

Water-Resource Development: A Strategic Plan

Summary of Water Systems Gateway Area Development District

Water Resources Development Commission

October, 1999

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GATEWAY AREA DEVELOPMENT DISTRICT

Main and Slate Streets
 P.O. Box 1070
 Owingsville, KY 40360
 (606) 674-6355

REGIONAL OVERVIEW

(Gateway ADD Existing & Proposed Water Lines Map)

- Estimated 1999 population of 67,200--74% on public water
- Estimated 2020 population of 74,300--82% on public water
- 1,060 miles of water lines, with plans for 260 additional miles
- Estimated funding needs for public water 2000-2005--\$34,300,000
- Estimated funding needs for public water 2006-2020--\$19,100,000

Gateway Area Development District had an estimated population of 67,238 (27,313 households) in 1999 with a projected population of 74,286 (32,747 households) in 2020. There are 1,060 miles of water lines in the region serving 49,000 people, or 74% of the region's population 260 miles of proposed water line extensions for the period 2000-2020 would provide service to an additional 2,300 households. About 17,200 people in the region rely on private domestic water systems: 12,000 on wells, and 5,200 on other sources.

Estimated populations and public water service for the five counties in the region is given below:

<u>County</u>	<u>1999 Pop</u>	<u>On Public</u>	<u>2020 Pop</u>	<u>On Public</u>
Bath	10,300	8,200 (80%)	10,900	8,800 (81%)
Menifee	5,600	3,600 (65%)	6,650	4,700 (71%)
Montgomery	21,100	20,000 (95%)	23,600	22,400 (95%)
Morgan	11,900	2,100 (18%)	12,600	6,900 (55%)
Rowan	18,300	15,900 (87%)	20,600	18,100 (88%)
<i>Region</i>	67,200	49,800 (74%)	74,300	60,900 (82%)

19 public water systems serve the region: 17 community systems--7 municipal, 5 water districts, 2 water associations, 2 state, 1 private, and 2 non-community systems. There are 7 small (501 to 3,300 people served) community systems and 1 very small systems (less than 500 people served).

Estimated costs for public water expansions and associated system upgrades are:

EXISTING & PROPOSED WATER LINES

GADD
Kentucky

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Data Collection & GIS Input By:
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WATER LINES

- Existing Water Lines
- Proposed Water Lines

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
BATH								-
Owensville				2,000	2,000	4,000		8,000
Bath Co. W/D	1	16	50					50
Total	1	16	50	2,000	2,000	4,000		8,050
								-
MONTGOMERY								-
Mt. Sterling	3	14	200		2,000	8,000		10,200
Total	3	14	200		2,000	8,000		10,200
								-
MENIFEE								-
Frenchburg						8,000		8,000
Total						8,000		8,000
								-
ROWAN								-
Morehead W/D	5	26	300			11,000		11,300
Rowan Co. Water Inc.	1	12	50					50
Total	6	38	350			11,000		11,350
								-
MORGAN								-
Morgan Co.w/D	61	756	3,050				1,200	4,250
Total	61	756	3,050				1,200	4,250
								-
GATEWAY TOTAL	71	824	3,650	2,000	4,000	31,000	1,200	41,850

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
BATH								-
Owensville								-
Bath Co. W/D	11	51	995				755	1,750
Total	11	51	995				755	1,750
								-
MONTGOMERY								-
Mt. Sterling	2	10	100					100
Reid Village	0.4	6	30				70	100
Jeffersonville	5	20	200				150	350
Total	7.4	36	330				220	550
								-
MENIFEE								-
Frenchburg	28	194	1,400				1,000	2,400
Total	28	194	1,400				1,000	2,400
								-
ROWAN								-
Morehead W/D								-
Rowan Co. Water Inc.	16	51	800					800
Total	16	51	800					800
								-
MORGAN								-
Morgan Co.W/D	124	1142	6,200				1,800	8,000
Total	124	1142	6,200				1,800	8,000
								-
GATEWAY TOTAL	186	1,474	9,725	-	-	-	3,775	13,500

BATH COUNTY

(Bath County Water Service Area Map)

- Estimated 1999 population of 10,300--80% on public water
- Estimated 2020 population of 10,900--81% on public water
- 245 miles of water lines, with plans for 12 additional miles
- Estimated funding needs for public water 2000-2005--\$8,050,000
- Estimated funding needs for public water 2006-2020--\$1,750,000

Bath County had an estimated population of 10,347 (4,307 households) in 1999 with a projected population of 10,853 (4,872 households) in 2020. Public water is provided to 3,625 customers, or about 80 percent of the county's residents. In areas of the county not served by public water, about 56 percent of the households rely on private domestic wells and 44 percent of the households rely on other sources. About 67 customers will be added to public water service through new line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
BATH								-
Owensville				2,000	2,000	4,000		8,000
Bath Co. W/D	1	16	50					50
Total	1	16	50	2,000	2,000	4,000		8,050

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	In \$1000	in \$1000
BATH								-
Owensville								-
Bath Co. W/D	11	51	995				755	1,750
Total	11	51	995				755	1,750

PUBLIC WATER SYSTEMS

Bath County is served by 3 community water systems: 1 municipal, Owensville Water Works; 2 water districts, Bath County Water District and Sharpsburg Water District.

WATER SERVICE AREAS

BATH COUNTY

Kentucky

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Water Resource Development Commission

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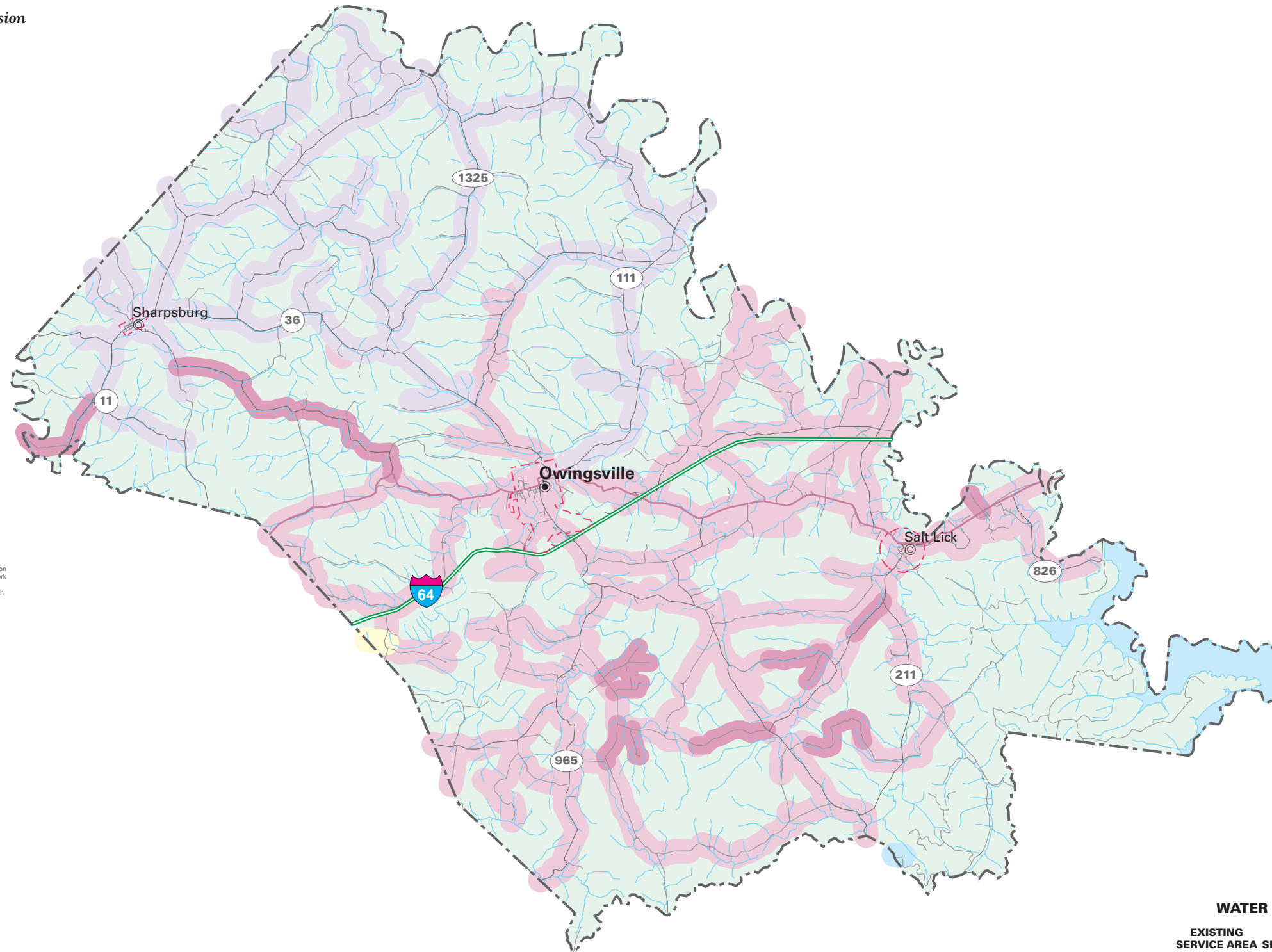
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WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	OWNER
		SHARPSBURG WATER DISTRICT
		MOUNT STERLING WATER WORKS
		FRENCHBURG WATER COMPANY
		BATH COUNTY WATER DISTRICT

BATH COUNTY WATER DISTRICT

PWSID: 0060022
 System Type:..... COMMUNITY
 Owner Type:..... WATER DISTRICT
 Surface Source:
 Purchase Source: BATH COUNTY WATER
 Well Source:
 Sells Water to: SHARPSBURG WATER DISTRICT
 Treatment Plant Capacity (MGD):..... 0.00
 Percent Daily Average Production:..... 0.00
 Total Tank Storage Capacity (gallons): 100,000.00
 Total Service Connections: 2,775.00
 Number of Employees:..... 7.00
 Treatment Operator Class:2D
 Distribution Operator Class:
 Customer Rate for 1,000 Gallons:..... 3.24
 O/M costs 1997:..... 497,199.00
 O/M costs per Service Connection: 189.12
 Net Revenue 1997: 10,366.00
 Total Water Produced 1997 (gallons): 0.00
 Water Sold 1997 (gallons): 288,992,000.00
 Unaccounted-for Water 1997 (%): 8.40

OWINGSVILLE WATER WORKS

PWSID: 0060338
 System Type:..... COMMUNITY
 Owner Type:..... MUNICIPAL
 Surface Source:..... SLATE CREEK
 Purchase Source:
 Well Source:
 Sells Water to:
 Treatment Plant Capacity (MGD):..... 1.00
 Percent Daily Average Production:..... 53.00
 Total Tank Storage Capacity (Gallons): 300000.00
 Total Service Connections: 852.00
 Number of Employees:..... 5.00
 Treatment Operator Class:2D
 Distribution Operator Class:.....2A
 Customer Rate for 1,000 Gallons:..... NA
 O/M costs 1997:..... NA
 O/M costs per Service Connection: NA
 Net Revenue 1997: NA
 Total Water Produced 1997:..... NA
 Water Sold 1997:..... NA
 Unaccounted-for Water 1997:..... NA

SHARPSBURG WATER DISTRICT

PWSID: 0060392
 System Type:..... COMMUNITY
 Owner Type:..... WATER DISTRICT

Surface Source:	
Purchase Source:	BATH COUNTY WATER
Well Source:	
Sells Water to:	
Treatment Plant Capacity (MGD):.....	0.00
Percent Daily Average Production:.....	0.00
Total Tank Storage Capacity (gallons):	100,000.00
Total Service Connections:	1,263.00
Number of Employees:.....	3.00
Treatment Operator Class:	2D
Distribution Operator Class:	
Customer Rate for 1,000 Gallons:.....	5.03
O/M costs 1997:.....	254,893.00
O/M costs per Service Connection:	202.94
Net Revenue 1997:	18,294.00
Total Water Produced 1997 (gallons):.....	0.00
Water Sold 1997 (gallons):.....	67,472,100.00
Unaccounted-for Water 1997 (%):	11.43

PRIVATE DOMESTIC SYSTEMS

About 2,000 residents of Bath County rely on private domestic water supplies: 1,150 on wells, and 850 on other sources.

Some wells located in the Licking River valley and the major creek valleys will produce enough water for a domestic supply except during dry weather. In the upland areas of Bath County, which encompasses 80% of the county, most drilled wells will not produce enough water for a dependable domestic supply except along drainage lines that may produce enough water except during dry weather.

Throughout the county ground water is hard or very hard and may contain salt or hydrogen sulfide, especially at depths greater than 100 feet.

MENIFEE COUNTY

(Menifee County Water Service Area Map)

- Estimated 1999 population of 5,600--65% on public water
- Estimated 2020 population of 6,650--71% on public water
- 140 miles of water lines, with plans for 28 additional miles
- Estimated funding needs for public water 2000-2005--\$2,400,000
- Estimated funding needs for public water 2006-2020--\$8,000,000

Menifee County had an estimated population of 5,631 (2,252 households) in 1999 with a projected population of 6,631 (3,001 households) in 2020. Public water is provided to about 65 percent of the county's residents. In areas of the county not served by public water, about 2/5 of the households rely on private domestic wells and 3/5 of the households rely on other sources. About 195 customers will be added to public water service through new line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
MENIFEE								-
Frenchburg						8,000		8,000
Total						8,000		8,000

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
MENIFEE								-
Frenchburg	28	194	1,400				1,000	2,400
Total	28	194	1,400				1,000	2,400

PUBLIC WATER SYSTEMS

Menifee County is served by the Frenchburg Water Company.

FRENCHBURG WATER COMPANY

PWSID: 0830148
 System Type:..... COMMUNITY
 Owner Type:..... MUNICIPAL
 Surface Source:
 Purchase Source: BATH COUNTY WATER
 Well Source:

WATER SERVICE AREAS MENIFEE COUNTY Kentucky

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WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	OWNER
		JEFFERSONVILLE WATER SYSTEM
		FRENCHBURG WATER COMPANY
		BATH COUNTY WATER DISTRICT

Sells Water to:.....	FRENCHBURG WATER COMPANY
Treatment Plant Capacity (MGD):.....	0.00
Percent Daily Average Production:.....	0.00
Total Tank Storage Capacity (gallons):.....	100,000.00
Total Service Connections:	0.00
Number of Employees:.....	5.00
Treatment Operator Class:	2D
Distribution Operator Class:	
Customer Rate for 1,000 Gallons:.....	Not available
O/M costs 1997:.....	Not available
O/M costs per Service Connection:	Not available
Net Revenue 1997:	Not available
Total Water Produced 1997 (gallons):.....	Not available
Water Sold 1997 (gallons):.....	Not available
Unaccounted-for Water 1997 (%):	Not available

PRIVATE DOMESTIC SYSTEMS

About 1,900 residents of Menifee County rely on private domestic water supplies: 750 on wells and 1,150 on other sources.

Wells in alluvium in the valleys of Slate, Salt Lick, and Beaver Creeks yield only a minimum supply of slightly more than 100 gallons per day. The northwestern half of Menifee county lies in the Knobs physiographic region in which rocks in this area generally yield small supplies of water for domestic use. Wells on hills generally will yield smaller quantities of water than wells in valley bottoms. In the central and southeast half of the county usually adequate soft water can be found on broad ridges. Wells in the broad valleys supply adequate water for domestic use, chiefly through fractures.

Salty water may be found locally in a few wells drilled to depths of 100 feet below the level of the principal valley bottoms. Most ground water is moderately hard and contains noticeable amounts of iron.

Springs are commonly found at the base of sandstone and limestone formations in valley bottoms. Some springs supply enough water for domestic use however generally they have large seasonal variation in flow.

MONTGOMERY COUNTY

(Montgomery County Water Service Area Map)

- Estimated 1999 population of 21,100--95% on public water
- Estimated 2020 population of 23,600--95% on public water
- 340 miles of water lines, with plans for 11 additional miles
- Estimated funding needs for public water 2000-2005--\$10,200,000
- Estimated funding needs for public water 2006-2020--\$550,000

Montgomery County had an estimated population of 21,062 (8,384 households) in 1999 with a projected population of 23,618 (10,118 households) in 2020. Public water is provided to about 95 percent of the county's residents. In areas of the county not served by public water, about 1 of 5 households rely on private domestic wells and 4 of 5 households rely on other sources. About 50 customers will be added to public water service through new line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
MONTGOMERY								-
Mt. Sterling	3	14	200		2,000	8,000		10,200
Total	3	14	200		2,000	8,000		10,200

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
MONTGOMERY								-
Mt. Sterling	2	10	100					100
Reid Village	0.4	6	30				70	100
Jeffersonville	5	20	200				150	350
Total	7.4	36	330				220	550

PUBLIC WATER SYSTEMS

Montgomery County is served by 6 public water systems: 2 municipal systems, Jeffersonville Water System and Mt. Sterling Water Works; 2 water districts, Montgomery County Water District #1 and Reid Village Water District; and 2 water associations, Judy Water Association and Levee Road Water Association, Inc.

WATER SERVICE AREAS MONTGOMERY COUNTY Kentucky



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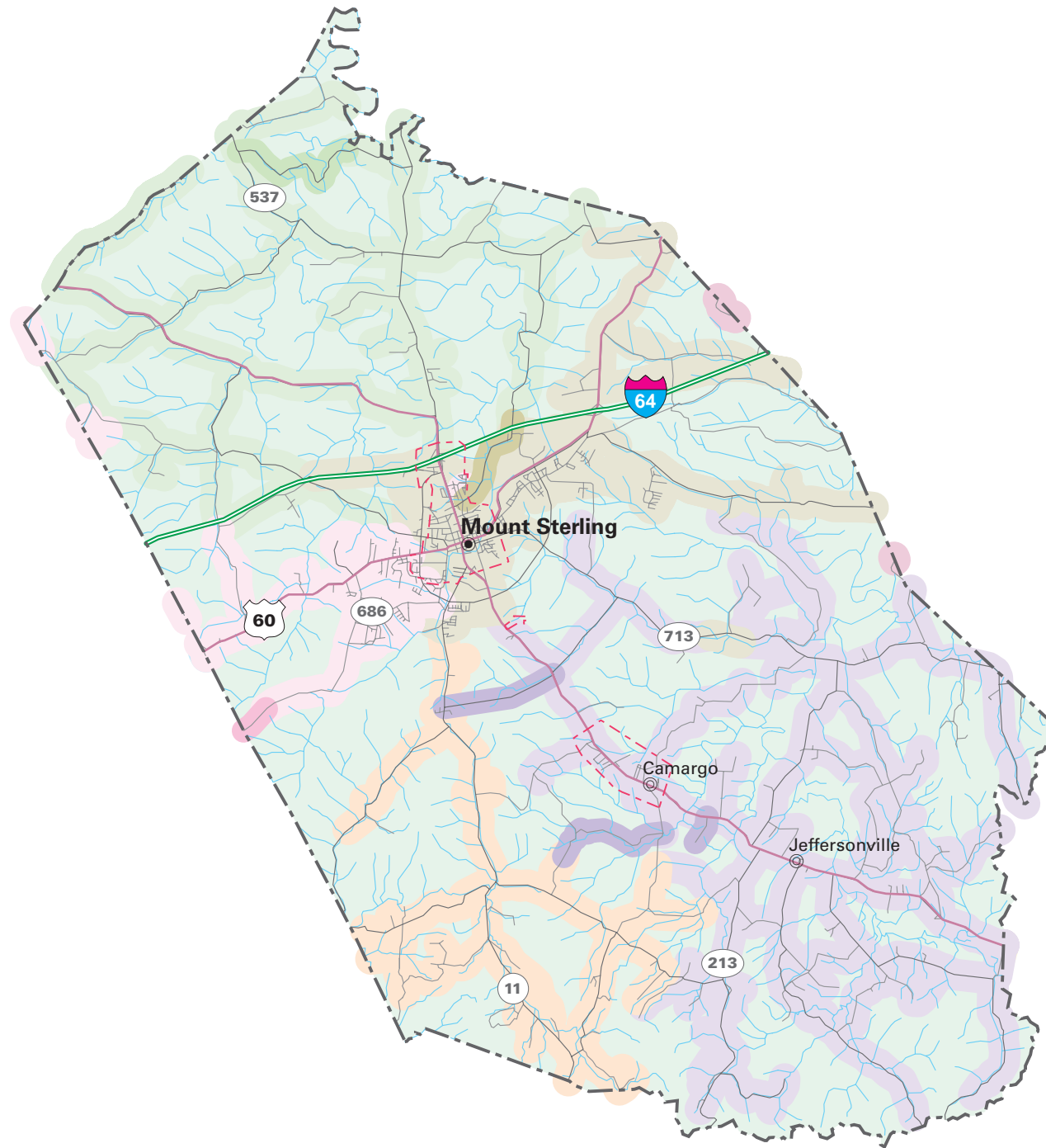
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WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	OWNER
		REID VILLAGE WATER DISTRICT
		MOUNT STERLING WATER WORKS
		LEVEE ROAD WATER ASSOCIATION INCORPORATED
		JUDY WATER ASSOCIATION
		JEFFERSONVILLE WATER SYSTEM
		FRENCHBURG WATER COMPANY
		EAST CLARK COUNTY WATER DISTRICT
		BATH COUNTY WATER DISTRICT

JUDY WATER ASSOCIATION

PWSID: 0870147
System Type:..... COMMUNITY
Owner Type:..... WATER ASSOCIATION
Surface Source:
Purchase Source: GREENBRIER LAKE
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD):..... 0.00
Percent Daily Average Production:..... 0.00
Total Tank Storage Capacity (gallons): 90,000.00
Total Service Connections: 937.00
Number of Employees:..... 4.00
Treatment Operator Class:2D
Distribution Operator Class:
Customer Rate for 1,000 Gallons:..... 6.74
O/M costs 1997:..... 194,982.00
O/M costs per Service Connection: 221.07
Net Revenue 1997: 8,151.00
Total Water Produced 1997 (gallons):..... 0.00
Water Sold 1997 (gallons): 44,108,000.00
Unaccounted-for Water 1997 (%): 0.26

JEFFERSONVILLE WATER SYSTEM

PWSID: 0870212
System Type:..... COMMUNITY
Owner Type:..... MUNICIPAL
Surface Source:
Purchase Source: MT STERLING WATER
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD):..... 0.00
Percent Daily Average Production:..... 0.00
Total Tank Storage Capacity (gallons): 100,000.00
Total Service Connections: 1,300.00
Number of Employees:..... 3.00
Treatment Operator Class:2D
Distribution Operator Class:
Customer Rate for 1,000 Gallons:..... Not available
O/M costs 1997:..... Not available
O/M costs per Service Connection: Not available
Net Revenue 1997: Not available
Total Water Produced 1997 (gallons):..... Not available
Water Sold 1997 (gallons): Not available
Unaccounted-for Water 1997 (%): Not available

LEVEE ROAD WATER ASSOCIATION INCORPORATED

PWSID: 0870246
System Type:..... COMMUNITY
Owner Type:..... WATER ASSOCIATION
Surface Source:

Purchase Source: GREENBRIER LAKE
 Well Source:
 Sells Water to:
 Treatment Plant Capacity (MGD):..... 0.00
 Percent Daily Average Production:..... 0.00
 Total Tank Storage Capacity (gallons): 75,000.00
 Total Service Connections: 666.00
 Number of Employees:..... 2.00
 Treatment Operator Class:2D
 Distribution Operator Class:
 Customer Rate for 1,000 Gallons:..... 4.90
 O/M costs 1997:..... 127,249.00
 O/M costs per Service Connection: 197.59
 Net Revenue 1997: 791.00
 Total Water Produced 1997 (gallons):..... 0.00
 Water Sold 1997 (gallons):..... 37,427,000.00
 Unaccounted-for Water 1997 (%): 8.18

MONTGOMERY COUNTY WATER DISTRICT #1

PWSID: 0870290
 System Type:..... COMMUNITY
 Owner Type: WATER DISTRICT
 Surface Source:.....
 Purchase Source:MOUNT STERLING WATER WORKS
 Well Source:
 Sells Water to:
 Treatment Plant Capacity (MGD):..... 0.00
 Percent Daily Average Production:..... 0.00
 Total Tank Storage Capacity (G):..... NA
 Total Service Connections: 554.00
 Number of Employees:..... NA
 Treatment Operator Class:2D
 Distribution Operator Class:.....
 Customer Rate for 1,000 Gallons:..... 5.54
 O/M costs 1997:..... 189,006.00
 O/M costs per Service Connection: 330.43
 Net Revenue 1997: 27,775.00
 Total Water Produced 1997:..... 0.00
 Water Sold 1997:..... 75,356,530.00
 Unaccounted-for Water 1997:..... 10.72

MOUNT STERLING WATER WORKS

PWSID: 0870298
 System Type:..... COMMUNITY
 Owner Type: MUNICIPAL
 Surface Source:..... SLATE CREEK
 Purchase Source:
 Well Source:
 Sells Water to: JUDY WATER ASSOCIATION
 Treatment Plant Capacity (MGD):..... 1.00
 Percent Daily Average Production:..... 86.00

Total Tank Storage Capacity (gallons):	0.00
Total Service Connections:	0.00
Number of Employees:	25.00
Treatment Operator Class:	2D
Distribution Operator Class:	4A
Customer Rate for 1,000 Gallons:	Not available
O/M costs 1997:	Not available
O/M costs per Service Connection:	Not available
Net Revenue 1997:	Not available
Total Water Produced 1997 (gallons):	Not available
Water Sold 1997 (gallons):	Not available
Unaccounted-for Water 1997 (%):	Not available

REID VILLAGE WATER DISTRICT

PWSID:	0870367
System Type:	COMMUNITY
Owner Type:	WATER DISTRICT
Surface Source:	
Purchase Source:	HOWARDS MILL
Well Source:	
Sells Water to:	
Treatment Plant Capacity (MGD):	0.00
Percent Daily Average Production:	0.00
Total Tank Storage Capacity (gallons):	100,000.00
Total Service Connections:	894.00
Number of Employees:	3.00
Treatment Operator Class:	2D
Distribution Operator Class:	
Customer Rate for 1,000 Gallons:	4.79
O/M costs 1997:	201,909.00
O/M costs per Service Connection:	231.28
Net Revenue 1997:	15,990.00
Total Water Produced 1997 (gallons):	0.00
Water Sold 1997 (gallons):	52,055.00
Unaccounted-for Water 1997 (%):	12.07

PRIVATE DOMESTIC SYSTEMS

About 1,000 people in Montgomery County rely on private domestic water supplies: 200 on wells and 800 on other sources.

Some wells located in the major creek valleys will produce enough water for a domestic supply except during dry weather. In the upland areas of Montgomery County, which encompasses 80% of the county, most drilled wells will not produce enough water for a dependable domestic supply except along drainage lines that may produce enough water except during dry weather.

Throughout the county ground water is hard or very hard and may contain salt or hydrogen sulfide, especially at depths greater than 100 feet.

MORGAN COUNTY

(Morgan County Water Service Area Map)

- Estimated 1999 population of 11,900--18% on public water
- Estimated 2020 population of 12,600--55% on public water
- 110 miles of water lines, with plans for 185 additional miles
- Estimated funding needs for public water 2000-2005--\$4,250,000
- Estimated funding needs for public water 2006-2020--\$8,000,000

Morgan County had an estimated population of 11,888 (4,560 households) in 1999 with a projected population of 12,561 (5,176 households) in 2020. Public water is provided to about 18 percent of the county's residents. In areas of the county not served by public water, about 5 of 6 households rely on private domestic wells and 1 of 6 households rely on other sources. About 1,900 customers will be added to public water service through new line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
MORGAN								-
Morgan Co.w/D	61	756	3,050				1,200	4,250
Total	61	756	3,050				1,200	4,250

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
MORGAN								-
Morgan Co.W/D	124	1,142	6,200				1,800	8,000
Total	124	1,142	6,200				1,800	8,000

PUBLIC WATER SYSTEMS

There are 6 public or semipublic water systems in Morgan County: 4 community systems--1 municipal, West Liberty Water Company; 1 water district, Morgan County Water District; 1 state system; 1 private system-- and 2 non-community systems.

WATER SERVICE AREAS MORGAN COUNTY Kentucky



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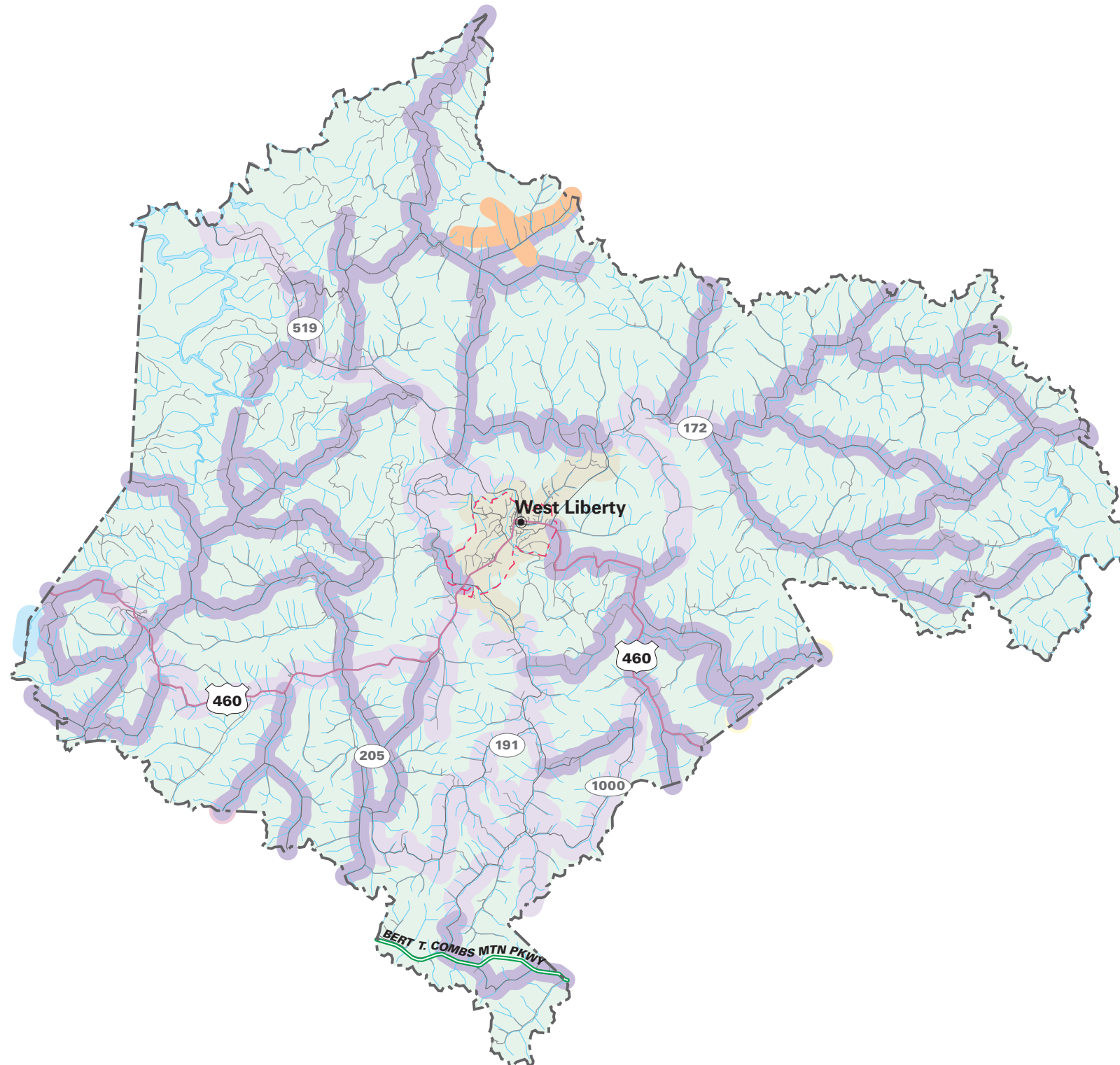
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Data Collection & GIS Input By:
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WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	OWNER
		WEST LIBERTY WATER COMPANY
		SANDY HOOK WATER DISTRICT
		PAINTSVILLE MUNICIPAL WATER WORKS
		MORGAN COUNTY WATER DISTRICT
		MAGOFFIN COUNTY WATER DISTRICT
		FRENCHBURG WATER COMPANY
		CAMPTON WATER PLANT

WEST LIBERTY WATER COMPANY

PWSID: 0880452
 System Type:..... COMMUNITY
 Owner Type:..... MUNICIPAL
 Surface Source:..... LICKING RIVER
 Purchase Source: LICKING RIVER
 Well Source:
 Sells Water to:WEST LIBERTY WATER COMPANY
 Treatment Plant Capacity (MGD):..... 1.08
 Percent Daily Average Production:..... 77.00
 Total Tank Storage Capacity (gallons): 300,000.00
 Total Service Connections: 850.00
 Number of Employees:..... 7.00
 Treatment Operator Class:2D
 Distribution Operator Class:.....3A
 Customer Rate for 1,000 Gallons:..... Not available
 O/M costs 1997:..... Not available
 O/M costs per Service Connection: Not available
 Net Revenue 1997: Not available
 Total Water Produced 1997 (gallons):..... Not available
 Water Sold 1997 (gallons):..... Not available
 Unaccounted-for Water 1997 (%): Not available

MORGAN COUNTY WATER DISTRICT

PWSID: 0880594
 System Type:..... COMMUNITY
 Owner Type:..... WATER DISTRICT
 Surface Source:
 Purchase Source:
 Well Source:
 Sells Water to:
 Treatment Plant Capacity (MGD):..... 0.00
 Percent Daily Average Production:..... 0.00
 Total Tank Storage Capacity (gallons): 110,000.00
 Total Service Connections: 700.00
 Number of Employees:..... 3.00
 Treatment Operator Class: 1D
 Distribution Operator Class:
 Customer Rate for 1,000 Gallons:..... 7.28
 O/M costs 1997:..... 162,367.00
 O/M costs per Service Connection: 227.40
 Net Revenue 1997: 7,814.00
 Total Water Produced 1997 (gallons):..... 0.00
 Water Sold 1997 (gallons):..... 28,687,000.00
 Unaccounted-for Water 1997 (%): 22.45

OTHER SYSTEMS

OLDFIELDS TRAILER PARK

Oldfields Trailer Park is located in Morgan County. The system serves a population of 86 and has 26 service connections. The private, community system has treatment capacity of 10,000 gallons per day and the water source is wells.

WOODSBEND BOYS CAMP

Woodsbend Boys Camp is located in Morgan County. The system serves a population of 120 and has 1 service connection. The state, community system has treatment capacity of 17,280 gallons per day and the water source is wells.

WRIGLEY ELEM SCHOOL

Wrigley Elem School is located in Morgan County. The system serves a population of 232 and has 1 service connection. The local, non-transient, non-community system has treatment capacity of 8,640 gallons per day and the water source is wells.

519 FOODMART

519 Foodmart is located in Morgan County. The system serves a population of 30 and has 1 service connection. The private, transient, non-community system has treatment capacity of 5,000 gallons per day and the water source is wells.

PRIVATE DOMESTIC SYSTEMS

About 10,000 people in Morgan County rely on private domestic water supplies: 8,300 on wells, and 1,700 on other sources.

Most wells drilled into bedrock in valley bottoms are adequate for domestic supply and some of the wells in the alluvium of the Licking River and its main tributaries provide adequate amounts of water. Fewer than half of the wells drilled on hillsides are adequate for domestic use and wells on hilltops produce even less water. In northwestern Morgan county a few deeper wells that penetrate thick sandstone beds of the Lee formation produce enough water for domestic use and may yield enough for municipal or industrial supplies.

Most water from drilled wells is extremely hard and contains noticeable amounts of iron. Wells that are more than 100 feet below local drainage may be salty and in some areas as shallow as 50 feet below drainage.

A few springs supply sufficient quantities of water for domestic use, usually produces less than 5 gpm.

ROWAN COUNTY

(Rowan County Water Service Area Map)

- Estimated 1999 population of 18,300--87% on public water
- Estimated 2020 population of 20,600--88% on public water
- 270 miles of water lines, with plans for 22 additional miles
- Estimated funding needs for public water 2000-2005--\$11,350,000
- Estimated funding needs for public water 2006-2020--\$800,000

Rowan County had an estimated population of 18,309 (7,810 households) in 1999 with a projected population of 20,623 (9,580 households) in 2020. Public water is provided to about 87 percent of the county's residents. In areas of the county not served by public water, about 70 percent of the households rely on private domestic wells and 30 percent of the households rely on other sources. About 90 customers will be added to public water service through new line extensions in 2000-2020.

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
ROWAN								-
Morehead W/D	5	26	300			11,000		11,300
Rowan Co. Water Inc.	1	12	50					50
Total	6	38	350			11,000		11,350

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
ROWAN								-
Morehead W/D								-
Rowan Co. Water Inc.	16	51	800					800
Total	16	51	800					800

PUBLIC WATER SYSTEMS

There are 3 public community water systems in Rowan County: 1 municipal, Morehead Utility Plant Board; 1 water district, Rowan Water, Inc.; and 1 state, Morehead State University WTP.

WATER SERVICE AREAS

ROWAN COUNTY

Kentucky



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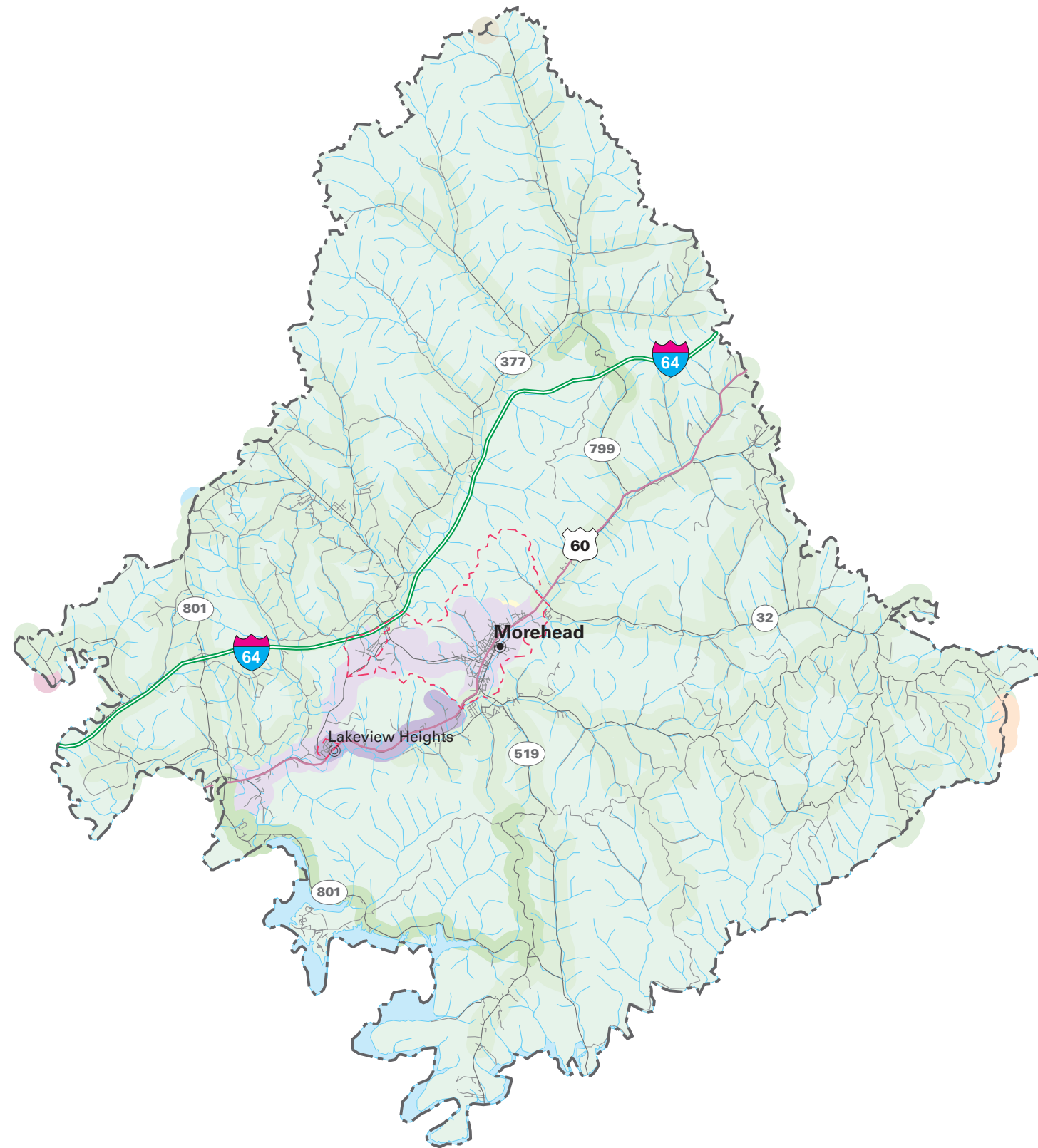
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WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	OWNER
		VANCEBURG ELECTRIC PLANT BOARD
		SANDY HOOK WATER DISTRICT
		ROWAN WATER INCORPORATED
		MOREHEAD UTILITY PLANT BOARD
		MOREHEAD STATE UNIVERSITY WATER TREATMENT PLANT
		FLEMING COUNTY WATER ASSOCIATION
		BATH COUNTY WATER DISTRICT

MOREHEAD UTILITY PLANT BOARD

PWSID: 1030292
 System Type:..... COMMUNITY
 Owner Type:..... MUNICIPAL
 Surface Source:..... LICKING RIVER
 Purchase Source:
 Well Source:
 Sells Water to: ROWAN WATER INCORPORATED
 Treatment Plant Capacity (MGD):..... 0.00
 Percent Daily Average Production:..... 78.00
 Total Tank Storage Capacity (gallons): 0.00
 Total Service Connections: 3,115.00
 Number of Employees:..... 36.00
 Treatment Operator Class:2D
 Distribution Operator Class:.....4A
 Customer Rate for 1,000 Gallons:..... Not available
 O/M costs 1997:..... Not available
 O/M costs per Service Connection: Not available
 Net Revenue 1997: Not available
 Total Water Produced 1997 (gallons):..... Not available
 Water Sold 1997 (gallons):..... Not available
 Unaccounted-for Water 1997 (%): Not available

ROWAN WATER INCORPORATED

PWSID: 1030375
 System Type:..... COMMUNITY
 Owner Type:..... WATER DISTRICT
 Surface Source:
 Purchase Source: LICKING RIVER
 Well Source:
 Sells Water to:BATH COUNTY WATER DISTRICT
 Treatment Plant Capacity (MGD):..... 0.00
 Percent Daily Average Production:..... 0.00
 Total Tank Storage Capacity (gallons): 40,000.00
 Total Service Connections: 5,000.00
 Number of Employees:..... 9.00
 Treatment Operator Class:2D
 Distribution Operator Class:
 Customer Rate for 1,000 Gallons:..... 4.50
 O/M costs 1997:..... 845,154.00
 O/M costs per Service Connection: 161.47
 Net Revenue 1997: 50,861.00
 Total Water Produced 1997 (gallons):..... 0.00
 Water Sold 1997 (gallons):..... 346,504,000.00
 Unaccounted-for Water 1997 (%): 18.30

OTHER SYSTEMS

MOREHEAD STATE UNIVERSITY WATER TREATMENT PLANT

PWSID: 1030480

System Type:.....	COMMUNITY
Owner Type:.....	STATE
Surface Source:.....	EAGLE LAKE
Purchase Source:	
Well Source:	
Sells Water to:	
Treatment Plant Capacity (MGD):.....	1.34
Percent Daily Average Production:.....	26.00
Total Tank Storage Capacity (gallons):.....	450,000.00
Total Service Connections:	62.00
Number of Employees:.....	14.00
Treatment Operator Class:	2D
Distribution Operator Class:.....	3A
Customer Rate for 1,000 Gallons:.....	Not available
O/M costs 1997:.....	Not available
O/M costs per Service Connection:	Not available
Net Revenue 1997:	Not available
Total Water Produced 1997 (gallons):.....	Not available
Water Sold 1997 (gallons):.....	Not available
Unaccounted-for Water 1997 (%):	Not available

Morehead State University Water Treatment Plant is located in Rowan County. The system serves a population of 9,200 and has 62 service connections. The state, community system has treatment capacity of 1,300,000 gallons per day and storage capacity of 450,000 gallons. The water source is Triplet Creek.

PRIVATE DOMESTIC SYSTEMS

About 2,300 people in Rowan County rely on private domestic water supplies: 1,600 on wells and 700 on other sources.

Some wells located in the Licking River valley and the major creek valleys and in far eastern Rowan County will produce enough water for a domestic supply except during dry weather. In the upland areas of Rowan County, which encompasses 70% of the county, most drilled wells will not produce enough water for a dependable domestic supply except along drainage lines that may produce enough water except during dry weather.

Throughout the county ground water is hard or very hard and may contain salt or hydrogen sulfide, especially at depths greater than 100 feet.