



**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

**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: Allan Shingleton
300 Sower Boulevard, 3rd Floor
Frankfort, Kentucky 40601 or allan.shingleton@ky.gov

For assistance contact Allan Shingleton at (502) 782-6907 or allan.shingleton@ky.gov

System Information:

PWS Name: Benton Water and Sewer

PWS ID Number: KY0790029

AI Number: 2922

Contact Person/Title: Tony Seavers

Mailing Address: 1009 Main St. Benton, KY 421

Telephone: 270-527-3677 Email: tseavers@cityofbenton.org

System Type*: Community

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

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

County: Marshall ADD: Purchase

WWD Permit #: 0483 Permitted Amount (mgd): 0.95

Population Served: 3226

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

WHPP Changes Summary: No changes have occurred since the previous submittal

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

A county map with the location of the treatment plant has been attached.

Section 2: Water Withdrawal and Water Quality

There have been no changes to the water withdrawal rates or the water quality since the previous submittal.

Section 3: Change or Modification to Groundwater Source

There have been no modifications to Benton's water supply wells since the previous submittal. Copies of the Well Inspection Records have been attached.

Section 4 (REQUIRED): Planning Team

Leader:

Tony Seavers – Superintendent Benton Water and Sewer

Team Members:

Chad Warren – Operator
Rita Dotson – Mayor
Bethany Cooper – City Treasurer
Harry Green – Fire Dept. Chief

Section 5: WHPA Delineation

There are no modifications to the WHPA Delineation since the previous submittal.

Section 6 (REQUIRED): WHPA Map

A map with Benton's delineated WHPAs is attached.

Section 7 (REQUIRED): Contaminant Source Inventory

A Contaminant Source Inventory Map and corresponding CSI table have been attached.

Section 8 (REQUIRED): Management Strategies

Provide a discussion of the previous and newly proposed management strategies. 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.

Previous Management Strategy Update:

A Groundwater Protection Plan will be prepared for the municipal sewage treatment plant and the water plant that will address all covered practices as specified by 401 KAR 5:037. A GPP is required for many of the area businesses identified in the CSI. Those businesses requiring a GPP will be contacted by the KY division of Water. Owners of all the potential contaminant sources within the WHPA will be notified of their inclusion in the WHPA and requested to notify the water system personnel in the event of a spill or release of potential contaminants. Benton was looking into acquiring grant money for fencing around the three supply wells as an added security measure. A map of the WHPA and potential contaminant sources will be created for the local emergency services to use.

Newly Proposed Management Strategies:

Benton has recently updated the Groundwater Protection Plan for its water treatment plant and will continue to use the annual Consumer Confidence Report to notify its customers that an update to the Wellhead Protection Plan has taken place. The City will continue to look into

possible avenues for funding of fencing around the supply wells for security measures. Recently a new roofing was added to the supply well buildings as well as new doors. Benton is also requesting two Water Supply Protection road signs to be placed at WHPA boundaries.

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	(270) 527-86778
City of Benton Fire Department	(270) 527-3957
Benton Police Department	(270) 527-3126
Marshall County Office of Emergency Management	(270) 527-4739
Local Emergency Dispatch Click here to enter text.	911

State and Federal Assistance	Phone Number
Kentucky DOW (Frankfort)	(502) 564-3410
Kentucky DOW Associated Field Office Paducah	(270) 898-8468
Kentucky Environmental Response Team 24 hour response line	(502) 554-2380 (800) 928-2380
Kentucky State Fire Marshall	(502) 573-0382

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.

The following media outlets will be used in the event of an emergency:

Newspaper, Television, and Radio Stations	Phone Numbers
Local Radio station: WCBL	(270) 527-3102
Local Television station: WPSDTV - Paducah	(270) 527-3162

Potential Future Problems:

Possible contamination could occur from overflows from the sewer treatment plant. The liner of the primary pond has been inspected and will continue to be inspected on a routine basis.

Alternative Water Supply (Short and Long Term):

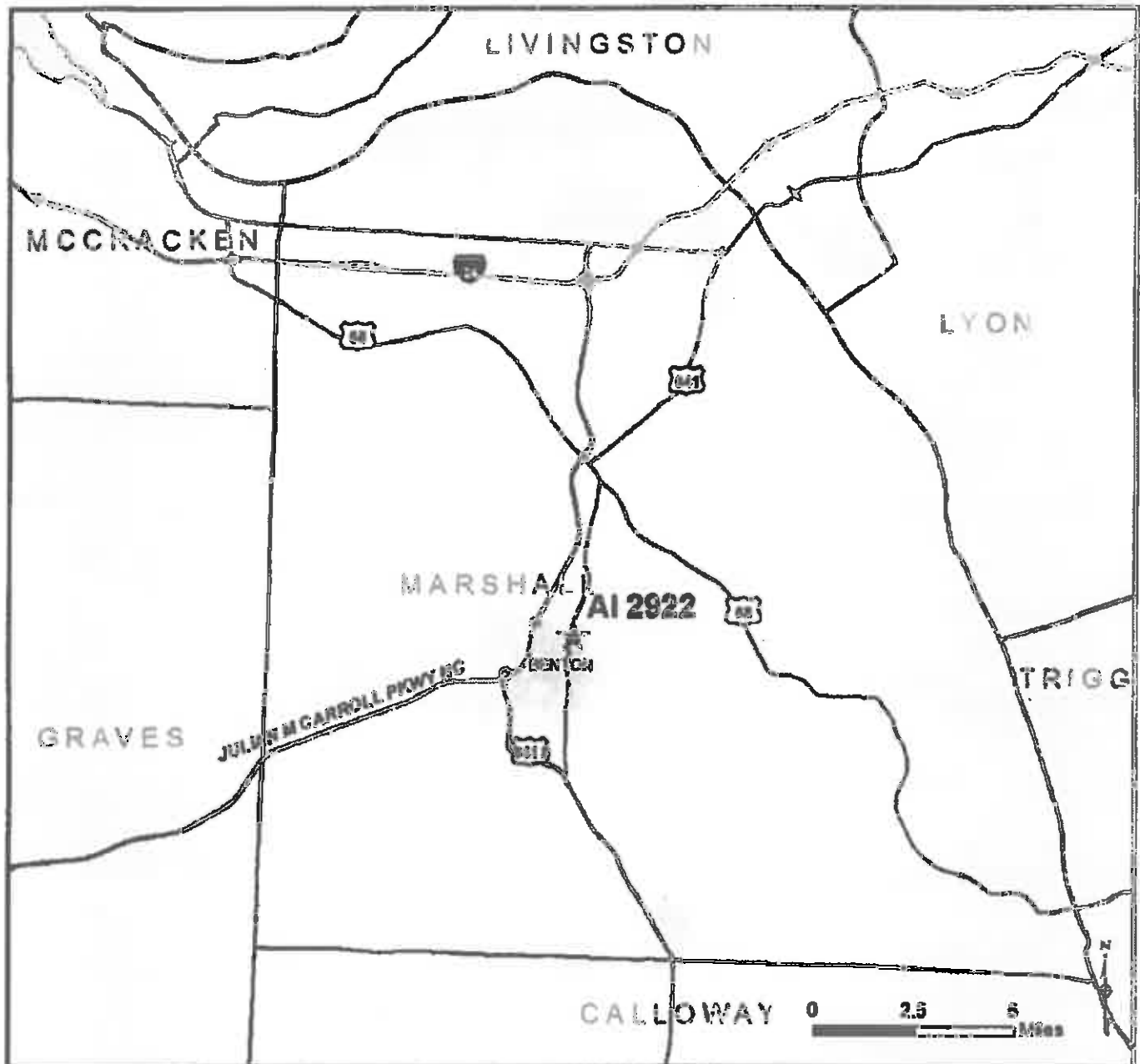
Short Term: Benton Water is connected to North Marshall Water District and to Symsonia Water District. These interconnects provide an additional source of water in the event of a water supply problem with Benton's wells.

Long Term: Drilling new wells would be the long term alternative water supply. Benton is currently budgeting monthly for well improvements and/or new well construction.

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



Wellhead Protection Plan
5-yr Update

Benton Water & Sewer System
Marshall Co., KY
PWS ID 0790029
AI # 2922

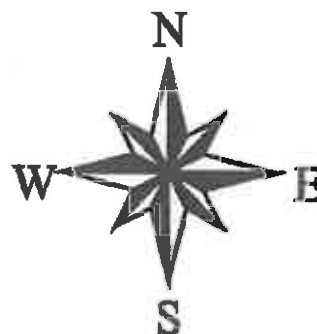


Benton Wellhead Protection Areas



0.6 0 0.6 1.2 Miles

- PWS wells
- Wellhead Protection Areas
- WHPA-1
- WHPA-2
- WHPA-3





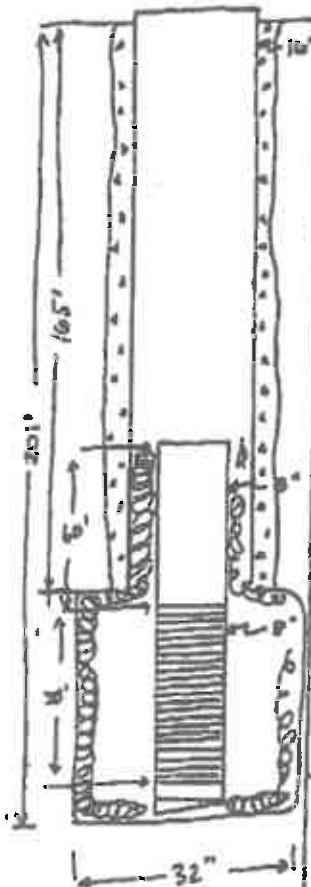
Benton Water & Sewer System VMPA

- Water Wells (Geothermal Heat Pumps)
- Water Wells (Other)
- Water Wells (Domestic)
- Water Wells (Agriculture)
- Potential Contaminant Sources
- Agriculture Use
- Water Supply Protection Signs
- Water Wells (PWS)
- Zone 1: 100 Day Time of Travel for potential contaminant
- Zone 2: 5 year Time of Travel
- Zone 3: Hydrologic Boundary

0 1 2 Miles

ALL MEASUREMENTS TAKEN FROM (GROUND) (TOP OF FOUNDATION) (TOP OF CASING) (TOP BASE PLATE)

DRAWING OF THE WELL



STARTED WELL 12/3 1990 AND COMPLETED 12/8 1990
 TOTAL DEPTH 201 ELEVATION 273 STATIC WATER LEVEL 22
 LENGTH SURFACE CASING — SIZE — THICKNESS —
 CEMENTED WITH — SACKS CEMENT TYPE PACKER —
 LENGTH WELL CASING 165 SIZE 16 WEIGHT 275 lb/ft
 CEMENTED WITH 120 SACKS CEMENT TYPE PACKER —
 INNER CASING LENGTH 60 SIZE RST WEIGHT 5 lb/ft
 WITH — GUIDES LOCATED — TYPE BACKOFF —
 LEAD SEAL — BACKPRESSURE VALVE — GUIDE —
 WELL STRAINER MAKE — SIZE 2 LENGTH 30 OPENING 0.05
 TYPE MATERIAL ST PLATING WALD CONNECTIONS —
 SIZE HOLE DRILLED FOR SURFACE CASING 26 WITH —
 SIZE HOLE DRILLED FOR WELL CASING 28 WITH —
 SIZE HOLE DRILLED FOR STRAINER 28 WITH —
 TARDS OF GRAVEL USED 12 HOW PLACED —
 HOW WAS WELL DEVELOPED AIR
 NOTES: —

RIG USED R.C. DRILLER Charlie Crook

SERIAL NUMBER 52885 MAKE L.B. FOUNDATION Concrete
 LENGTH COLUMN 20 SIZE 2 TYPE 0 1/2 LENGTHS —
 BOWL SIZE 2 TYPE THC STAGES 4 MATERIAL IMPELLER 0.2
 MATERIAL BOWL CI WITH — PORTS AND — SHAFT —
 SUCTION SIZE 6 LENGTH 20 SUCTION STRAINER 2
 IS PUMP SEALED HOW — WHERE — WITH WHAT —
 LUBRICATOR TYPE Ricc SIZE 10T VOLTAGE 220
 LENGTH OF AIRLINE X SIZE — TYPE MATERIAL —
 AIR RELEASE VALVE TYPE — SIZE 2
 SIZE SURFACE DISCHARGE — TYPE — DAYTON COUPLING —
 PRESSURE GAUGE — SPEED 1760
 NOTES: —

RIG USED TO SET PUMP STAND INSTALLER Larry Howell
 DATE PUMP INSTALLED 12/11 1990 DATE IN OPERATION 12/12 1990

MAKE US HP 30 FRAME A&F6UP PHASE 3 CYCLE — VOLT 220/240
 SPEED 1760 MODEL — SERIAL NUMBER 2P29850
 TOP BEARING — BOTTOM BEARING — RATCHET —
 STARTER — PRESSURE SWITCH — FLOAT —

MAKE — MODEL — SIZE — KAYID — NO. —
 SIZE PULLEY — TYPE MOTOR FRAME —

MAKE — MODEL — HP — SERIAL NUMBER —
 SPEED — SIZE PULLEY — FOUNDATION —
 TYPE FUEL TANK — MAKE MAG — NO. —
 MAKE STARTER — NO. — TYPE FUEL —
 MAKE FLEXIBLE SHAFT — SIZE — LENGTH — BELT LENGTH —

PURPOSE FOR WHICH THIS WATER IS USED CITY
 TEMPERATURE — IS WATER CLEAR YES CAPACITY 430 GPM
 SAND — HARDNESS — PH — IRON — NCI —
 TYPE TREATMENT USED —
 IS THERE A BERRICK OVER THE WELL NO HEIGHT — TYPE —
 CAN TRUCK OR RIG EASILY GET TO WELL YES
 PUMP HOUSE Concrete Block SIZE HATCH 6x11

CONTRACT NO. 78 H.R.O.

OUR WELL NO. — THEIR WELL NO. 4 IN TEST HOLE NO. X
 LOCATION OF THE WELL Behind WATER PLANT
 INSTALLED FOR Benton WATER Dept
 ADDRESS CITY Benton Ky COUNTY Marshall STATE Ky

YEAR 1990

KENTUCKY WATER-WELL RECORD				0002-0939		①	
Completed copies of this form are to be submitted within 30 days of well completion to the property owner and to the KY Natural Resources and Environmental Protection Cabinet, Division of Water, 50 Holly Road, First Floor Plaza, Frankfort, Kentucky 40621. (TYPE OR PRINT CLEARLY)							
a) GENERAL INFORMATION							
Well Owner's Name		Owner's Phone		Well Use		Hydrographer or Hydrologic Region	
BONTON WATER DEPT		(502) 527-8677		☐ domestic ☐ municipal ☐ irrigation ☐ industrial ☐ stock ☐ dry-dock ☐ other		☐ Blue Grass ☐ Ohio River Alluvial ☐ E. Coal Field ☐ W. Coal Field ☐ West. Plateau ☐ Jackson Purchase	
Mailing Address		Well Address (if different from owner's address)		City		State Zip Code	
101 E. 11TH ST		S.A.A.E.		BONTON		KY 42025	
City		State		Zip Code		City	
BONTON		KY		42025		BONTON	
USGS Quadrangle Name		County		Latitude		Longitude	
HAYDIN		MARSHALL		36° 51' 48" N		88° 20' 57" W	
b) WELL CONSTRUCTION				c) SKETCH			
Start Date: 12/1/90 Finish Date: 12/8/90 Drilling Method: Type of Work: ☐ Air Rotary ☒ New Well ☐ Mud Rotary ☐ Rework ☐ Cable ☐ Deepen ☐ Auger ☐ Plug ☐ Dig Other ☐ Other				Date: 12/1/90 Shut-in pressure of flowing well: 39.8 (psi) Discharge: 3.2 (gpm) Static level below land surface (ft) before pumping: 3.2 Testing Method: ☒ Pump ☐ Slowing ☐ Saker ☐ Other Drawdown: EL. after 8 hours pumping at 3.2 gpm () gpm EL. after 5 hours pumping at 3.2 gpm () gpm			
Surface EL: 723.5 Total Depth: 20.5 Depth to Bedrock: 0.5 Water Level: 5.2							
d) WATER QUALITY Date: 12/1/90 Well developed/pumped/bailed: B. Number at 300 gpm before sampling Appearance: Color: Dig clear Dig none ☐ cloudy ☐ rusty ☐ muddy ☐ sulfur ☐ other ☐ other Type and amount of disinfectant used: Dichlor 10.601 Results of () fecal () total coliform analyses: 5.1 colonies per 100 ml Test Performed By: ☐ other P-4 laboratory (attach copy of lab report) Date: 12/11/90				e) OPTIONAL ANALYSES: (attach lab analyses, if available) Date: Well developed/pumped/bailed: Number at gpm before sampling: ☐ pH ☐ Temperature ☐ Specific Conductance ☐ Iron ☐ Sulfate ☐ Chloride ☐ Hardness Other:			
f) WELL COMPLETION PL below surface From To Hole diameter Coating (s.s.) Coating type 0 165 28" 16 RIG Steel 165 200 28" 8 RIG 200 200 28" 8 65 Screen				g) PUMP DATA: Was pump set? () yes () no Date set: 12/11/90 Type: Horsepower 2.0 Installed by: ☐ Jet Pumping 440 GPM () Driller ☒ Turbine Pump intake set at 118" () Pump Installer ☐ Submersible feet below ground surface () Home Owner ☐ Other or Other			
h) LITHOLOGIC LOG (for additional space, use additional forms): Feet Below Surface Description Water Quality and GPM From To 0 35 CLAY 35 46 SAND & GRAVEL 46 67 FINE SAND & CLAY 67 100 HARD SHALE 100 159 CLAY & SAND 159 170 SAND 170 181 SAND & GRAY - BLUE 181 205 SAND & BROWN GRAVEL				i) COMMENTS (for additional space, use additional paper): (a) AFFIRMATION: The work described above was done under my supervision, and this report is true and correct to the best of my knowledge. (NOTE: The water-well driller is not responsible for natural groundwater quality or quantity encountered while drilling or completing this well.) Well Driller's or Rig Operator's Name (Print Type): LAYNE CENTRAL CO (Name Certificate Number or Rig Operator's Permit No.) 0091-0118-03 Signature of Responsible Certified Driller: Laurence B. Brummett Company Mailing Address: P.O. Box 3396 City: Owensboro State: KY Zip Code: 42301 Date: 12/11/90 Attached pages? () Yes () No Number of sheets: 1			

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.

[Click here to enter text.](#)

*****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: 2-9-21 [Click here to enter text.](#)

Printed Name/Title: Tony Seavers – Superintendent Benton Water and Sewer

New CSI completed by wellhead protection staff 2015

Contaminant Source Inventory and Susceptibility Analysis for Benton Water and Sewer System

Contaminant Source ID #	Contaminant Source/Land Use	Address	Proximity	WHPA	Contaminant Value	Hydrologic Sensitivity	Numeric Rating	Susceptibility Ranking
1	Benton WWTP	East 4th Street	1	3	2	1	9	Low
2	Tiptons	331 Poplar Street	2	3	2	1	9	Low
3	D & W Laundry & Historic Tribune	300 East 12th Street	1	3	2	1	9	Low
4	C & H Auto Sales	305 East 4th Street	1	3	2	1	9	Low
5	Parkway Chrysler	101 West 5th Street	1	3	2	1	9	Low
6	Country Chevy	104 West 5th Street	1	3	2	1	9	Low
7	Auto Zone	120 West 5th Street	1	3	2	1	9	Low
8	Select Auto Sales	210 West 5th Street	1	3	2	1	9	Low
9	Collier Funeral Home, Inc	211 West 5th Street	1	3	2	1	9	Low
10	Haltom Cemetery	Haltom Cemetery Rd.	3	3	2	1	9	Low
11	Benton Cemetery	412 West 14th Street	1	3	2	1	9	Low
12	Big H Auto	701 East 4th Street	1	3	2	1	9	Low
13	Filbeck-Cann and King Funeral Home	1117 Poplar Street	1	3	2	1	9	Low
14	Benton Elementary School	208 West 11th Street	1	3	3	1	12	Medium
15	Napa Auto Parts	1300 Poplar Street	1	3	2	1	9	Low
16	Main Street Motors	812 Main Street	1	3	3	1	12	Medium
17	Marshall County Hospital (Old)	503 George McCain Drive	1	3	3	1	12	Medium
18	Loretto Station	423 East 12th Street	1	3	3	1	12	Medium
19	Petros Away Food Mart	816 KY 408	1	3	2	1	9	Low
20	Holland Tire	402 Main Street	2	3	3	1	12	Medium
21	Johnny P Gibson Body Shop	319 East 4th Street	1	3	3	1	12	Medium
22	Stevens Body Shop	317 East 4th Street	1	3	3	1	12	Medium
23	Lawrence Wheel Alignment	3841 Old Olive Rd	1	3	2	1	9	Low
24	CE Motors	317 Elm Street	1	3	3	1	12	Medium
25	Purlandon, Inc	304 East 4th Street	1	3	3	1	12	Medium
26	Marshall County Garage	264 East 4th Street	1	3	3	1	12	Medium
27	BP	408 Main Street	1	3	2	1	9	Low
28	Quality Car Sales	335 Main Street	1	3	2	1	9	Low
29	D & A Used Cars	338 Poplar Street	1	3	3	1	12	Medium
30	Harold Higgins Used Cars	331 Main Street	2	3	2	1	9	Low
31	Benton C&D Landfill	1509 Main Street	1	3	3	1	12	Medium
32	Leon Wiley Ford	39 Main Street	1	3	2	1	9	Low
Non-point Sources								
	Hwy 602		1	3	3	1	12	Medium
	Hwy 348		1	3	3	1	12	Medium
	Hwy 408		1	3	3	1	12	Medium
	Agriculture		1	3	3	1	12	Medium
					Totals:	High	Med	Low
					36	0	15	20

After the Wellhead Protection Area is delineated the system performs an inventory of all of the potential contaminant sources within the designated area. The inventory is assigned a hydrologic sensitivity ranking and each source is assigned a proximity ranking and contaminant value. A ranking system scale from 1-3 (1 represents the lowest hydrologic sensitivity ranking, WHPA-3, and the lowest contaminant value). The numeric ranking is determined using the equation: $\text{Numeric Ranking} = (\text{Proximity Ranking} \times 3) + (\text{Contaminant Value} \times 3) + \text{Hydrologic Sensitivity}$. The susceptibility ranking is assigned to each source based on the numeric ranking: < 10 = Low, 10-15 = Medium, > 15 = High.

Assistance:

For any assistance please contact Wellhead Protection Staff:

Rob Blair
(502) 782-6893
Robert.Blair@ky.gov

Allan Shingleton
(502) 782-6907
Allan.Shingleton@ky.gov

Please sign and return completed form to:

Kentucky Division of Water
Watershed Management Branch
Attention: Allan Shingleton
300 Sower Boulevard, 3rd Floor
Frankfort, Kentucky 40601
or allan.shingleton@ky.gov

