



**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, 3<sup>rd</sup> Floor  
Frankfort, Kentucky 40601 or [allan.shingleton@ky.gov](mailto:allan.shingleton@ky.gov)

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

**System Information:**

PWS Name: **Carroll County Water District #1**

PWS ID Number: **0210066**

AI Number: [Click here to enter text.](#)

Contact Person/Title: **Obe Cox**

Mailing Address: **PO Box 350 205 Main Street Ghent, KY 41045**

Telephone: **502-347-9500** Email: **ocox@carrollcountywater.com**

System Type\*: **Community**

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

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

County: **Carroll** ADD: **Northern KY ADD**

WWD Permit #: **0107, 1421** Permitted Amount (mgd): **1.2 mgd , 0.5 mgd**

Population Served: **4300**

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

WHPP Changes Summary: **No changes since 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**

The Carroll County Water District uses the same treatment plants located at the Ghent and Gallatin wellfields. County Highway Maps with the locations of both the Water District's treatment plants are attached.

#### **Section 2: Water Withdrawal and Water Quality**

Currently there have been no changes to either the Water Withdrawal or Quality for the water district since the previous submittal. The water district would like to increase their permitted withdrawal amount in the near future but has not yet applied for a permit revision at this time.

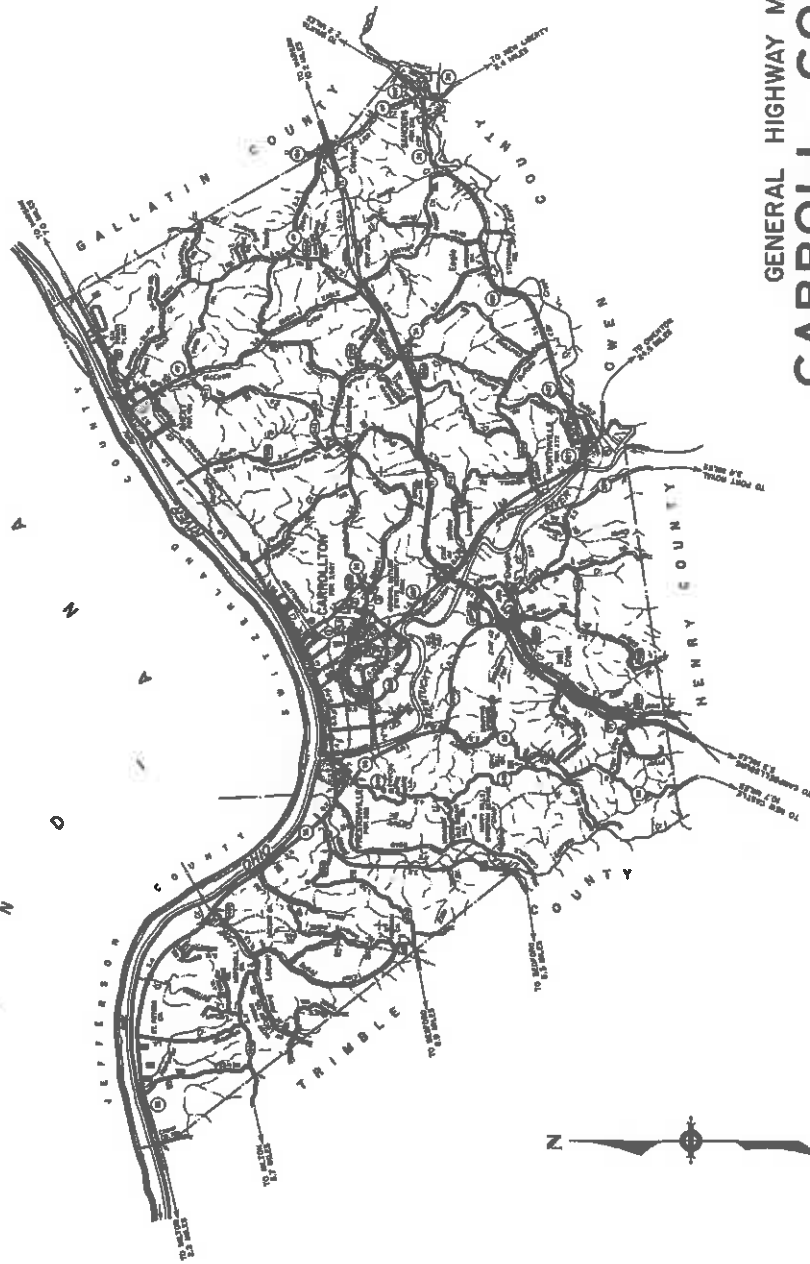
#### **Section 3: Change or Modification to Groundwater Source**

There have been no modifications to Carroll County's groundwater supply wells since the previous submittal. Copies of the Well Inspection Records are attached.

#### **Section 4 (REQUIRED): Planning Team**

**Leader:**

**Obe Cox - General Manager**



# GENERAL HIGHWAY MAP **CARROLL COUNTY** KENTUCKY

PREPARED BY THE  
 KENTUCKY TRANSPORTATION CABINET  
 DEPARTMENT OF HIGHWAYS  
 IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION





# KENTUCKY WATER WELL INSPECTION FORM

(1) AKGWA NUMBER:

0000-7133

0000-7133

(2) GENERAL INFORMATION:

Well Owner's Name: CARROLL Co. WD #1

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: ( ) \_\_\_\_\_ ( ) No Phone

(3) WELL RECORD LABEL LOCATION:

( ) well casing ( ) other

(4) WELL LOCATION:

USGS Quadrangle Name: Vernon South

County: Carroll

Elevation: 490 ft. ( ) map ( ) altimeter ( ) other

Latitude: 38 04 10 Longitude: 85 03 41

Physiographic or Hydrologic Region:

( ) Blue Grass ( ) Ohio River Alluvium ( ) E. Coal Field  
( ) Miss. Plateau ( ) Jackson Purchase ( ) W. Coal Field

(5) WELL CHARACTERISTICS:

Is this a hand dug well? ( ) yes ( ) no ( ) unknown

Who constructed well? REYNOLDS & SON ( ) unknown

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Date well was completed: \_\_\_\_\_ ( ) unknown

Total depth: \_\_\_\_\_ ft. ( ) measured ( ) reported ( ) unknown

Does the casing extend above the ground? ( ) yes ( ) no

Casing Type(s)	Casing Inside Diameter (in)	Feet Below Surface From	To	Casing Wall Thickness
1				
2				
3				
4				

Is the well located in a pit? ( ) yes ( ) no ( ) unknown

Is the water discharge pipe below ground surface? ( ) yes ( ) no ( ) unknown

Is a pitless adapter used? ( ) yes ( ) no ( ) unknown

Well yield: \_\_\_\_\_ ( ) gpm ( ) gph ( ) gpd

( ) measured ( ) estimated ( ) unknown

Surface annular material: ( ) clay ( ) sand ( ) cement

( ) drill cuttings ( ) gravel ( ) open annulus ( ) unknown

( ) other

Well head (casing top): ( ) well cap ( ) sanitary seal ( ) open

( ) other

Pump type: ( ) jet ( ) submersible ( ) hand pump ( ) turbine

( ) none ( ) bailer/bucket ( ) other

Level of pump intake: \_\_\_\_\_ ft. ( ) unknown

Age of pump: \_\_\_\_\_ yrs. ( ) unknown

Electric connection for pump: ( ) 2 wire, 110V ( ) 3 wire, 220V ( ) unknown

Static water level: \_\_\_\_\_ ft. below surface ( ) measured ( ) reported

If unknown: ( ) can't be measured ( ) not measured

Does the owner have any log or record concerning this well? ( ) yes ( ) no If yes, specify: \_\_\_\_\_

(6) SKETCH MAP:

(7) WELL USE:

( ) domestic ( ) public ( ) irrigation  
( ) industrial ( ) livestock ( ) monitoring  
( ) unused ( ) other

PWSID #: 0210066

Water Withdrawal Permit #: 0107

(8) WELL SERVICE:

Number of people served: \_\_\_\_\_

Number of service connections: \_\_\_\_\_

Any quantity problems? ( ) yes ( ) no

Any quality problems? ( ) yes ( ) no

Describe: \_\_\_\_\_

(9) COMPLIANCE TO STANDARDS:

Is this well in compliance with state water well construction standards? ( ) yes ( ) no ( ) unknown

If no, describe deficiencies: \_\_\_\_\_

(10) TYPE OF TREATMENT SYSTEM:

( ) none  
( ) water softener  
( ) ultra violet  
( ) chlorination  
( ) aeration  
( ) charcoal filter  
( ) sand filter  
( ) iron inhibitor  
( ) other

Is a treatment bypass available? ( ) yes ( ) no

Describe water quality problem requiring treatment: \_\_\_\_\_

(11) INSPECTION INFORMATION:

Date of inspection: \_\_\_\_\_ Check one: ( ) original inspection

( ) re-inspection

Was a water quality sample taken as part of this inspection? ( ) yes ( ) no

Reason for inspection (check all that are applicable):

( ) general water quality analysis requested

( ) specific complaint investigation

( ) general survey

( ) ambient groundwater monitoring

( ) other

Permit/Program Name

Other ID #: \_\_\_\_\_

Other ID #: \_\_\_\_\_

Well inventory #: \_\_\_\_\_

(12) OPTIONAL USE:

Will well owner allow state monitoring? ( ) yes ( ) no ( ) unknown

Extent of monitoring allowed: ( ) collect sample ( ) measure static water level

( ) pump well ( ) remove well cap ( ) other

Monitoring feasibility: \_\_\_\_\_

(13) COMMENTS:

Well #5 = Alley Well

(14) INSPECTOR IDENTIFICATION:

Name: Dixon Mike

Agency: ( ) CHR ( ) DOW ( ) DWM ( ) KGS ( ) SOAP

( ) Other

Signature of Inspector: Mike Dixon by K. Flowers

Date: 04 27 88

Number of Attached pages: \_\_\_\_\_

WELL #6

## KENTUCKY WATER WELL INSPECTION FORM

(1) AKGWA NUMBER:

0000-7134

0000-7134

(2) GENERAL INFORMATION:

Well Owner's Name: CARROL Co. UD #1

Mailing Address: 0210066

City: State: Zip:

Phone: ( ) No Phone

(3) WELL RECORD LABEL LOCATION:

( ) well casing ( ) other

(4) WELL LOCATION:

USGS Quadrangle Name: Vany South

County: Carroll

Elevation: 440 ft. ( ) map ( ) altimeter ( ) other

Latitude: 38 44 10 Longitude: 85 02 41

Physiographic or Hydrologic Region:

( ) Blue Grass ( ) Ohio River Alluvium ( ) E. Coal Field  
( ) Miss. Plateau ( ) Jackson Purchase ( ) W. Coal Field

(5) WELL CHARACTERISTICS:

Is this a hand dug well? ( ) yes ( ) no ( ) unknown

Who constructed well? ( ) unknown

Address:

City: State: Zip:

Date well was completed: ( ) unknown

Total depth: ft. ( ) measured ( ) reported ( ) unknown

Does the casing extend above the ground? ( ) yes ( ) no

Casing Inside Feet Casing

Type(s) Diameter (in) From Below Surface To Wall Thickness

1. 2. 3. 4.

Is the well located in a pit? ( ) yes ( ) no ( ) unknown

Is the water discharge pipe below ground surface? ( ) yes ( ) no ( ) unknown

Is a pitless adapter used? ( ) yes ( ) no ( ) unknown

Well yield: ( ) gpm ( ) gph ( ) gpd

( ) measured ( ) estimated ( ) unknown

Surface annular material: ( ) clay ( ) sand ( ) cement

( ) drill cuttings ( ) gravel ( ) open annulus ( ) unknown

( ) other

Well head (casing top): ( ) well cap ( ) sanitary seal ( ) open

( ) other

Pump type: ( ) jet ( ) submersible ( ) hand pump ( ) turbine

( ) none ( ) bailer/bucket ( ) other

Level of pump intake: ft. ( ) unknown

Age of pump: yrs. ( ) unknown

Electric connection for pump: ( ) 2 wire, 110V ( ) 3 wire, 220V ( ) unknown

Static water level: ft. below surface ( ) measured ( ) reported

If unknown: ( ) can't be measured ( ) not measured

Does the owner have any log or record concerning this well?

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

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( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

( ) yes ( ) no If yes, specify:

(7) WELL USE:

( ) domestic ( ) public ( ) irrigation

( ) industrial ( ) livestock ( ) monitoring

( ) unused ( ) other

PWSID #: 0210066

Water Withdrawal Permit #: 0107

(8) WELL SERVICE:

Number of people served:

Number of service connections:

Any quantity problems? ( ) yes ( ) no

Any quality problems? ( ) yes ( ) no

Describe:

Describe:

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(10) TYPE OF TREATMENT SYSTEM:

( ) none

( ) water softener

( ) ultra violet

( ) chlorination

( ) aeration

( ) charcoal filter

( ) sand filter

( ) iron inhibitor

( ) other

Is a treatment bypass available? ( ) yes ( ) no

Describe water quality problem requiring treatment:

Describe water quality problem requiring treatment:

Describe water quality problem requiring treatment:

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Describe water quality problem requiring treatment:

Describe water quality problem requiring treatment:

Describe water quality problem requiring treatment:

(14) INSPECTOR IDENTIFICATION:

Name: Mike

Last First MI Inspector ID #

Agency: ( ) CHR ( ) DOW ( ) DWM ( ) KGS ( ) SOAP

( ) Other

Signature of Inspector:

Mike Dixon, by K. Flowers

Date: 04 27 88

Month Day Year

Number of Attached pages:

See attached inspection report

# KENTUCKY WATER WELL RECORD

Please read all instructions prior to completing this form. Do not write in shaded areas. 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 - Groundwater Branch, 18 Reilly Road, Frankfort Office Park, Frankfort, Kentucky 40601. Telephone (502) 584-3410.  
(TYPE OR PRINT CLEARLY)

0003-7319

Well #7

## (a) GENERAL INFORMATION:

Well Owner's Name <b>CARROLL CO. WATER DISTRICT</b>		Owner's Phone (502) 347-9470	Date Received <b>JUN 13 1995</b>
Mailing Address <b>P.O. Box 333</b>		Well Address ( ) Same as owner's address <b>Hwy. 42 - 0.6 mi. NE of CARROLL / GALLATIN CO. LINE</b>	(c) AKGWA NUMBER: <b>0003-7319</b>
City <b>CARROLLTON</b>	State <b>Ky.</b>	Zip Code <b>41008</b>	(e) VARIANCE WELL: ( ) Yes (X) No

(d) WELL LOCATION:	USGS Quadrangle Name <b>VEVAY NORTH, IND-KY</b>	County <b>GALLATIN</b>
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(a) GENERAL WELL CONSTRUCTION:	(c) WELL TEST:	(b) PHYSIOGRAPHIC OR HYDROLOGIC REGION:	(d) WELL SERVICE:
Start Date: <b>5 11 95</b>	Date: <b>5 31 95</b>	( ) Blue Grass (X) Ohio River Alluvium	Number of people served:
Finish Date: <b>6 1 95</b>	Testing Method:	( ) E. Coal Field ( ) W. Coal Field	Number of service connections:
Drilling Method: Type of Work:	(X) Pump ( ) Blowing	( ) Miss. Plateau ( ) Jackson Purchase	
( ) Air Rotary (X) New Well	( ) Bailer ( ) Other		
( ) Mud Rotary ( ) Rework	Well Yield: <b>1023</b> (X) gpm ( ) gph		
( ) Cable ( ) Deepen	Drawdowns:		
( ) Auger ( ) Plug	<b>4.8</b> ft. after <b>9</b> (X) hrs ( ) min		
(X) Other ( ) Other	of pumping at ( ) gpm ( ) gph		
<b>REVERSE ROTARY</b>	_____ ft. after ( ) hrs ( ) min		
Surface El.: <b>460.3</b> ft.	of pumping at ( ) gpm ( ) gph		

(a) WATER QUALITY:	(c) WELL USE:
Well was (X) pumped ( ) bailed	( ) Domestic ( ) Industrial ( ) Dry Hole
( ) blown ( ) not purged, for	(X) Public ( ) Livestock ( ) Heat Pump
<b>9</b> (X) hrs ( ) min.,	( ) Irrigation ( ) Monitoring ( ) Other
at <b>1033</b> per (X) min. ( ) hr.	
before sampling.	
Appearance: Odor:	
(X) Clear (X) None	
( ) Cloudy ( ) Musty	
( ) Muddy ( ) Sulfur	
( ) Other ( ) Other	

(a) WELL TEST:	(c) WELL USE:
Well Disinfectant: Type <b>HTH</b>	( ) Domestic ( ) Industrial ( ) Dry Hole
Amount <b>20</b>	(X) Public ( ) Livestock ( ) Heat Pump
Results of (X) fecal ( ) total	( ) Irrigation ( ) Monitoring ( ) Other
coliform analysis:	
(X) <1.0 ( ) TNTC ( ) Conf.	
# colonies/100 ml	
Other	
Sampling Date: <b>5 31 95</b>	
Analysis Date: <b>6 3 95</b>	
Lab Performing Test:	
<b>Beckman</b>	

(a) WATER QUALITY:	(c) WELL USE:
Well was (X) pumped ( ) bailed	( ) Domestic ( ) Industrial ( ) Dry Hole
( ) blown ( ) not purged, for	(X) Public ( ) Livestock ( ) Heat Pump
<b>9</b> (X) hrs ( ) min.,	( ) Irrigation ( ) Monitoring ( ) Other
at <b>1033</b> per (X) min. ( ) hr.	
before sampling.	
Appearance: Odor:	
(X) Clear (X) None	
( ) Cloudy ( ) Musty	
( ) Muddy ( ) Sulfur	
( ) Other ( ) Other	

(a) WATER QUALITY:	(c) WELL USE:
Well was (X) pumped ( ) bailed	( ) Domestic ( ) Industrial ( ) Dry Hole
( ) blown ( ) not purged, for	(X) Public ( ) Livestock ( ) Heat Pump
<b>9</b> (X) hrs ( ) min.,	( ) Irrigation ( ) Monitoring ( ) Other
at <b>1033</b> per (X) min. ( ) hr.	
before sampling.	
Appearance: Odor:	
(X) Clear (X) None	
( ) Cloudy ( ) Musty	
( ) Muddy ( ) Sulfur	
( ) Other ( ) Other	

(a) WELL COMPLETION:	(c) WELL USE:
Feet Below Surface	( ) Domestic ( ) Industrial ( ) Dry Hole
From To Hole Diameter (in.) Casing Inside Diameter (in.) Casing Type	(X) Public ( ) Livestock ( ) Heat Pump
<b>0 20' 36 29.25 Steel</b>	( ) Irrigation ( ) Monitoring ( ) Other
<b>0 89' 30 17.25 5/8-40 STL</b>	
<b>89' 114' 30 17.25 SLOTTED SS</b>	

(a) WELL COMPLETION:	(c) WELL USE:
Feet Below Surface	( ) Domestic ( ) Industrial ( ) Dry Hole
From To Hole Diameter (in.) Casing Inside Diameter (in.) Casing Type	(X) Public ( ) Livestock ( ) Heat Pump
<b>0 20' 36 29.25 Steel</b>	( ) Irrigation ( ) Monitoring ( ) Other
<b>0 89' 30 17.25 5/8-40 STL</b>	
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Feet Below Surface	( ) Domestic ( ) Industrial ( ) Dry Hole
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<b>0 20' 36 29.25 Steel</b>	( ) Irrigation ( ) Monitoring ( ) Other
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(a) WELL COMPLETION:	(c) WELL USE:
Feet Below Surface	( ) Domestic ( ) Industrial ( ) Dry Hole
From To Hole Diameter (in.) Casing Inside Diameter (in.) Casing Type	(X) Public ( ) Livestock ( ) Heat Pump
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<b>0 20' 36 29.25 Steel</b>	( ) Irrigation ( ) Monitoring ( ) Other
<b>0 89' 30 17.25 5/8-40 STL</b>	
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(a) WELL COMPLETION:	(c) WELL USE:
Feet Below Surface	( ) Domestic ( ) Industrial ( ) Dry Hole
From To Hole Diameter (in.) Casing Inside Diameter (in.) Casing Type	(X) Public ( ) Livestock ( ) Heat Pump
<b>0 20' 36 29.25 Steel</b>	( ) Irrigation ( ) Monitoring ( ) Other
<b>0 89' 30 17.25 5/8-40 STL</b>	
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(a) WELL COMPLETION:	(c) WELL USE:
Feet Below Surface	( ) Domestic ( ) Industrial ( ) Dry Hole
From To Hole Diameter (in.) Casing Inside Diameter (in.) Casing Type	(X) Public ( ) Livestock ( ) Heat Pump
<b>0 20' 36 29.25 Steel</b>	( ) Irrigation ( ) Monitoring ( ) Other
<b>0 89' 30 17.25 5/8-40 STL</b>	
<b>89' 114' 30 17.25 SLOTTED SS</b>	

(a) WELL COMPLETION:	(c) WELL USE:
Feet Below Surface	( ) Domestic ( ) Industrial ( ) Dry Hole
From To Hole Diameter (in.) Casing Inside Diameter (in.) Casing Type	(X) Public ( ) Livestock ( ) Heat Pump
<b>0 20' 36 29.25 Steel</b>	( ) Irrigation ( ) Monitoring ( ) Other
<b>0 89' 30 17.25 5/8-40 STL</b>	
<b>89' 114' 30 17.25 SLOTTED SS</b>	

Please read all instructions prior to completing this form. Do not write in shaded areas. 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 - Groundwater Branch, 14 Ralphy Road, Frankfort Office Park, Frankfort, Kentucky 40601. Telephone (502) 584-3410.  
(TYPE OR PRINT CLEARLY)

### GENERAL INFORMATION:

Well Owner's Name <b>CARROLL G. WATER DISTRICT</b>		Owner's Phone <b>(502) 732 4034</b>	Date Received: <b>OCT 20 1997</b>
Mailing Address <b>P.O. Box 333</b>		Well Address ( ) Same as owner's address <b>OFF Hwy. 42 - EAST OF Ghent, Kentucky</b>	AKGWA NUMBER: <b>0004-4574</b>
City <b>CORRINGTON</b>	State <b>Ky</b>	Zip Code <b>41008</b>	VARIANCE WELL: ( ) Yes (X) No

WELL LOCATION: <b>NEVAY NORTH, W.D. KY</b>	County <b>GALLATIN</b>
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GENERAL WELL CONSTRUCTION: Start Date: <b>7-8-97</b> Finish Date: <b>7-16-97</b> Drilling Method: Type of Work: ( ) Air Rotary (X) New Well ( ) Mud Rotary ( ) Rework ( ) Cable ( ) Deepen ( ) Auger ( ) Plug (X) Other ( ) Clean <b>reverse rotary</b> Surface Elevation: <b>460.2</b> Total Depth: <b>114</b> Depth to Bedrock: <b>114</b> Static Water Level: <b>45.9</b>	WELL TEST: Date: <b>7-22-97</b> Testing Method: (X) Pump ( ) Blowing ( ) Bailor ( ) Other Well Yield: <b>1000</b> gpm ( ) gph Drawdown: <b>2.1</b> ft. after <b>24</b> hrs ( ) min of pumping at ( ) gpm ( ) gph ft. after ( ) hrs ( ) min of pumping at ( ) gpm ( ) gph	PHYSIOGRAPHIC OR HYDROLOGIC REGION: ( ) Blue Grass (X) Ohio River Alluvium ( ) E. Coal Field ( ) W. Coal Field ( ) Miss. Plateau ( ) Jackson Purchase	WELL SERVICE: Number of people served: Number of service connections:
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WELL USE: ( ) Domestic ( ) Industrial ( ) Dry Hole (X) Public ( ) Livestock ( ) Heat Pump ( ) Irrigation ( ) Other <b>AUSTIN #210066</b>
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WATER QUALITY: Well was (X) pumped ( ) bailed ( ) blown ( ) not purged, for <b>24</b> hrs ( ) min., at <b>100</b> per ( ) min. ( ) hr. before sampling. Appearance: (X) Clear ( ) Cloudy ( ) Muddy ( ) Other Odor: (X) None ( ) Musty ( ) Sulfur ( ) Other	Well Disinfectant: Type <b>HOI</b> Amount <b>50</b> Results of (X) fecal ( ) total coliform analysis: (X) 0 or <1.0 ( ) TNTC ( ) Confirmed # colonies/100ml Other: Sampling Date: <b>7-23-97</b> Analysis Date: <b>7-23-97</b> Lab Performing Test: <b>Berkmore</b>	SKETCH MAP: 
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Show well location and distance from permanent structures, public state fields, major roads (include name or number) and intersections. INDICATE NORTH WITH AN ARROW. Provide a photograph of a topographic map with the well location clearly marked with an "X", the AKGWA number, and the well owner's name.

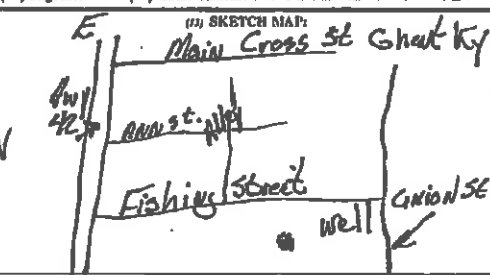
WELL COMPLETION: Feet Below Surface From To <b>0 89</b> <b>89 114</b> Hole Diameter (in.) <b>36</b> <b>36</b> Casing Inside Diameter (in.) <b>17</b> <b>17</b> Casing Type <b>5.440 S2</b> <b>17" ID stainless steel</b>	PUMP DATA: Was a pump installed? (X) Yes ( ) No Date Installed: <b>10-17-97</b> Pump Type: ( ) Submersible ( ) Jet ( ) Turbine ( ) Hand ( ) Other Installed by: <b>W Pump Installer</b> Horsepower: <b>125</b> Rating (gpm): <b>500</b> Pump intake set at feet below ground surface
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Casing Joint: ( ) Glued ( ) Threaded (X) Welded ( ) No Joint ( ) Other	LITHOLOGIC LOG: Feet Below Surface From To <b>0 3</b> <b>3 13</b> <b>13 20</b> <b>20 38</b> <b>38 62</b> <b>62 102</b> <b>102 114</b> Description <b>Brown silty clay</b> <b>Bulky brown silty clay</b> <b>Dr. br. silty sand</b> <b>with gravel</b> <b>Dr. br. silty, sandy</b> <b>clay with gravel</b> <b>Brown sand (gravel)</b> <b>Brown sand with</b> <b>little gravel</b> <b>Coarse sand (gravel)</b> <b>Large gravel with</b> <b>sand &amp; small gravel</b> Water Quality and GPM
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COMMENTS:
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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/Operator's Name (Print Name) <b>Harry J. Burrows</b>	State Certification Number/Reg Operator's Permit No. <b>0136-0327-00</b>	Signature of Responsible Operator <b>Harry J. Burrows</b>	
Company Name/Address <b>1421 MEADOWS AVE.</b>	City <b>LOUISVILLE</b>	State <b>KY</b>	Zip <b>40206</b>
Date <b>10-27-97</b>	Number of finished cases <b>2</b>		
White Copy to Division of Water, Yellow Copy to Owner, Pink Copy to Driller's Files			
SEP-4045 Printed with State Funds 01000			



KENTUCKY WATER WELL RECORD				Attach Water Well Record			
Please read all instructions prior to completing this form. Do not write in shaded areas. The original copy of this form must be submitted within 30 days of well completion to the Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water - Groundwater Branch, 14 Rally Road, Frankfort, KY 40601. Telephone (502) 564-3410.				(TYPE OR PRINT CLEARLY)			
GENERAL INFORMATION:				Id: 0005-1579			
Well Owner's Name <b>Carroll Co. Water</b>		Owner's Phone ( ) None <b>502 347-9500</b>		Date Received:			
Mailing Address <b>205 Main Cross St PO Box 350</b>		Well Address ( ) Same as owner's address		(1) AKGWA NUMBER: □ □ □ □ - □ □ □ □			
City <b>Ghent</b>	State <b>Ky</b>	Zip Code <b>40145</b>	City	State	Zip Code	(4) VARIANCE WELL: ( ) Yes ( ) No	
(2) WELL LOCATION:		USGS Quadrangle Name		County		Latitude N Longitude W	
(6) GENERAL WELL CONSTRUCTION: Start Date: _____ Finish Date: _____ Drilling Method: Type of Work: ( ) Air Rotary ( ) New Well ( ) Mud Rotary ( ) Rework ( ) Cable ( ) Deepen ( ) Auger ( ) Plug ( ) Other ( ) Clean <b>Reverse Circulation</b> Surface Elev.: _____ ft. Total Depth: <b>116'</b> Depth to Bedrock: <b>116'</b> Static Water Level: <b>59'</b>		(7) WELL TEST: Date: <b>6/30/03</b> Testing Method: ( ) Pump ( ) Blowing ( ) Bailor ( ) Other Well Yield: _____ gpm ( ) gph Drawdown: <b>12'</b> to <b>250'</b> <b>71'</b> ft. after <b>24</b> hrs ( ) min of pumping at <b>250</b> gpm ( ) gph ft. after _____ hrs ( ) min of pumping at _____ gpm ( ) gph Flowing Artesian Well: Shut-in Pressure: _____ (psi) Discharge: _____ gpm ( ) gph		(8) PHYSIOGRAPHIC OR HYDROLOGIC REGION: ( ) Blue Grass ( ) Ohio River Alluvium ( ) E. Coal Field ( ) W. Coal Field ( ) Miss. Plateau ( ) Jackson Purchase		(9) WELL SERVICE: Number of people served: _____ Number of service connections: _____	
(10) WATER QUALITY: Well was ( ) pumped ( ) bailed ( ) blown ( ) not purged, for <b>24</b> hrs. ( ) min. at _____ per ( ) min. ( ) hr. before sampling. Appearance: Odor: _____ ( ) Clear ( ) None ( ) Cloudy ( ) Musty ( ) Muddy ( ) Sulfur ( ) Other ( ) Other Well Disinfectant: Type _____ Amount _____ Results of ( ) fecal ( ) total coliform analysis: ( ) 0 or <1.0 ( ) TNTC ( ) Confirmed # colonies/100 ml Sampling Date: _____ Analysis Date: _____ Lab Performing Test: _____		(11) SKETCH MAP: 		Show well location and distances from permanent structures, septic drain fields, major roads, etc. Name or number and intersections. INDICATE NORTH WITH AN ARROW. Provide a photocopy of a topographic map with the well location clearly marked with an "X", the AKGWA number, and the well owner's name.			
(12) WELL COMPLETION: Foot Below Surface Hole Casing Inside Casing Type From To Diameter (in.) Diameter (in.) <b>30' to 116'</b> <b>36"</b> <b>15"</b> <b>Steel</b>		(13) PUMP DATA: Was a pump installed? ( ) Yes ( ) No Date Installed: _____ Pump Type: ( ) Submersible ( ) Turbine ( ) Hand ( ) Driller ( ) Pump Installer ( ) Home Owner ( ) Other ( ) Other Installed by: _____ Horsepower: <b>2.5</b> Flowing (gpm): <b>300</b> Pump intake set at <b>100'</b> feet below ground surface		(14) LITHOLOGIC LOG: Foot Below Surface Description Water Quality and GPM From To <b>0-18</b> <b>Brown sandy clay</b> <b>18-57</b> <b>Brown med. sand &amp; gravel</b> <b>57-91</b> <b>Gray sandy gravel</b> <b>91-116</b> <b>Gray med. sand</b> <b>116-</b> <b>Stone</b>			
Casing joint: ( ) Glued ( ) Threaded ( ) Welded ( ) No Joint ( ) Other Well head (Casing Top) Seal: ( ) Well Cap ( ) Sanitary Seal ( ) Other <b>Vertical Turbine</b> Is a pressure adapter installed? ( ) yes ( ) no Seen or Casing Perforation, if applicable: I.D. (in.) From <b>36</b> To <b>116</b> I.D. Type _____ Slot Size <b>0.60</b> O.D. (in.) From _____ To _____ I.D. Type _____ Slot Size _____ Annulus Fill and Seal: Foot Below Surface From To Material <b>116-55</b> <b>Silica Gravel Pack</b> <b>55-20'</b> <b>3/8" pea gravel</b> <b>20'</b> <b>grade</b> <b>hole plus coarse</b>		COMMENTS:					
(15) 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 Owner's or Rig Operator's Name (Print or Type) <b>Barry Singleton</b>		State Certification Number or Rig Operator's Permit No. <b>0206-0303-00</b>		Signature of Registered Professional Engineer <b>Paul B. White</b>		Date <b>8/14/03</b>	
Company Mailing Address <b>PO Box 250</b>		City <b>Paoli</b>		Zip Code <b>40354</b>		State <b>IN</b>	
Number of Attached sheets		White Copy to Division of Water, Yellow Copy to Owner, Pink Copy to Driller's Files				DEP-4045 Printed with State Funds 9/16/97	

**Team Members:**

**Pat Stewart – KU/Ghent Fire Dept.**

**Ken Massey – Retired Science Teacher, Ghent**

**Phil Napier – Environmental Coordinator, Nucor**

**Matt Glass - KRWA**

**Section 5: WHPA Delineation**

There have been no changes to the WHPA Delineation for Carroll County Water District since those that were made to wellfield #1 in the previous submittal.

**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. Please contact program staff for assistance.

There have been no changes to the WHPA/CSI map since the District's previous submittal. A copy of the WHPA and CSI maps are 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 discussion of the overall system susceptibility. Please contact program staff for assistance.

There have been no changes to the CSI since the previous submittal and a copy of the CSI tables for each wellfield showing the district's susceptibility determination rankings is attached along with a brief description of the WHPA susceptibility. The highest risk for contamination to the groundwater supply is still a spill occurring on HWY 47 or 42. The susceptibility ranking for the Ghent WHPA is medium. The Gallatin WHPA also has a medium susceptibility ranking.

**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:**

The water district previously requested road signs because of the wellfiled's location near US HWY 42. The road signs were put in place along the highway near the WHPA boundary. Carroll County Water District has made a continuous effort to assure the quantity and quality of the water supply is more than adequate to meet the needs of its customers and protect their health. The District previously added a stationary power generator at the Ghent plant and provided a mobile unit for remote pumpstations in order for water to continue to be made available during extended power outages. The district has also cooperated with other water systems and local industry and contracted with the U.S. Geological Survey to collect hydrogeologic data for building a computer model to simulate the groundwater flow in the Ohio River Alluvial Aquifer in the area to help predict movement of pollutants in the aquifer should an incident occur.

**Newly Proposed Management Strategies:**

- Continued annual participation with data collection to assist USGS in updating the computer model.
- Continue upgrades to treatment facilities and SCADA throughout system when needed.
- Continue education efforts by working with local schools to educate youth about clean water.
- Metered interconnections with Gallatin County Water and Carrollton Utilities
- Seek out and plug abandoned wells when possible.

Carroll County Water District has explored the potential for increasing their water withdrawal permit due to concerns about meeting future demand based on anticipated growth and current permit limitations. Approximately 45% of the Water District's sales are industrial and can increase drastically; however, the District does not currently meet the criteria for approval of an increase.

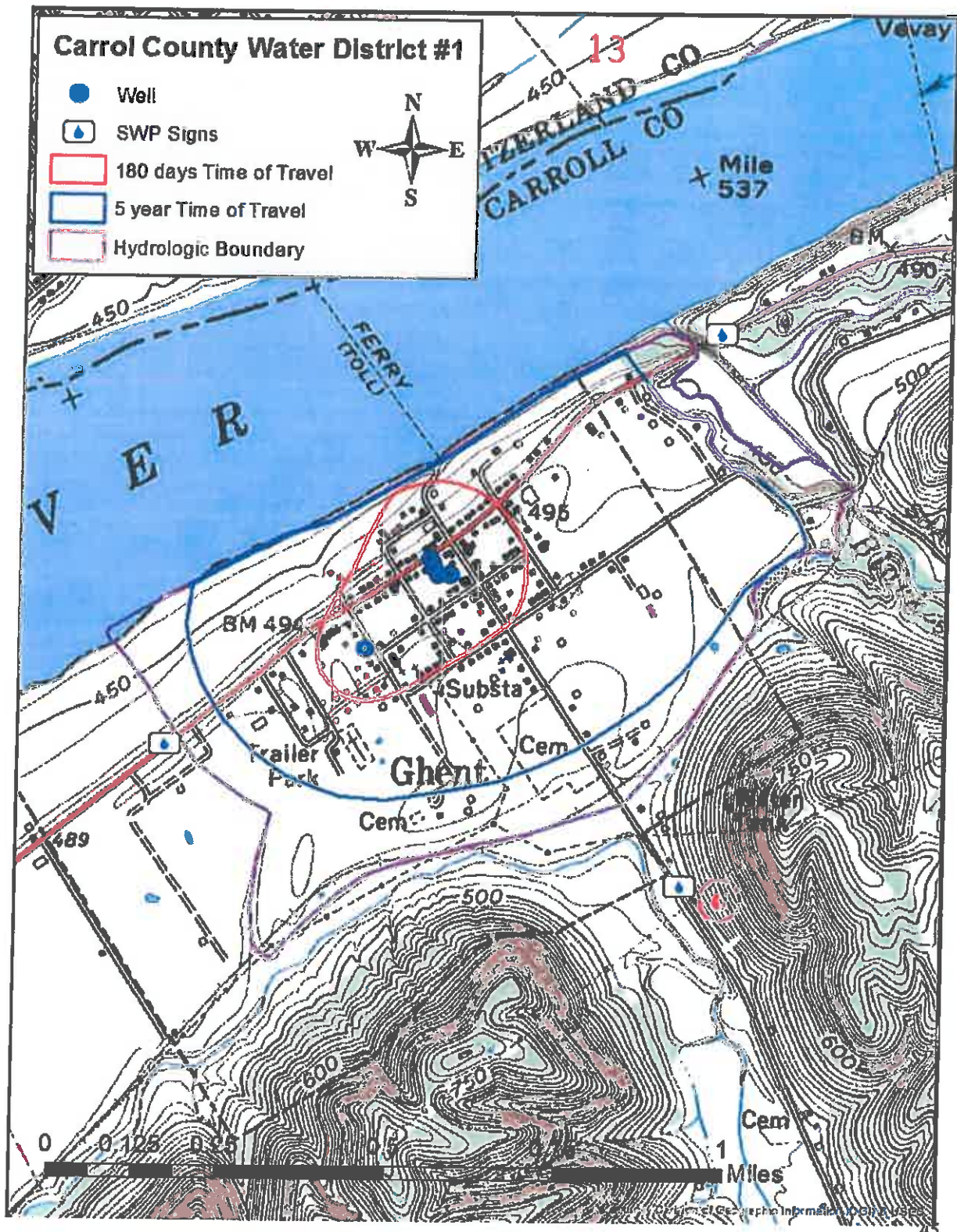
**Section 9 (REQUIRED): Contingency and WHP Planning**

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.**

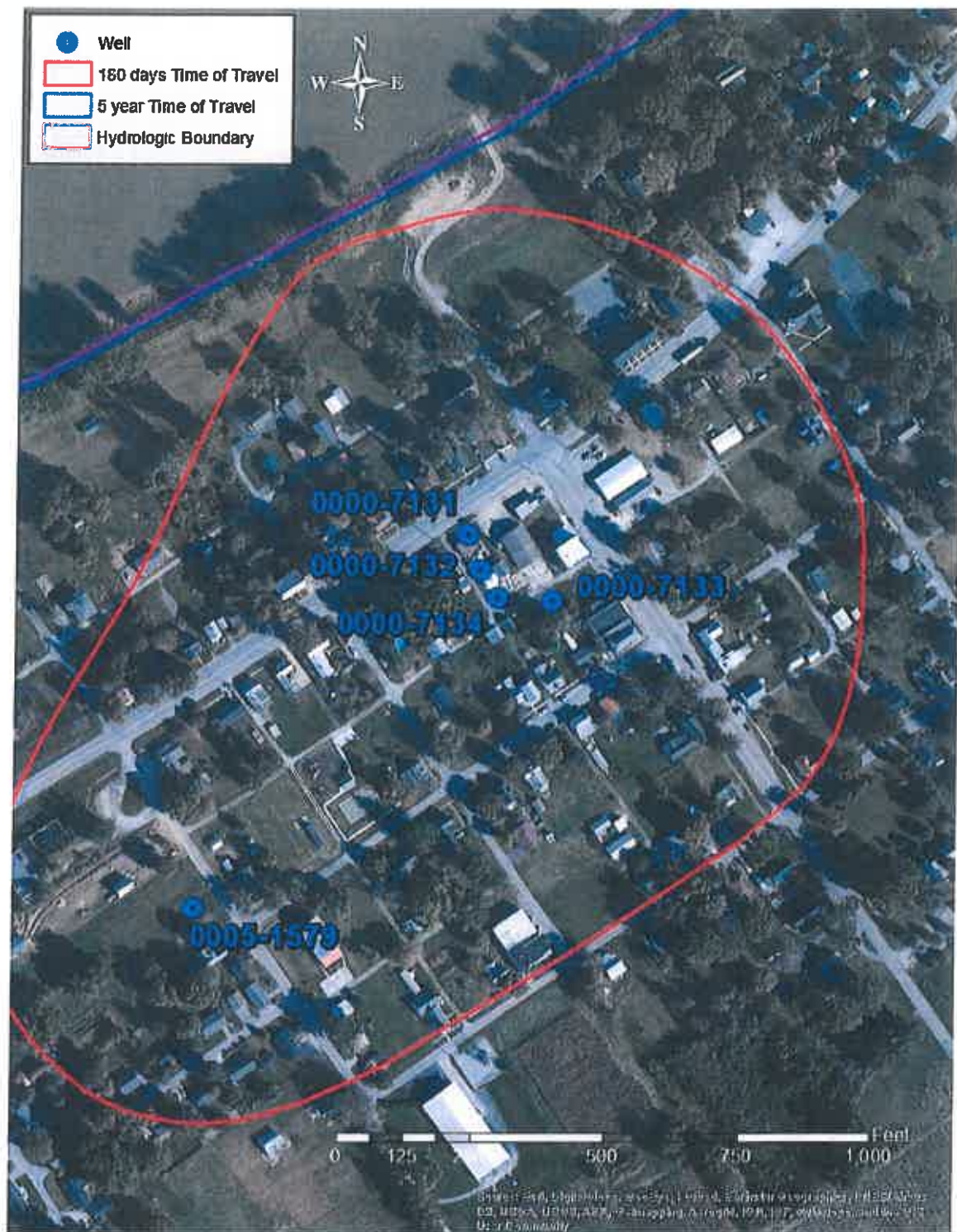
New Delineation 2015:







### Well locations and AKGWA #'s for Ghent Wellfield:





## Attachment 7: Contaminant Source Inventory, Ghent Wellfield

Since the completion of the last contaminant source inventory in 2006, there have been some changes for the Ghent wellfield. The Ghent wellfield is located within the city of Ghent and consists of five wells. At the time of the previous inventory there were only four wells. The addition of the new #5 well added approximately 28 acres to the wellhead protection area 1(180-day time of travel / recharge area) and changed some of the rankings for previously identified, potential contaminant sources.

The septic systems have been eliminated from the CSI (Contaminant Source Inventory) as all residences are connected to Carrollton regional waste water treatment plant. Some of the more noted additions to the CSI are the cemetery located on Main Cross Street, Ghent Machine & Tool, and the CSX railroad tracks that runs south of the city. The railroad existed at the time of the previous CSI, but was not listed. Even though there has been additions made to the CSI the overall susceptibility ranking has remained relatively the same with the highest risk to potential contamination being still a spill along Highway 47 or 42.

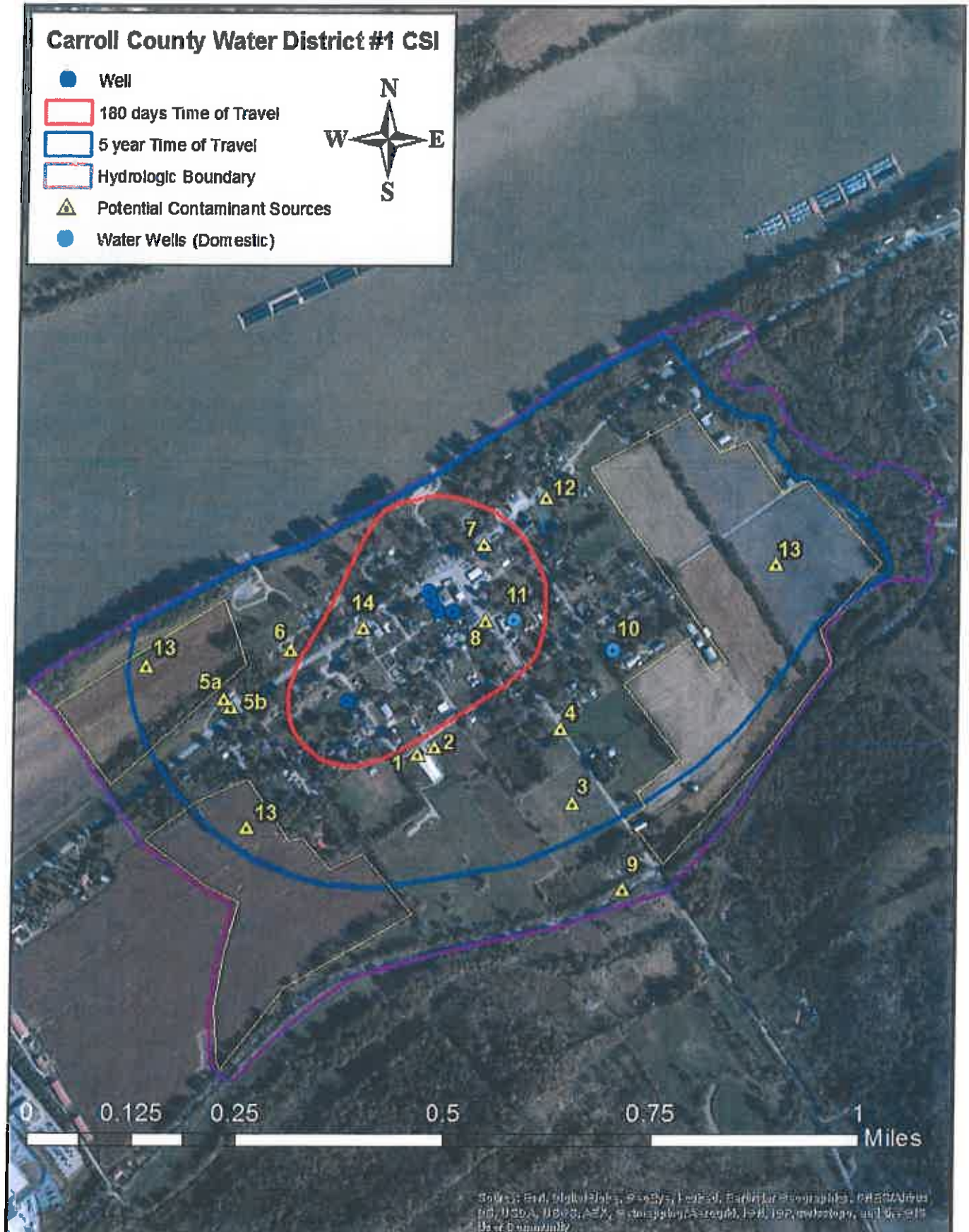
### **Contaminant Source Inventory and Susceptibility Analysis for Carroll County Water District #1**

Contaminant Source ID #	Contaminant Source/Land Use	Address	Quantity	WHPA	Proximity 1-WHPA-3, 2-WHPA-2, 3-WHPA-1	Contaminant Value	Hydrologic Sensitivity	Numeric Rating	Susceptibility Ranking
1	Ghent Machine & Tool	400 Liberty Street, Ghent, KY 41045	1	2	2	2	2	12	Medium
2	Substation	400 Liberty Street, Ghent, KY 41045	1	2	2	2	2	12	Medium
3	Cemetery	446 Main Cross St, Ghent, KY 41045	1	2	2	2	2	12	Medium
4	Home heating oil tank	511 Main Cross St, Ghent, KY 41045	1	2	2	3	2	15	Medium
5a	Marathon Gas Station	Kelly's Gas & Carry-out, 201 Main St, Ghent, KY 41045	1	2	2	3	2	15	Medium
5b	500 gal AST fuel storage	Same as above	1	2	2	3	2	15	Medium
6	Sewer treatment plant	City of Ghent, 508 Main St, Ghent, KY 41045	1	2	2	3	2	15	Medium
7	Highway 42 (Main Street)		1	1	3	3	2	17	High
8	Highway 47 (Main Cross)		1	1	3	3	2	17	High
9	CSX Railroad		1	3	1	3	2	13	Medium
10	Domestic Well	702 Liberty St, Ghent, KY 41045	1	2	2	1	2	9	Low
11	Domestic Well	606 Union St, Ghent, KY 41045	1	1	3	1	2	11	Medium
12	Abandoned Water Well	701 Main St, Ghent, KY 41045	1	2	2	2	2	12	Medium
13	Agricultural		1	2	2	2	2	12	Medium
14	Abandoned Water Well	502 Main St, Ghent, KY 41045	1	1	3	2	2	14	Medium
						Totals:	High	Med	Low
						15	2	12	1

*After the Wellhead Protection Area is delineated the system performs an inventory of all of the potential contaminant sources within the designated area. The aquifer is assigned a hydrologic sensitivity ranking and each source is assigned a proximity ranking and contaminant value. A rankings use a 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 Numeric Ranking = (Proximity Ranking x 2) + (Contaminant Value x 3) + Hydrologic Sensitivity. The susceptibility ranking is assigned to each source based on the numeric ranking: < 10 = Low, 10-15 = Medium, > 15 = High.*

# Carroll County Water District #1 CSI

- Well
- 180 days Time of Travel
- 5 year Time of Travel
- Hydrologic Boundary
- ▲ Potential Contaminant Sources
- Water Wells (Domestic)



Sources: Env. Data, Maps, & Data, Federal, Earth & Space, NASA, NOAA, USGS, AEC, & other sources. All rights reserved. All other trademarks and service marks are the property of their respective owners.



The Gallatin Wellfield is located approximately four miles east of the City of Ghent. The wellfield consists of two wells spaced 150 feet apart. No change has occurred to its CSI since 2006, except for listing the same CSX railroad line that runs through the Ghent Wellfield protection area. The railroad was not listed in 2006, but has been listed for this 5-year update.

Contaminant Source ID #	Contaminant Source/Land Use	Address	Quantity	WHPA	Proximity <i>1=WHPA-3, 2=WHPA-2, 3=WHPA-1</i>	Contaminant Value	Hydrologic Sensitivity	Numeric Rating	Susceptibility Ranking
1	HWY US 42	-85.006881, 38.760593	1	2	2	3	2	15	Medium
2	Class V Well	-85.007856, 38.754837	1	3	1	2	2	10	Medium
3	Class V Well	-85.00508, 38.76307	1	3	1	2	2	10	Medium
4	Air Liquid Metal Corp.	-85.000197, 38.758959	1	3	1	3	2	13	Medium
5	Monitoring Well	-85.002952, 38.761218	1	3	1	3	2	13	Medium
	Monitoring Well	-84.997722, 38.760222	1	3	1	3	2	13	Medium
	Industrial Site-Lagoons	-84.997722, 38.760222	1	3	1	3	2	13	Medium
8	Gallatin Terminal	-85.013838, 38.757878	1	3	1	3	2	13	Medium
9	CSX Railroad	-85.004621, 38.755533	1	3	1	3	2	13	Medium
						Totals:	High	Med	Low
						9	0	9	0

50



<b>Local Emergency Response</b>	<b>Phone Number</b>
Plant Operator	502-548-9500/9501
City of Ghent Fire Department	502-732-0946
Carrollton Police Department	502-732-6621
Carroll County Office of Emergency Management	502-732-7019
Local Emergency Dispatch Click here to enter text.	911

<b>State and Federal Assistance</b>	<b>Phone Number</b>
Kentucky DOW (Frankfort)	502-564-3410
Kentucky DOW Associated Field Office FIELD OFFICE	859-525-4923
Kentucky Environmental Response Team 24 hour response line	(502) 564-2380 (800) 928-2380
Kentucky State Fire Marshall	(502) 573-0382

<b>Any Other Pertinent Contacts</b>	<b>Any Other Pertinent Numbers</b>
Click here to enter text.	PHONE NUMBER
Click here to enter text.	PHONE NUMBER
Click here to enter text.	

**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.

Click here to enter text.

<b>Newspaper, Television, and Radio Stations</b>	<b>Phone Numbers</b>
WAVE 3 – Louisville, KY	502-561-4150
WIKI – Madison, Carrollton	812-2733139

**Potential Future Problems:**

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

Carroll County Water District has not experienced any of the Nitrate issues it did prior to the previous WHPP update submittal. The District has continued to blend wells to keep this from becoming a problem. The biggest threat to the water supply continues to be a potential spill on a nearby highway. The District will continue to be prepared to shutdown wells and work with local EMS to contain and cleanup if such a spill were to occur.

**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.

Carroll County Water District has two water treatment plants that are connected by a pipeline so that each can serve as a backup to the other. The District also has interconnections with Gallatin County Water District and Carrollton Utilities which serve as good sources of alternate water supplies.

**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.

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: 11/13/2020

**Printed Name/Title:** Obe D. Cox, General Manager

**Assistance:**

For any assistance please contact Wellhead Protection Staff:

Rob Blair  
(502) 782-6893  
[Robert.Blair@ky.gov](mailto:Robert.Blair@ky.gov)

Allan Shingleton  
(502) 782-6907  
[Allan.Shingleton@ky.gov](mailto:Allan.Shingleton@ky.gov)

**Please sign and return completed form to:**

Kentucky Division of Water  
Watershed Management Branch  
Attention: Allan Shingleton  
300 Sower Boulevard, 3<sup>rd</sup> Floor  
Frankfort, Kentucky 40601  
or [allan.shingleton@ky.gov](mailto:allan.shingleton@ky.gov)