucky Division of Water, 14 Reilly Road, Frankfort, or any site other than the facility location for public review, a copy of the recertified GPP must be sent to the GPP Program or other site every three years, or whenever recertification is required by a change in activities being conducted.