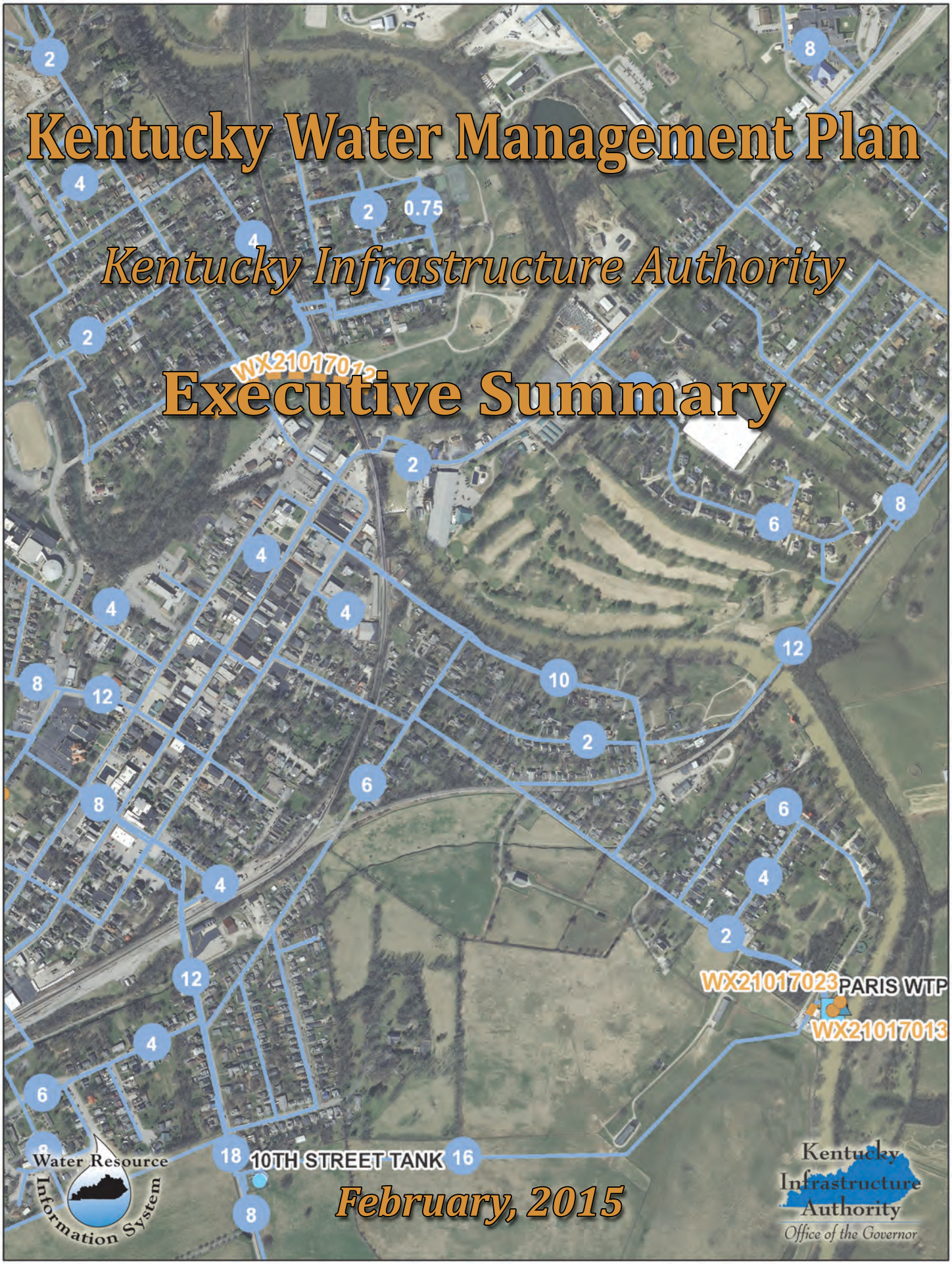

Kentucky Water Management Plan

Kentucky Infrastructure Authority

Executive Summary

February, 2015

Kentucky Infrastructure Authority
Office of the Governor

KENTUCKY INFRASTRUCTURE AUTHORITY

Steven L. Beshear
Governor

Capital Center Complex
1024 Capital Center Drive, Suite 340
Frankfort, Kentucky 40601
(502) 573-0260
(502) 573-0157 (fax)
kia.ky.gov

John E. Covington, III
Executive Director

February 5, 2015

Dear Governor Beshear and Members of the General Assembly:

Drinking water and wastewater infrastructure is vital to Kentucky's future. Adequate drinking water infrastructure is essential to providing clean, safe drinking water and protecting public health. Kentucky is blessed in both quantity and quality of beautiful lakes, rivers and streams. To protect these valuable natural resources, we must build and maintain the necessary wastewater infrastructure. Without both drinking water and wastewater infrastructure, our economic future and quality of life are at risk.

Kentucky has long recognized the need for adequate drinking water and wastewater infrastructure. In 2000, the Governor and General Assembly working together established a framework to plan for Kentucky's needs. Area Water Management Councils were created in each of Kentucky's Area Development Districts (ADDs), with the ADDs responsible for facilitating their meetings. The Councils are a forum for local utilities and local officials to discuss and identify each area's drinking water and wastewater needs. The Councils are tasked with reviewing and prioritizing needed projects based on local priorities.

For the Councils to successfully plan for the future, they must have information about the location and condition of existing infrastructure. The Kentucky Infrastructure Authority (KIA) was given the responsibility for maintaining and updating the Water Resource Information System (WRIS). The WRIS is a geo-database of existing infrastructure and of the projects reviewed by the Councils. The ADDs work with both the Councils and with every individual utility to gather information about each system, its existing infrastructure and its proposed projects through the creation of Project Profiles that address infrastructure needs. This document was created using the WRIS to identify and rank projects.

The WRIS facilitates a bottom up planning process and is truly a collaborative effort between the Councils, the ADDs and KIA. The information about Kentucky's drinking water and wastewater utilities, existing drinking water and wastewater infrastructure and the projects needed to maintain and improve the existing drinking water and wastewater infrastructure in the WRIS is an invaluable resource.

The Water Management Plan was developed from the project profiles of 2,089 drinking water projects with a total cost of $1,909,356,450 and 1,484 wastewater projects with a total cost of $2,026,556,842. The Water Management Plan identifies the needs and priorities of each planning council, the ranking process and the ranking of each council's projects.

KENTUCKY INFRASTRUCTURE AUTHORITY

Steven L. Beshear
Governor

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John E. Covington, III
Executive Director

Kentucky should be proud of the significant improvements we have made to our drinking water and wastewater infrastructure. However, as shown in the Water Management Plan, there is still significant work to be done to meet the growing drinking water and wastewater needs and to maintain our existing infrastructure. Kentucky has in place a planning process that identifies the most important projects from both a local and a regional perspective. This document identifies the drinking water and wastewater needs across the Commonwealth that are still to be met and the projects that will address those needs.

Sincerely,

John E. Covington, III
Executive Director

When you talk to us,
you talk to all of Kentucky

KCADD

KY Council of Area Development Districts

501 Capital Avenue • Frankfort, Kentucky 40601 • Office 502.875.2515 • Fax 502.875.0946

January 22, 2015

Governor Beshear and Members of the General Assembly:

The Kentucky Area Development Districts (KADD), in conjunction with our local units of government, water and sewer systems, and the Kentucky Infrastructure Authority (KIA), are pleased to be a partner in providing the enclosed Infrastructure Assessment of providers and projects in our districts. Each Area Development District (ADD) collects and updates information in the Water Resource Information System (WRIS) that is critical to the planning process. The ADD's relationship with local utilities and elected officials give us the ability to successfully maintain the information in the WRIS, which was utilized to generate this report. This information is used by numerous agencies throughout the state, and provides much of the information needed for all aspects of water planning and emergency management decision-making.

This report demonstrates the importance of these projects to the viability of our communities, by providing detail as to the affected areas, services needed, residents/businesses impacted, funding requirements, and projected timeframes for completion. Not only have these projects been identified as important within each county, but they have also been reviewed and ranked as priority projects by each ADD Regional Water Management Planning Council. The prioritization process in each ADD is critical to making sure local governments and utilities are involved with and supportive of regional infrastructure planning.

Thank you for your continued interest and support of this process. We look forward to working with you and KIA to continue the planning and development of infrastructure projects within our communities. We hope you find this data helpful, and welcome your comments, suggestions and questions now and in the future.

Sincerely,

Jody Jenkins
Union County Judge/Executive
Chairperson
Kentucky Council of Area Development Districts

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Introduction

Over fifteen years ago, the Water Resource Development Commission was tasked by Governor Paul Patton to prepare a strategic plan for water-resource development in the Commonwealth of Kentucky. The intent of Governor Patton's Executive Order was to provide water and wastewater service to every Kentuckian by the year 2020. The original strategic plan for water developed by the WRDC in 1999 not only was a great barometer for the status of water services in the Commonwealth, but also provided recommendations to be carried out over the next twenty years. Similar in format, the strategic plan for wastewater followed in early 2000. Both plans focused on expanding and improving water and wastewater services to all citizens of Kentucky. Of the original 17 recommendations, a number have already been implemented; none more important than the expansion of the Water Resource Information System (WRIS) Portal.

The WRIS Portal has been developed through the cooperative efforts of water and wastewater treatment systems and local, regional, and state agencies. The WRIS Portal provides much of the information needed for all aspects of water and wastewater planning and emergency management decision making. The WRIS portal is designed to bring together information from a multitude of sources and display that information in one easy to use web application. The Portal is linked to databases at the Kentucky Division of Water, Kentucky Department for Environmental Protection, the Kentucky Department for Local Government, the Kentucky Public Service Commission, the Kentucky Department of Education, the Kentucky Department of Parks, KyWARN, and the Kentucky Infrastructure Authority (KIA).

Not only does the WRIS Portal contain valuable system information, but it also serves as the statewide registry for water and wastewater projects in the Commonwealth of Kentucky. Multiple funding sources require applicants to have a completed Project Profile within the WRIS including the Clean Water and Drinking Water State Revolving Fund (SRF), Community Development Block Grants (CDBG), Appalachian Regional Commission (ARC), Delta Regional Authority, State and Federal Line Item Grants, and Coal Severance Grants. The WRIS Project Profile is the project database that populates the e-Clearinghouse portal for review by all state agencies.

WRIS Portal information originating from KIA is maintained by the Kentucky Area Development Districts through system visits performed annually to each drinking water system and wastewater treatment system in the Commonwealth. In addition, the Kentucky Area Development Districts facilitate the Area Water Management Councils, encompassing the Commonwealth. These Area Water Management Councils meet quarterly and by statute assume the role and function of long range planning efforts for the Public Water and Wastewater Systems represented on the Council.

As we approach the year 2020, it is important to recognize the growth of public water and wastewater systems in the Commonwealth over the past several years. Our hope is that after reading through this report, the reader will recognize that the collaborative efforts of the above mentioned local, regional, and state agencies and public water and wastewater systems have begun the framework for continued growth of sustainable infrastructure throughout the Commonwealth of Kentucky.

Water Management Plan Data Sources

The information contained in this report was acquired from several sources: U.S. Census Bureau's 2010 Census Data, the Division of Water's Safe Drinking Water Information System (SDWIS), the Environmental Protection Agency's Integrated Compliance Information System (ICIS), and the Kentucky Infrastructure Authority's Water Resource Information System (WRIS) Project Profile and System Data. Most importantly, all of the system data and project information originated with the public water and wastewater systems within this report. The information is either self reported by the public water and wastewater systems to the Area Development District Water Management Planners in a semiannual system visit, or a spatial analysis of reported information by the Kentucky Infrastructure Authority's WRIS Team.

As with any report that aggregates, interpolates, and/or extrapolates information, inconsistencies in the data will arise. However, every effort has been made to minimize the amount of inconsistent data. Please find below the explanations for several of the data sources cited in this report.

Serviceability Index – The Serviceable Population and Percent Serviceable information found in State and County Summary pages is derived from a spatial analysis of mapped service lines of public water and wastewater systems and the census blocks from the U.S. Census Bureau. The census blocks are buffered by 250 feet in order to capture a service line that may be able to serve a portion of the census block.

A census block smaller than 10 acres is considered to be fully served if a service line falls within the census block or its buffer zone of 250 feet. If a census block is considered to be fully serviced, then 100% of the census block's population and household count is allocated to the public water or wastewater system that owns the service lines within the given census block.

For a census block larger than 10 acres, an analysis is conducted comparing the ratio of service lines to road centerlines within a given census block. Once the ratio of distribution service line to road centerline is calculated, the ratio is used to allocate a portion of the census block's population and household count to the public water or wastewater system that owns the servcie lines within the given census block. If the ratio exceeds 75% of service line to road centerline, the census block is considered to be fully serviced. For any ratio smaller than 75%, the ratio is used to allocate only a portion of the census block's population and household count to the public water or wastewater system that owns the service lines located within the census block.

Project Summary –A summary of a public water and wastewater system's projects is provided at the bottom of their System Summary page. Only projects that have been approved by the Area Water Management Council and are in need of funding have been annotated in the summary. For more information on a project, please visit www.wris.ky.gov.

Estimated Percentage Water Loss – The estimated percentage water loss for each system is provided in the system's summary. This figure is an estimate calculated by dividing the amount of water provided to their customers by the system's production and/or purchase values. This information is reported to the Water Management Planners at the ADD on an annual basis. For specific system data, please visit www.wris.ky.gov.

Water

Kentucky

- 2010 census population of 4,339,367 (1,927,164 households) with 95% serviceable.
- Projected 2020 population of 4,672,754 (change of 333,387).
- 62,271 miles of existing water lines.
- 8 new water treatment plants proposed in the next 10 years.
- 2,407 miles of line extensions proposed in the next 10 years.
- 1,260 miles of line rehabilitation proposed in the next 10 years.
- 416 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $1,680,270,204.
- Estimated funding needs for projects from 6 to 10 years: $227,434,318.
- Average age of structures: water treatment plants is 37 years; water tanks is 26 years.
- Total number of interconnected systems is 415.
- 3,075 miles of asbestos concrete pipe currently in use.
- 14,652 miles of water lines less than 15 years old.
- 14,780 miles of water lines between 15 and 30 years old.
- 17,761 miles of water lines between 31 and 50 years old.
- 6,371 miles of water lines between 51 and 70 years old.
- 3,434 miles of water lines greater than 70 years old.

Area Development District Demographic and Asset Condition Summary

Area Development District	2010 Population	2020 Population	Serviceable Population	Percent Serviceable	Planned Cost 0 to 10 Years
Bluegrass Area Development District	770,404	862,521	741,516	97%	$ 203,889,071
Barren River Area Development District	284,195	316,297	275,351	97%	$ 133,560,956
Big Sandy Area Development District	154,093	148,051	143,309	93%	$ 44,061,644
Buffalo Trace Area Development District	56,478	58,306	54,889	97%	$ 24,379,000
Cumberland Valley Area Development District	236,618	237,501	229,766	97%	$ 86,737,487
Five County Area Development District	137,884	139,098	131,544	95%	$ 44,813,673
Green River Area Development District	213,472	220,544	206,223	97%	$ 97,825,841
Gateway Area Development District	81,652	87,651	78,796	96%	$ 16,888,965
Kentuckiana Regional Planning and Development Agency	959,091	1,058,343	939,420	98%	$ 265,523,549
Kentucky River Area Development District	114,762	111,267	96,103	84%	$ 102,845,756
Lake Cumberland Area Development District	207,256	221,481	196,121	95%	$ 155,635,856
Lincoln Trail Area Development District	269,117	295,040	244,453	92%	$ 160,966,298
Northern Kentucky Area Development District	438,647	488,377	425,830	97%	$ 230,528,856
Pennyrile Area Development District	219,305	226,580	199,915	95%	$ 225,083,506
Purchase Area Development District	196,393	201,697	154,811	79%	$ 114,964,064
Demographic Totals	**4,339,367**	**4,672,754**	**4,118,047**	**95%**	**$ 1,907,704,522**

Area Development District	Average WTP Age (yrs)	Intercon-nected Systems	AC Pipe (mi)	Lines < 15 yrs (mi)	Lines 15 to 30 yrs (mi)	Lines 31 to 50 yrs (mi)	Lines 51 to 70 yrs (mi)	Lines > 70 yrs (mi)
Bluegrass Area Development District	43	57	525	1,417	2,883	2,148	688	1,190
Barren River Area Development District	36	42	179	1,276	1,266	2,689	1,585	20
Big Sandy Area Development District	42	14	57	2,375	103	35	4	0
Buffalo Trace Area Development District	34	16	111	555	793	254	116	27
Cumberland Valley Area Development District	35	37	27	963	1,904	606	219	44
Five County Area Development District	33	17	46	563	761	867	18	123
Green River Area Development District	34	30	183	697	1,409	1,461	264	203
Gateway Area Development District	40	29	32	644	425	835	142	12
Kentuckiana Regional Planning and Development Agency	19	15	188	48	126	1,095	413	411
Kentucky River Area Development District	23	13	44	1,156	803	312	8	0
Lake Cumberland Area Development District	38	21	55	1,343	2,382	1,598	98	162
Lincoln Trail Area Development District	46	27	97	1,566	650	890	1,372	71
Northern Kentucky Area Development District	38	24	45	706	833	1,541	206	253
Pennyrile Area Development District	42	52	845	1,086	287	2,600	691	527
Purchase Area Development District	34	21	641	257	155	830	547	391
Asset Condition Averages and Totals:	**37**	**415**	**3,075**	**14,652**	**14,780**	**17,761**	**6,371**	**3,434**

Percent of Households Serviceable by Public Water Systems in 2010

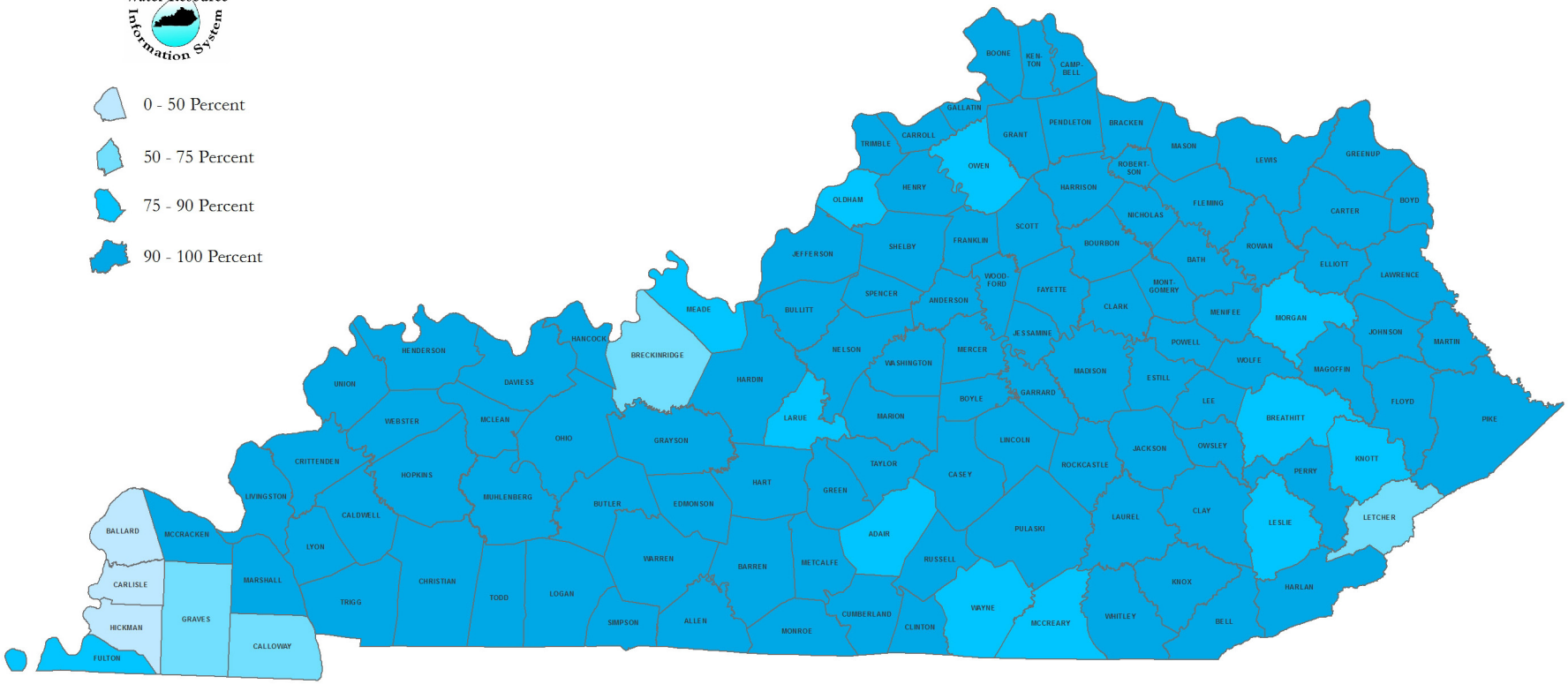
Prepared By:
Kentucky Infrastructure Authority

Kentucky Infrastructure Authority
1024 Capital Center Drive
Frankfort, KY 40601
(502) 573-0260
http://kia.ky.gov

February, 2015

Water Resource Information System

- 0 - 50 Percent
- 50 - 75 Percent
- 75 - 90 Percent
- 90 - 100 Percent



Percent Increase in Households Serviceable by Public Water Systems from 2000 to 2010

Prepared By:
Kentucky Infrastructure Authority

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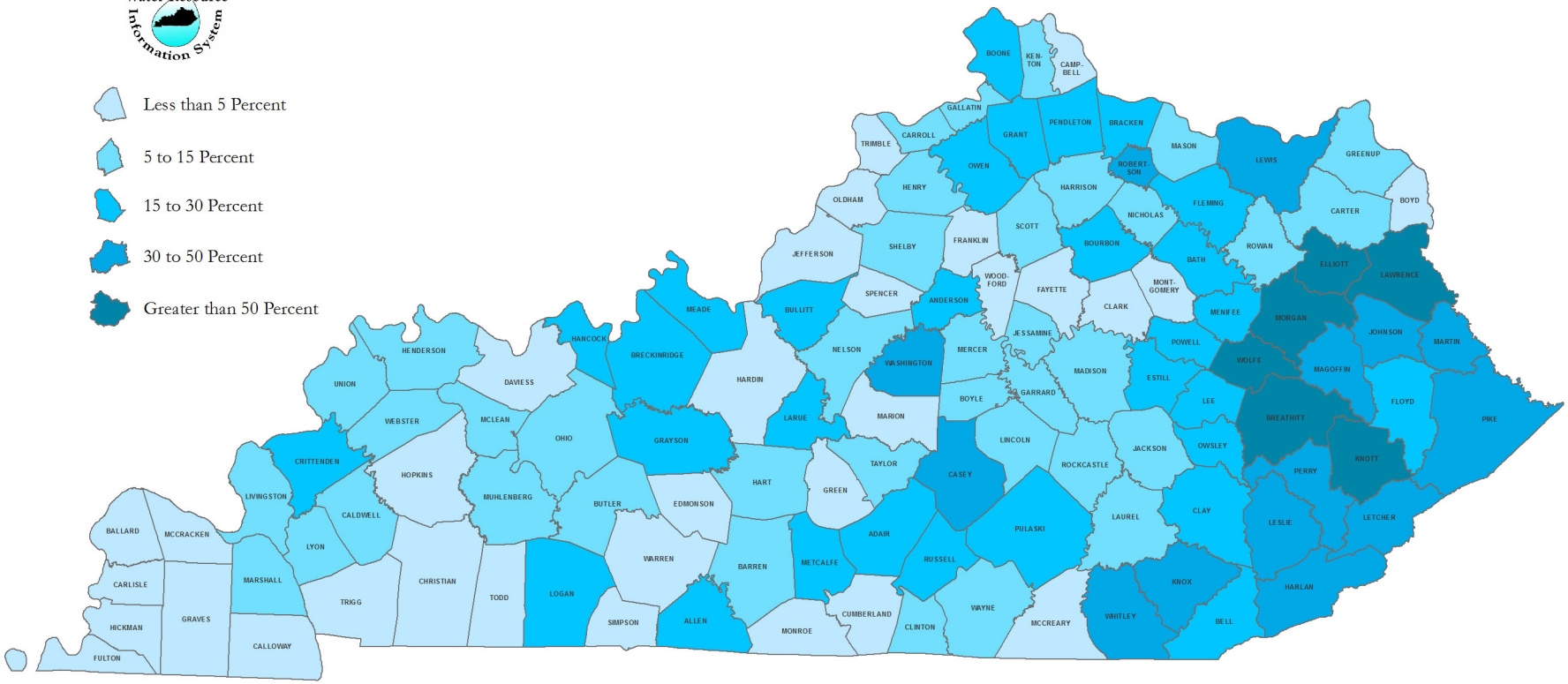
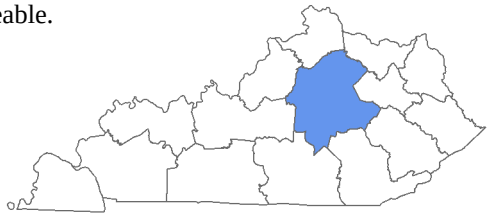
February, 2015

Water Resource Information System

- Less than 5 Percent
- 5 to 15 Percent
- 15 to 30 Percent
- 30 to 50 Percent
- Greater than 50 Percent



Bluegrass Area Development District (BGADD)



- 2010 census population of 770,404 (340,939 households) with 97% serviceable.
- Projected 2020 population of 862,521 (change of 92,117).
- 8,723.33 miles of existing water lines.
- 66.00 miles of line extensions proposed in the next 10 years.
- 73.00 miles of line rehabilitation proposed in the next 10 years.
- 36.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $184,466,196.
- Estimated funding needs for projects from 6 to 10 years: $19,422,875.
- Average age of structures: water treatment plants is 43 years; water tanks is 30 years.
- Total number of interconnected systems is 57.
- 525 miles of asbestos concrete pipe currently in use.
- 1,417 miles of water lines less than 15 years old.
- 2,883 miles of water lines between 15 and 30 years old.
- 2,148 miles of water lines between 31 and 50 years old.
- 688 miles of water lines between 51 and 70 years old.
- $ 1,190 miles of water lines greater than 70 years old.

Bluegrass Area Development District has a 2010 census population count of 770,404 (340,939 households) with a projected 2020 population count of 862,521 (355,488 households). Public water is currently available to approximately 97 percent of the district's households based on 2010 census counts. Over the next ten years approximately 244 serviceable households will be added through the construction of 66.00 miles of water line extensions and approximately 156,414 instances of improved service through the rehabilitation of 73.00 miles of existing water lines and other appurtenances. 36.00 miles of transmission lines are also proposed within this district.

County Summary for Bluegrass Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Anderson	21,421	9,127	23,555	9,582	9,105	100%	$ 740,000
Bourbon	19,985	8,927	20,530	8,478	8,784	98%	$ 4,234,000
Boyle	28,432	12,312	29,048	11,782	12,264	100%	$ 13,567,910
Clark	35,613	15,706	37,985	15,800	15,486	99%	$ 48,016,655
Estill	14,672	6,865	14,359	6,115	6,660	97%	$ 5,217,950
Fayette	295,803	135,160	334,733	141,152	126,154	93%	-
Franklin	49,285	23,164	50,777	21,761	22,996	99%	$ 39,885,000
Garrard	16,912	7,463	19,122	7,917	7,359	99%	$ 829,645
Harrison	18,846	8,208	19,640	8,006	8,149	99%	$ 7,219,887
Jessamine	48,586	19,331	58,928	22,184	19,288	100%	$ 16,447,018
Lincoln	24,742	10,819	26,170	10,762	10,566	98%	$ 7,471,231
Madison	82,916	35,043	95,333	38,093	34,819	99%	$ 29,263,429
Mercer	21,331	9,941	21,810	9,299	9,840	99%	$ 4,879,360
Nicholas	7,135	3,261	7,411	3,012	3,156	97%	$ 13,065,150
Powell	12,613	5,598	12,319	4,860	5,494	98%	$ 3,161,311
Scott	47,173	19,303	63,984	25,538	18,805	97%	$ 360,000
Woodford	24,939	10,711	26,817	11,147	10,317	96%	$ 9,530,525
Totals	**770,404**	**340,939**	**862,521**	**355,488**	**329,242**	**97%**	**$ 203,889,071**

Community Drinking Water Systems in Bluegrass Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0030239	Lawrenceburg Water & Sewer Department	Anderson	14,769	6,331
KY0030660	South Anderson Water District	Anderson	6,338	2,653
KY0090287	Millersburg Municipal Water Works	Bourbon	937	479
KY0090322	North Middletown Water Department	Bourbon	1,051	450
KY0090343	Paris Water Works	Bourbon	12,261	5,546
KY0110097	Danville City Water Works	Boyle	23,400	10,362
KY0110345	Parksville Water District	Boyle	3,934	1,698
KY0250981	East Clark County Water District	Clark	6,169	2,669
KY0250473	Winchester Municipal Utilities	Clark	25,165	11,123
KY0330123	Estill County Water District #1	Estill	9,370	4,265
KY0330205	Irvine Municipal Utilities	Estill	4,526	2,225
KY0340250	Kentucky-American Water Company	Fayette	299,501	137,601
KY0370137	Elkhorn Water District	Franklin	1,473	624
KY0370128	Farmdale Water District	Franklin	6,198	2,445
KY0370143	Frankfort Plant Board	Franklin	36,559	18,003
KY0370346	Peaks Mill Water District	Franklin	2,872	1,251
KY0400151	Garrard County Water Association	Garrard	13,038	5,644
KY0400233	Lancaster Water Works	Garrard	3,935	1,839
KY0490096	Cynthiana Municipal Water Works	Harrison	6,634	3,073
KY0490179	Harrison County Water Association	Harrison	13,817	5,821
KY0570214	Jessamine County Water District #1	Jessamine	4,028	1,630
KY0570249	Jessamine- South Elkhorn Water District	Jessamine	7,690	2,977
KY0570315	Nicholasville Utilities	Jessamine	31,464	12,905
KY0570010	Wilmore Water Works	Jessamine	6,403	2,211
KY0690089	Crab Orchard Water Works	Lincoln	1,215	575
KY0690203	Hustonville Water Works	Lincoln	4,326	1,895
KY0690278	McKinney Water District	Lincoln	4,252	1,831
KY0690417	Stanford Water Commission	Lincoln	7,864	3,357
KY0760030	Berea Municipal Utilities	Madison	9,972	4,131
KY0760672	Kirksville Water Association	Madison	4,327	1,804
KY0760224	Madison County Utilities District	Madison	24,991	10,384
KY0760370	Richmond Water, Gas & Sewer	Madison	31,580	13,695
KY0760407	Southern Madison Water District	Madison	11,364	4,732
KY0840048	Burgin Water Department	Mercer	1,041	467
KY0840180	Harrodsburg Municipal Water Department	Mercer	8,363	4,001
KY0840587	Lake Village Water Association	Mercer	4,358	2,095
KY0840321	North Mercer Water District	Mercer	9,519	4,023
KY0910065	Carlisle Water Department	Nicholas	2,045	1,059
KY0910314	Nicholas County Water District	Nicholas	3,486	1,513
KY0990074	Clay City Water System	Powell	1,635	746
KY0990357	Powells Valley Water District	Powell	5,678	2,556
KY0990418	Stanton Water Commission	Powell	5,393	2,316
KY1050157	Georgetown Municipal Water & Sewer Service	Scott	32,984	13,650
KY1200283	Midway Municipal Water Works	Woodford	1,734	757
KY1200310	Northeast Woodford County Water District	Woodford	2,277	983
KY1200411	South Woodford County Water District	Woodford	3,749	1,630

Community Drinking Water Systems in Bluegrass Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY1200439	Versailles Municipal Water	Woodford	14,370	6,110
		Totals:	738,055	328,135

Bluegrass Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

The Bluegrass Area Development District (BGADD) estimates that approximately 946 persons do not have access to a community water supply out of a 2010 population of 770,404 people. This is consistent with a water-unserved population of about 0.13 percent and a water-served population of about 99.87 percent. Given the high percentage of success the BGADD has had with this intiative, the primary need is the repair and replacement of existing infrastructure. The BGADD region wants to make sure that all of the progress made remains in good condition.

The secondary need in this region is to continue to extend service to unserved areas. Our goal is to not only remain at the top of this initiative but to also be the first to have 100% access to public drinking water.

Description and Determination of Planning Units:

The seventeen counties within our district are split up into seven (7) groups of two (2) to three (3) counties. These counties are adjacent to each other and have the potential to work on regional projects together. The Planning Units are designated as follows:

Planning Unit 1 Meeting - Estill and Powell

Planning Unit 2 Meeting – Bourbon, Harrison and Nicholas

Planning Unit 3 Meeting – Boyle, Garrard and Lincoln

Planning Unit 4 Meeting – Anderson and Mercer

Planning Unit 5 Meeting – Franklin, Scott and Woodford

Planning Unit 6 Meeting – Fayette and Jessamine

Planning Unit 7 Meeting – Clark and Madison

Bluegrass Area Development District
Project Ranking Methodology

The Bluegrass Area Water Management Council examined the following criteria in the ranking of water and wastewater projects for 2014:

- the current and potential customer base that would benefit;
- adequacy of existing water/wastewater infrastructure;
- optimization of scarce resources, cost per customer, and ability to pay;
- the dependability of existing infrastructure to provide adequate service;
- avoidance of duplication of service;
- current user rates as compared to the median for the region;
- Median Household Income (MHI), and
- Project type such as construction, operation, and maintenance types of projects.

To that end, a scoring matrix was developed with an available score between zero and 20 for the following seven categories:

1. Project Type: More credit was given for construction projects as opposed to projects that could be categorized as routine maintenance or operation efforts that could perhaps be financed from local revenues derived from user charges.

2. Readiness: The more committed to a project a project sponsor appeared to be, the more credit the project would be received in this scoring category. If a project had final engineering plans and specifications complete and regulatory agency approval in hand, it would receive more credit. Projects with only rough conceptual ideas would receive fewer points.

3. Enforcement Actions: If a project was in response to a state or a federal regulatory agency's enforcement action, it would receive more points. If a project was developed in an attempt to prevent a regulatory agency's enforcement action, it could be highly scored also, but perhaps not so highly scored as a utility already under an enforcement action.

4. Cost Effectiveness: Factors to be considered under this category were income levels of project area residents, cost per customer, funding already in place (be it local or non-local), project viability, and existing rates being charged.

5. Regionalization: Projects in which inter-local cooperation could in some way be demonstrated would receive more consideration than projects that were simply local in nature. Regional projects in general, tend to promote efficiency and effectiveness in utility delivery service. The Council was looking to give a boost to projects which were, in small part or in large part, regional in nature. Projects exhibiting more regional thought were given an advantage as compared to projects exhibiting less regional thought.

6. Local Rankings: This measure played heavily in the regional ranking process. A project that was first-ranked at its local ranking would receive 20 points in this scoring category; a second-ranked project, 18 points; a third-ranked project, 16 points, etc, and finally, a tenth-ranked project, 2 points. Projects locally ranked with an eleventh or twelfth ranking or higher would receive no points in the regional ranking and scoring process.

7. Best of Type: For both water projects and for wastewater projects, the first and second ranked locally ranked projects were disaggregated from the others. As a maximum, this would have resulted in a pool of 34 (17 counties x 2 projects per county) water projects and a similar pool of 34 wastewater projects. The Executive Council reviewed the project descriptions and the likely financial scenarios and ranked thsse projects top to bottom. The top 15 water projects were determined. The highest scoring project got the full 20 points; the next highest ranked project got 19 points, etc.; the 15th ranked water project received 6 points. For projects

not in the top 15, no points were awarded in this Best of Type category. The same process was repeated for wastewater projects.

A given project, if top-ranked in every category, could score 140 points.

Executive Council recommendations to the full Bluegrass Water Management Council can be modified by the full Council.

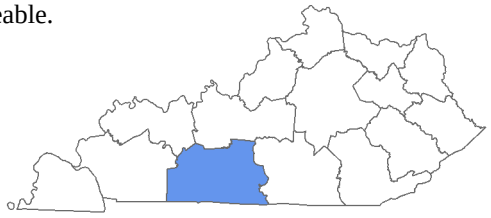
Project Rankings For Bluegrass Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21151040	Berea Utilities - Owsley Fork Reservior (Red Lick Creek MPS No. 1) Rehabilitation	0-2 Years	Partially Funded	$13,259,000	Madison	1	6
WX21113041	Nicholasville – Jessamine South Elkhorn Water District Interconn	0-2 Years	Partially Funded	$663,000	Jessamine	2	3
WX21113016	Catnip Hill Pike 750,000 Gallon Elevated Storage Tank	0-2 Years	Partially Funded	$2,000,000	Jessamine	3	1
WX21017021	Paris Water Treatment Plant Improvements	0-2 Years	Not Funded	$1,500,000	Bourbon	4	2
WX21065005	Irvine Water Treatment Plant Upgrade and Expansion	0-2 Years	Not Funded	$4,537,500	Estill	5	2
WX21197011	Water Treatment Plant Floor Repair	0-2 Years	Partially Funded	$1,186,500	Powell	6	1
WX21239026	Versailles Raw Water Main Replacement	0-2 Years	Not Funded	$1,234,500	Woodford	7	3
WX21151008	Standby Power Upgrade for Side Storage and College Hill Plant	0-2 Years	Not Funded	$2,546,700	Madison	8	1
WX21079020	Garrard County Water Association Extension 13	0-2 Years	Not Funded	$139,185	Garrard	9	1
WX21097024	Harrison County Water Association Kelat Tank Replacement	0-2 Years	Not Funded	$625,500	Harrison	10	4
WX21151053	Raw Water and High Service Pumping and Controls Modification	0-2 Years	Partially Funded	$680,000	Madison	11	4
WX21167027	City of Harrodsburg - Additional Water Line Replacements 2013	0-2 Years	Over Funded	$285,000	Mercer	12	3
WX21049015	Water Treatment Plant - 9.0 MGD	0-2 Years	Not Funded	$39,000,100	Clark	13	2
WX21021026	Danville - Corporate Drive Water Main Extension Project	0-2 Years	Partially Funded	$1,396,410	Boyle	14	4
WX21239029	City of Versailles - Water Distribution System Improvements	0-2 Years	Not Funded	$2,350,000	Woodford	15	4
WX21167028	College St. and Chestnut St. Water Lines	0-2 Years	Not Funded	$326,660	Mercer	16	2
WX21167011	Lake Village Water Association - Water Master Plan	0-2 Years	Not Funded	$75,000	Mercer	17	4
WX21113027	Nicholasville Elevated Water Storage Project	3-5 Years	Over Funded	$3,103,960	Jessamine	18	5
WX21137049	City of Crab Orchard - Deepwell Woods Road Water Line	3-5 Years	Not Funded	$300,500	Lincoln	19	3
WX21097025	City of Cynthiana West By-Pass Water Main Extension Project	0-2 Years	Not Funded	$581,774	Harrison	20	6
WX21073012	Frankfort Plant Board Reservoir Improvement Project	3-5 Years	Not Funded	$6,427,000	Franklin	21	6
WX21017019	North Middletown Water Tank Rehabilitation & SCADA	0-2 Years	Fully Funded	$680,000	Bourbon	22	5
WX21167017	Lake Village Water Association - Contract 14 Water Main West Zone Upgrades	0-2 Years	Not Funded	$1,100,000	Mercer	23	1
WX21239023	Woodford County Germany, Shore Acres, Foraker, Watts Ferry & Hippe Agee Project	3-5 Years	Not Funded	$1,254,000	Woodford	24	1
WX21079015	Lancaster - New Water Treatment Plant	0-2 Years	Fully Funded	$12,240,455	Garrard	25	5
WX21017023	Paris to Kentucky American Water System Connection	0-2 Years	Not Funded	$90,000	Bourbon	26	3
WX21113021	Jessamine Co. WD #1 - Ashgrove Pike Water System Improvements	0-2 Years	Not Funded	$625,000	Jessamine	27	2
WX21017012	City of Paris Creek Crossing Pipe Replacement Under Houston and Stoner Creeks.	3-5 Years	Not Funded	$294,000	Bourbon	28	7
WX21151055	Kirksville Water Association - Repaint Newby Tank	0-2 Years	Not Funded	$116,450	Madison	29	3
WX21151059	Whitt Road Water Line Replacement	0-2 Years	Not Funded	$165,400	Madison	30	5
WX21137047	Waynesburg Water Line Replacement (KY HWY 328)	0-2 Years	Not Funded	$85,000	Lincoln	31	6
WX21151046	Richmond Utilities 20" Water Transmission Main Replacement	3-5 Years	Not Funded	$1,479,200	Madison	32	7
WX21021010	Perryville Standpipe Replacement	0-2 Years	Not Funded	$1,300,000	Boyle	33	2

Project Rankings For Bluegrass Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21239009	Sugar Hill Road Extension	0-2 Years	Not Funded	$123,400	Woodford	34	2
WX21113037	Wilmore Elevated Storage Tank Rehabilitation	0-2 Years	Not Funded	$370,000	Jessamine	35	4
WX21239015	South Woodford Water District - Cummins Ferry Water Line Replace	0-2 Years	Not Funded	$412,000	Woodford	36	5
WX21151056	Kirksville Water Association - Welchwood Master Meter Connection	0-2 Years	Not Funded	$189,500	Madison	37	8
			Total Cost:	**$102,742,694**			

Barren River Area Development District (BRADD)



- 2010 census population of 284,195 (126,280 households) with 97% serviceable.
- Projected 2020 population of 316,297 (change of 32,102).
- 6,730.22 miles of existing water lines.
- 113.00 miles of line extensions proposed in the next 10 years.
- 74.00 miles of line rehabilitation proposed in the next 10 years.
- 32.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $120,472,756.
- Estimated funding needs for projects from 6 to 10 years: $13,088,200.
- Average age of structures: water treatment plants is 36 years; water tanks is 27 years.
- Total number of interconnected systems is 42.
- 179 miles of asbestos concrete pipe currently in use.
- 1,276 miles of water lines less than 15 years old.
- 1,266 miles of water lines between 15 and 30 years old.
- 2,689 miles of water lines between 31 and 50 years old.
- 1,585 miles of water lines between 51 and 70 years old.
- $ 20 miles of water lines greater than 70 years old.

Barren River Area Development District has a 2010 census population count of 284,195 (126,280 households) with a projected 2020 population count of 316,297 (128,239 households). Public water is currently available to approximately 97 percent of the district's households based on 2010 census counts. Over the next ten years approximately 1,198 serviceable households will be added through the construction of 113.00 miles of water line extensions and approximately 103,385 instances of improved service through the rehabilitation of 74.00 miles of existing water lines and other appurtenances. 32.00 miles of transmission lines are also proposed within this district.

County Summary for Barren River Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Allen	19,956	9,307	22,366	9,171	9,091	98%	$ 6,309,950
Barren	42,173	19,188	46,361	19,245	19,113	100%	$ 12,608,000
Butler	12,690	5,877	12,544	5,178	5,660	96%	$ 7,887,150
Edmonson	12,161	6,467	12,628	5,283	6,380	99%	$ 4,675,203
Hart	18,199	8,559	18,690	7,604	8,447	99%	$ 23,886,783
Logan	26,835	12,339	27,382	11,301	12,140	98%	$ 7,376,502
Metcalfe	10,099	4,681	10,329	4,306	4,529	97%	$ 4,491,000
Monroe	10,963	5,204	10,405	4,423	5,089	98%	$ 19,275,200
Simpson	17,327	7,435	18,342	7,429	7,180	97%	$ 9,361,975
Warren	113,792	47,223	137,250	54,299	44,731	95%	$ 37,689,193
Totals	**284,195**	**126,280**	**316,297**	**128,239**	**122,360**	**97%**	**$ 133,560,956**

Community Drinking Water Systems in Barren River Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0020956	Allen County Water District	Allen	13,520	6,136
KY0020386	Scottsville Water Department	Allen	5,092	2,442
KY0050490	Cave City Water System	Barren	2,676	1,313
KY0050344	Caveland Environmental Authority	Barren	590	282
KY0050929	Glasgow Water Company	Barren	36,745	16,708
KY0160052	Butler County Water System	Butler	10,677	4,920
KY0160294	Morgantown Utilities	Butler	2,202	1,015
KY0310706	Brownsville Municipal Water System	Edmonson	692	349
KY0310114	Edmonson County Water District	Edmonson	17,603	10,369
KY0500032	Bonnieville Water District	Hart	444	247
KY0500166	Green River Valley Water District	Hart	16,339	7,293
KY0500476	Horse Cave Water System	Hart	2,285	1,111
KY0500305	Munfordville Water Works	Hart	1,484	757
KY0710001	Adairville Water Works	Logan	916	441
KY0710012	Auburn Water Department	Logan	1,379	647
KY0710951	East Logan Water District	Logan	7,788	3,198
KY0710247	Lewisburg Water Works	Logan	2,501	1,207
KY0710318	North Logan Water District	Logan	1,400	620
KY0710378	Russellville Municipal Water System	Logan	7,167	3,443
KY0710707	South Logan Water Association	Logan	4,106	1,816
KY0850115	Edmonton Water Works	Metcalfe	7,192	3,316
KY0860141	Fountain Run Water District #1	Monroe	882	487
KY0860150	Monroe County Water District	Monroe	8,002	3,703
KY0860426	Tompkinsville Water Works	Monroe	2,270	1,135
KY1070144	Franklin Water Works	Simpson	10,457	4,592
KY1070398	Simpson County Water District	Simpson	6,693	2,795
KY1140038	Bowling Green Municipal Utilities	Warren	46,878	19,759
KY1140487	Warren County Water District	Warren	61,349	25,054
		Totals:	279,329	125,155

Barren River Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

The majority of planning units within the BRADD region have identified the repair and replacement of existing infrastructure as the primary need within their respective county. Evidence of this need is reflected by the types of projects currently on record as well as the overall regional priority rankings submitted by each planning unit. Many planning units within the region have identified aging and/or failing existing infrastructure as a major obstacle to improving water service quality and have developed projects to combat this issue. Planning units also indicated that addressing the primary need of repair and replacement will also aid in the pursuit of extending services to unserved areas, which represents the secondary need identified most frequently within the BRADD region. Although to a lesser extent, improving security risks and increasing storage capacity were also identified as secondary needs by multiple planning units.

Description and Determination of Planning Units:

Planning units within the BRADD region are determined by county and are comprised of all water systems located within county boundaries. In addition, water systems that operate on a regional level within multiple counties are included in each planning unit in which they operate. Water planning units within the BRADD region: Allen, Barren, Butler, Edmonson, Hart, Logan, Metcalfe, Monroe, Simpson, and Warren.

Barren River Area Development District
Project Ranking Methodology

The Barren River Water Management Council utilizes the following criteria for the prioritization of water and wastewater projects on a regional scale. The criteria has been adapted from previous versions used by the BRADD combined with examples from other ADDs resulting in a 5 tiered ranking criteria to determine a numerical point value for each project. This process provides for increased collaboration on a local level to increase awareness on the impacts (locally and regionally) of proposed projects.

County Planning Unit Councils meet at least once locally to discuss and rank potential projects. These meetings are hosted by the County Judge/Executive with each local utility, mayor and other officials invited to attend. All proposed projects are reviewed by the council and given a numerical score based on a five tiered ranking criteria including: (1. Project Type 2.Complicance with Enforcement Action 3. Funding Status 4. Project Status and 5. County Ranking). Due to the diverse composition of each planning unit, a wide variety of interests are represented and therefore collaboration and compromise are key factors throughout the ranking process. This also provides for an increased level of understanding regarding the needs of planning unit as a whole and ensures that projects providing the most benefit (both locally and regionally) receive priority.

After all Planning Unit Council meetings have been completed, a summary tabulation of project scores is created and the Area Water Management Council meets to vote and finalize the regional ranking priorities. The top five scoring projects for each county are selected for ranking, resulting in a total of 50 ranked projects each for both water and wastewater. In addition, the top 10 overall projects are comprised of those projects identified as the #1 overall priority for each county (as indicated by each planning unit during regional ranking meetings). In this way each county is assured to have one project appear in the top 10 regional ranking, thus ensuring equal opportunity throughout the region. After the top 10 the projects are ranked based on overall score. The following criteria are used to score projects:

Drinking Water Ranking Criteria

I. Project Type

A. Elimination of a Public Water System (PWS) through a merger = 25 points
B. Elimination of water treatment plant through an interconnection = 23 points
C. Rehabilitation and or replacement of aging infrastructure = 20 points
D. Construction of a supplemental potable/raw water supply = 17 points
E. Construction of a new water treatment plant or expansion = 15 points
F. Construction of a new water storage tank = 10 point

G. Economic Development
- 100+ jobs created or maintained - 20 points
- 75-99 jobs created or maintained - 19 points
- 50-74 jobs created or maintained - 18 points
- 20-49 jobs created or maintained - 15 points
- 10-19 jobs created or maintained - 10 points
- less than 10 jobs created or maintained - 5 points

H. Extension of Service to Unserved Households
- 9+ households per mile - 20 points
- 7-8 households per mile - 19 points
- 5-6 households per mile - 18 points
- 3-4 households per mile - 15 points
- 1-2 households per mile - 10 points

I. Underserved Customers

80-100+ households per mile - 20 points
60-80 households per mile - 19 points
40-60 households per mile - 18 points
20-40 households per mile - 15 points
0-20 households per mile - 10 points

II. Compliance with Enforcement Action (Receive points in either A or B)

A. Does the project address correction of a documented health threat? = 10 Points
B. Is the project necessary to achieve full or partial compliance with a court order, agreed order, or a judicial or administrative consent decree? = 5 Points

III. Funding Status (Receive points in either A, B, or C)

A. Funds committed for 50-99% of total project cost = 10 points
B. Funds committed for 1-49% of total project cost = 5 points
C. No funds committed for project = 0 points

IV. Project Status (Can receive points in multiple categories)

A. All necessary approvals obtained to start construction (including rights-of-way) = 20 points
B. Engineering plans & specs submitted to DOW = 15 points
C. Preliminary engineering report complete = 10 points
D. Estimated engineer's budget complete = 5 points

V. County Ranking (Receive points in either A, B, C, or D)

A. Number one ranked project = 24 points
B. Number two ranked project =18 points
C. Number three ranked project = 14 points
D. Number four ranked project = 10 points
E. Number five ranked project = 8 Points

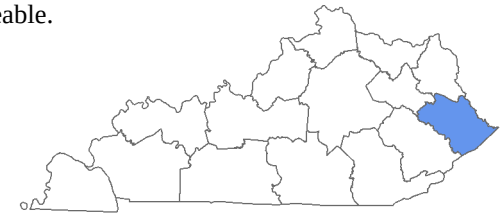
Project Rankings For Barren River Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21171045	Monroe County Water District - New Regional Water Treatment Plant and Water System Improvements	3-5 Years	Partially Funded	$12,412,000	Monroe	1	1
WX21169032	Edmonton - Water Storage Tank Renovations/SCADA System - Phase II	3-5 Years	Not Funded	$800,000	Metcalfe	2	1
WX21061027	Edmonson County Water District - Edmonson and Hart Extensions #1	3-5 Years	Not Funded	$977,075	Edmonson	3	1
WX21141025	Russellville Water Project 2	0-2 Years	Not Funded	$933,830	Logan	4	1
WX21009032	Glasgow Water Improvement - 20 Inch Transmission Line to Haywood	3-5 Years	Not Funded	$1,600,000	Barren	5	1
WX21213034	SCWD- Macedonia Road Fire Protection	3-5 Years	Not Funded	$120,000	Simpson	6	1
WX21031042	Morgantown - Water Plant Improvements	3-5 Years	Not Funded	$500,000	Butler	7	1
WX21099033	Bonnieville - Asbestos Line Replacement	3-5 Years	Not Funded	$1,000,000	Hart	8	1
WX21003001	Holland Road New Pump Station Project	0-2 Years	Not Funded	$1,334,180	Allen	9	1
WX21227063	BGMU - WKU Pump Station Emergency Generator	0-2 Years	Not Funded	$125,000	Warren	10	1
WX21169025	Edmonton - Joe Fields and Lone Star Line Replacement	3-5 Years	Not Funded	$150,000	Metcalfe	11	2
WX21213029	City of Franklin - Morgantown Rd Water Line	3-5 Years	Not Funded	$336,000	Simpson	12	2
WX21009033	Glasgow Water Improvement - 20 Inch Transmission Line Haywood to Grandview Ave	3-5 Years	Not Funded	$1,750,000	Barren	13	2
WX21061020	Edmonson County Water District - Edmonson and Hart Extensions #2	3-5 Years	Not Funded	$1,061,585	Edmonson	14	2
WX21171013	Tompkinsville Downtown Water Line Replacement	3-5 Years	Not Funded	$500,000	Monroe	15	2
WX21227076	BGMU - Water Treatment Plant - Alternate Disinfection Process	3-5 Years	Not Funded	$4,424,000	Warren	16	2
WX21141004	Adairville - Water System Improvements / Upgrades	0-2 Years	Over Funded	$616,441	Logan	17	2
WX21031045	BCWS - Hwy 231 Water Line Replacement, Phase 2	3-5 Years	Not Funded	$170,000	Butler	18	2
WX21099024	Horse Cave - Water Line Improvements	3-5 Years	Not Funded	$950,000	Hart	19	2
WX21003014	City of Scottsville - Maysville Rd Tank Painting and Old Tank Demolition	3-5 Years	Not Funded	$350,000	Allen	20	2
WX21099029	GRVWD - Water Treatment Plant Expansion	0-2 Years	Not Funded	$12,000,000	Hart	21	3
WX21213042	SCWD - Rural Fire Protection Project A	3-5 Years	Not Funded	$803,000	Simpson	22	3
WX21141020	City of Lewisburg - Radio Read Meter Purchase	0-2 Years	Fully Funded	$220,000	Logan	23	3
WX21003003	White Plains Tank Painting	3-5 Years	Not Funded	$350,000	Allen	24	3
WX21171037	Fountain Run Water District #1 - Repaint/Rehab Existing Tank	3-5 Years	Not Funded	$123,000	Monroe	25	3
WX21227028	WCWD - Greenwood Pump Station #2	3-5 Years	Not Funded	$275,000	Warren	26	3
WX21061005	Edmonson County Water Improvement - Nolin State Park	3-5 Years	Not Funded	$176,000	Edmonson	27	3
WX21009030	Caveland Environmental - Blair Road	3-5 Years	Not Funded	$198,000	Barren	28	3
WX21031039	Morgantown - Water Tank	0-2 Years	Fully Funded	$200,000	Butler	29	3
WX21169029	City of Edmonton - Water Service to New Bypass	6-10 Years	Not Funded	$2,000,000	Metcalfe	30	3
WX21099035	Edmonson County Water District - Edmonson and Hart Extensions #1	3-5 Years	Not Funded	$977,075	Hart	31	4
WX21213028	City of Franklin - West Cedar St. Water Line	0-2 Years	Not Funded	$495,975	Simpson	32	4
WX21031046	BCWS - Pump Station Standby Power System	0-2 Years	Not Funded	$90,000	Butler	33	4
WX21009035	Caveland Environmental - Cave City Water Line Replacement	3-5 Years	Not Funded	$600,000	Barren	34	4
WX21227074	BGMU - Water Treatment Plant - Caustic Soda	3-5 Years	Not Funded	$1,141,000	Warren	35	4

Project Rankings For Barren River Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21003012	City of Scottsville - WTP Emergency Generator Project	3-5 Years	Not Funded	$500,000	Allen	36	4
WX21141054	North Logan Water District - Radio Read Meter Conversion	0-2 Years	Not Funded	$400,000	Logan	37	4
WX21171039	Monroe County Water District Improvements - Water Storage Tanks	3-5 Years	Not Funded	$200,000	Monroe	38	4
WX21169022	Edmonton - A. Smith Rd Extension	3-5 Years	Not Funded	$32,000	Metcalfe	39	4
WX21099038	Quarry Road Water Main Extension	3-5 Years	Not Funded	$333,045	Hart	40	5
WX21031028	BCWS - Jetson Tank Replacement	3-5 Years	Not Funded	$550,000	Butler	41	5
WX21009037	Caveland Environmental - Park City Water Lines #2	3-5 Years	Not Funded	$500,000	Barren	42	5
WX21213023	SCWD - Northeast Transmission Upgrade	0-2 Years	Not Funded	$900,000	Simpson	43	5
WX21227054	WCWD - Glen Lily Area Improvements	6-10 Years	Not Funded	$1,797,000	Warren	44	5
WX21003020	Water Line Extension to Sumitomo Plant	3-5 Years	Not Funded	$654,300	Allen	45	5
			Total Cost:	**$55,625,506**			

Big Sandy Area Development District (BSADD)



- 2010 census population of 154,093 (70,217 households) with 94% serviceable.
- Projected 2020 population of 148,051 (change of -6,042).
- 2,476.57 miles of existing water lines.
- 60.00 miles of line extensions proposed in the next 10 years.
- 35.00 miles of line rehabilitation proposed in the next 10 years.
- There are no transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $31,689,744.
- Estimated funding needs for projects from 6 to 10 years: $12,371,900.
- Average age of structures: water treatment plants is 42 years; water tanks is 22 years.
- Total number of interconnected systems is 14.
- 57 miles of asbestos concrete pipe currently in use.
- 2,375 miles of water lines less than 15 years old.
- 103 miles of water lines between 15 and 30 years old.
- 35 miles of water lines between 31 and 50 years old.
- 4 miles of water lines between 51 and 70 years old.
- $ 0 miles of water lines greater than 70 years old.

Big Sandy Area Development District has a 2010 census population count of 154,093 (70,217 households) with a projected 2020 population count of 148,051 (61,704 households). Public water is currently available to approximately 94 percent of the district's households based on 2010 census counts. Over the next ten years approximately 268 serviceable households will be added through the construction of 60.00 miles of water line extensions and approximately 16,321 instances of improved service through the rehabilitation of 35.00 miles of existing water lines and other appurtenances.

County Summary for Big Sandy Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Floyd	39,451	18,175	37,153	15,594	17,450	96%	$ 13,527,243
Johnson	23,356	10,624	23,265	9,647	9,759	92%	$ 118,322
Magoffin	13,333	5,950	13,587	5,696	5,769	97%	$ 13,237,132
Martin	12,929	5,164	12,055	4,410	5,085	99%	$ 4,595,060
Pike	65,024	30,304	61,991	26,357	27,582	91%	$ 12,583,887
Totals	**154,093**	**70,217**	**148,051**	**61,704**	**65,645**	**93%**	**$ 44,061,644**

Community Drinking Water Systems in Big Sandy Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0360272	Martin Water Works	Floyd	651	375
KY0360358	Prestonsburg City's Utilities Commission	Floyd	18,053	8,216
KY0360026	Southern Water & Sewer District	Floyd	19,900	9,160
KY0360463	Wheelwright Utilities Commission	Floyd	956	399
KY0580340	Paintsville Utility Commission	Johnson	20,961	9,553
KY0770525	Magoffin County Water District	Magoffin	10,840	4,839
KY0770566	Salyersville Water Works	Magoffin	2,259	1,006
KY0800273	Martin County Water District	Martin	11,849	5,106
KY0980120	Elkhorn City Water Department	Pike	1,429	715
KY0980575	Mountain Water District	Pike	48,166	22,482
KY0980350	Pikeville Water Department	Pike	9,105	4,162
		Totals:	144,169	66,013

Big Sandy Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Increase Storage Capacity**

Discussion of Area Development District Needs:

In the Big Sandy Area 94% of the population is served by public water. The unserved population lives in very rural areas and waterline extension and maintenance is very expensive. The capital cost of designing and constructing public water system extensions is perhaps the chief impediment to the extension of public service into rural areas of the Big Sandy. The average age of water infrastructure in the region is approximately 50 years old. The primary need for the Big Sandy Area is to repair and replace existing infrastructure. The aging water infrastructure need to be upgraded or replaced. The area's secondary need for sufficient water supply to deal with drought or heavy water usage implementation of inter connectivity among systems would alleviate the problem and some connections have been made.

Description and Determination of Planning Units:

Big Sandy has five Water Planning Areas: Floyd, Johnson, Magoffin, Martin, and Pike Counties. The planning group is made up of Judge Executives, Mayors, and Utilities within the planning area. The planning area follows the county boundary of the respective planning unit.

The water suppliers in the planning groups are as follows:

- Floyd County - Prestonsburg City's, Martin Water Works, Wheelwright Utilities, Southern Water and Sewer District
- Johnson County - Paintsville Utilities
- Magoffin County- Magoffin County Water District, Salyersville Water Works
- Martin County- Martin County Water District,
- Pike County-Mountain Water District, Pikeville Water Department, and Elkhorn City Water Department.

Big Sandy Area Development District
Project Ranking Methodology

The annual ranking in the Big Sandy area begins with a series of county-wide meetings comprised of all the water and sewer utilities in the county where the meeting is taking place. Each utility present decides which of their projects is to be ranked and determines the importance of those for themselves. The county ranking process is based on a consensus decision by the members present at the meeting.

While the county rankings are based on a consensus, the regional ranking process uses a quantitative points system to determine the importance of each project ranked at the county level. The points given to each project fall within 7 categories: Project Type, Compliance, Financial, Project Status, County Ranking, Water Loss, and Regional Importance.

Project Type

A.	Elimination of Public Water System (PWS) through a merger	25
B.	Elimination of a water treatment plant through an interconnection.	23
C.	Construction of a new water treatment plant for regional provider.	20
D.	Construction of a supplemental potable/raw water supply	17
E.	Rehabilitation and/or replacement of aging infrastructure or for hydraulic necessity	15
F.	Construction of a new water treatment plant or expansion	15
G.	Construction of a new water storage tank	10
H.	Extension of Service to Unserved Households	
	a. 9+ households per mile	20
	b. 7-8 households per mile	19
	c. 5-6 households per mile	18
	d. 3-4 households per mile	15
	e. 1-2 households per mile	10

Compliance with Enforcement Action

	Is the project necessary to achieve full or partial compliance with a court order, agreed order, or a judicial or administrative consent decree?	20

Financial

A.	Documented financing plan in Project Profile	10
B.	Utility service area has a MHI less than $32,958	20
C.	Utility service area with a MHI between $41,197 and $32,959	10

Project Status

A.	Estimated engineer's budget complete	5
B.	Estimated bid date and construction start date	5

County Ranking

A.	Number one ranked project	24
B.	Number two ranked project	20
C.	Number three ranked project	16
D.	Number four ranked project	14
E.	Number five ranked project	12

Water Loss

A.	Utility has a water loss percentage less than 15%	20
B.	Utility has a water loss percentage between 15% to 25%	15
C.	Utility has a water loss percentage between 25% to 35%	10

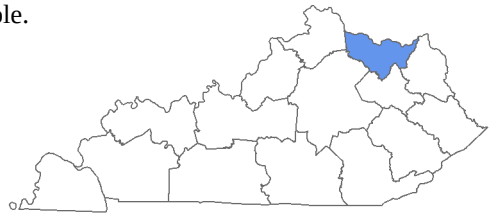
Regional Importance

A project can be awarded points at the discretion of the regional water management council.
No more than thirty points can be awarded by the council to water projects in the regional ranking.

Project Rankings For Big Sandy Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21195114	Marion Branch Industrial Park - Water Infrastructure Project	0-2 Years	Not Funded	$4,370,000	Pike	1	1
WX21159006	Martin County Rehab Aging Infrastructure	0-2 Years	Not Funded	$2,760,960	Martin	2	2
WX21195010	Railroad Bridge Water Line Replacement	0-2 Years	Not Funded	$192,000	Pike	3	2
WX21071001	City of Martin Emergency Water Interconnect	0-2 Years	Not Funded	$101,749	Floyd	4	1
WX21153019	Magoffin Industrial Park	0-2 Years	Not Funded	$431,300	Magoffin	5	1
WX21195023	MWD - Ridgeline Road Section 3 Upper Pompey	0-2 Years	Not Funded	$1,850,000	Pike	6	3
WX21153013	Salyersville Church Street Storage Tank	0-2 Years	Not Funded	$700,982	Magoffin	7	3
WX21071730	SWSD - Lackey to Wayland Water Line Replacement	3-5 Years	Not Funded	$1,350,000	Floyd	8	3
WX21071223	PCUC-Modifications to Existing Water Treatment Plant	3-5 Years	Not Funded	$1,088,085	Floyd	9	4
WX21153023	Magoffin County Water District - Radio Telemetry System	0-2 Years	Not Funded	$644,000	Magoffin	10	2
WX21071008	Southern Water - Mink Branch Tank Replacement	0-2 Years	Not Funded	$550,000	Floyd	11	5
WX21153029	Magoffin - KY 542 Water Line Extension	6-10 Years	Not Funded	$772,900	Magoffin	12	4
WX21153012	Salyersville Water Supply Project-Phase III	0-2 Years	Not Funded	$1,600,000	Magoffin	13	5
WX21159021	Martin County Water District Radio Read Meters	0-2 Years	Not Funded	$822,500	Martin	14	1
WX21195024	City of Pikeville By-pass Waterline Extension	0-2 Years	Not Funded	$500,000	Pike	15	4
WX21195020	MWD - Sycamore Waterline Extension Phase II	0-2 Years	Unknown	$0	Pike	16	6
WX21195017	MWD-System Wide Tank Rehabilitation	0-2 Years	Partially Funded	$750,000	Pike	17	5
WX21195021	Greasy Creek Booster Pump Station	0-2 Years	Not Funded	$500,000	Pike	18	8
WX21071731	Southern Water & Sewer District – Water Meter Change Out Program	3-5 Years	Not Funded	$1,329,400	Floyd	19	2
WX21195007	City of Elkhorn City John Moore's Branch Water Line Extension	0-2 Years	Not Funded	$315,887	Pike	20	7
			Total Cost:	**$20,629,763**			

Buffalo Trace Area Development District (BTADD)



- 2010 census population of 56,478 (26,144 households) with 97% serviceable.
- Projected 2020 population of 58,306 (change of 1,828).
- 1,742.61 miles of existing water lines.
- 18.00 miles of line extensions proposed in the next 10 years.
- 90.00 miles of line rehabilitation proposed in the next 10 years.
- 1.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $13,161,500.
- Estimated funding needs for projects from 6 to 10 years: $11,217,500.
- Average age of structures: water treatment plants is 34 years; water tanks is 22 years.
- Total number of interconnected systems is 16.
- 111 miles of asbestos concrete pipe currently in use.
- 555 miles of water lines less than 15 years old.
- 793 miles of water lines between 15 and 30 years old.
- 254 miles of water lines between 31 and 50 years old.
- 116 miles of water lines between 51 and 70 years old.
- $ 27 miles of water lines greater than 70 years old.

Buffalo Trace Area Development District has a 2010 census population count of 56,478 (26,144 households) with a projected 2020 population count of 58,306 (24,059 households). Public water is currently available to approximately 97 percent of the district's households based on 2010 census counts. Over the next ten years approximately 148 serviceable households will be added through the construction of 18.00 miles of water line extensions and approximately 29,559 instances of improved service through the rehabilitation of 90.00 miles of existing water lines and other appurtenances. 1.00 miles of transmission lines are also proposed within this district.

County Summary for Buffalo Trace Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Bracken	8,488	3,840	8,744	3,538	3,796	99%	$ 6,250,500
Fleming	14,348	6,623	14,880	6,231	6,502	98%	$ 7,330,000
Lewis	13,870	6,481	13,899	5,717	6,150	95%	$ 3,694,500
Mason	17,490	8,105	18,419	7,608	7,809	96%	$ 5,419,000
Robertson	2,282	1,095	2,364	965	1,089	100%	$ 1,685,000
Totals	**56,478**	**26,144**	**58,306**	**24,059**	**25,346**	**97%**	**$ 24,379,000**

Community Drinking Water Systems in Buffalo Trace Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0120013	Augusta Regional WTP	Bracken	1,169	573
KY0120039	Bracken County Water District	Bracken	6,068	2,701
KY0120044	Brooksville Water	Bracken	655	297
KY0350133	Fleming County Water Association	Fleming	9,532	4,209
KY0350134	Flemingsburg Water	Fleming	2,917	1,493
KY0910675	Western Fleming Water District	Fleming	2,791	1,254
KY0680153	Garrison Water	Lewis	2,820	1,253
KY0680438	Vanceburg Water	Lewis	6,238	2,954
KY0810046	Buffalo Trail Water Association	Mason	3,426	1,601
KY0810275	Maysville Water	Mason	11,263	5,403
KY0810366	Western Lewis-Rectorville Water & Gas District	Mason	4,964	2,243
KY0810460	Western Mason Water District	Mason	2,186	953
KY1010297	Mount Olivet Water	Robertson	446	213
		Totals:	54,475	25,147

Buffalo Trace Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Increase Storage Capacity**

Discussion of Area Development District Needs:

Buffalo Trace Area Development District (BTADD) is comprised of Bracken, Fleming, Lewis, Mason and Robertson Counties. Thirteen (13) water systems provide potable water to the residents of the area. In addition, one water commission provides water on a wholesale basis to other utilities. During a Regional Water Management Council meeting, the systems were given the opportunity to meet with the other systems in their respective county to discuss the needs for their system and determine the needs that were most prevalent in the county. The needs identified were used in the determination of the primary and secondary of the Buffalo Trace Area Development District.

The primary need identified in the Buffalo Trace Region is Repair and Replace Existing Infrastructure. This is the primary need for four of the five planning units and was identified as the secondary need for the other county. Many of the utilities have identified this as their primary need due to aging infrastructure and undersized lines. Approximately 250 miles of water line in the region was constructed prior to 1970, with more than 200 miles being constructed of AC line. In addition, wells need to be replaced and tanks need to be cleaned.

The secondary need identified is Increase Storage Capacity. This was identified as the primary need in one planning unit and secondary in two planning units. Several areas do not have adequate storage to meet regular demands within the area.

Additional secondary needs identified by the planning units include: Economic Stimulation and Meet Regulatory Requirements

Description and Determination of Planning Units:

The Buffalo Trace Area Development covers five planning units, each encompassing a political county boundary. The five planning units are: Bracken County, Fleming County, Lewis County, Mason County and Robertson County.

There are five water utilities in Bracken County: Augusta Regional WTP, Bracken County Water District, Brooksville Utility, Buffalo Trail Water Association and Western Mason Water District.

Four utilities serve residences in Fleming County. They include: Fleming County Water Association, Flemingsburg Utility, Western Fleming Water District and Rowan Water, Inc. In addition, Greater Fleming Regional Water Commission is a wholesale provider to Fleming County Water Association, Flemingsburg Utility and Western Fleming Water District.

Lewis County residents are served by three systems: Garrison Quincy Heights Water District, Vanceburg Electric Plant Board and Western Lewis Rectorville Water District.

Mason County is served by six utilities: Maysville Utility System, Western Mason Water District, Western Lewis Rectorville Water District, Buffalo Trail Water Association, Bracken County Water District and Fleming County Water Association.

Robertson County has service provided by Mt. Olivet Water and Buffalo Trail Water Association.

Buffalo Trace Area Development District
Project Ranking Methodology

Buffalo Trace completes county meetings. Every person who is on the mailing list for the Water Management Council (systems, Judge Executives, Mayors, engineers, Health Departments, DOW, etc.) is notified of the meetings. Each project is discussed and then the individuals present at the meeting rank the projects by what they determine to be most important and beneficial for the county. The rankings are reached by consensus.

After the county meetings, the Water Management Council ranks the projects on a regional basis. Each project that received a #1 ranking at the county meeting is presented. The Council then ranks those projects as to what is determined to be the most important and beneficial for the region. After those five projects are ranked and consensus reached, the projects are ranked on an alternating basis. The county that received the number 1 rank then receives the number 10 rank. The county that received the 2 rank receives the 9 rank. The county that received the 3 rank receives the 8 rank. The county that received the 4 rank receives the 7 rank. The county that received the 5 rank receives the 6 rank.

The rankings continue in an alternating fashion.
Basically;
County A receives regional rankings of 1, 10, 11, 20, etc.
County B receives regional rankings of 2, 9, 12, 19, etc.
County C receives regional rankings of 3, 8, 13, 18, etc.
County D receives regional rankings of 4, 7, 14, 17, etc.
County E receives regional rankings of 5, 6, 15, 16, etc.

This process is completed for both water and sewer projects. The order of regional rankings for water and sewer projects are completed independently of each other.

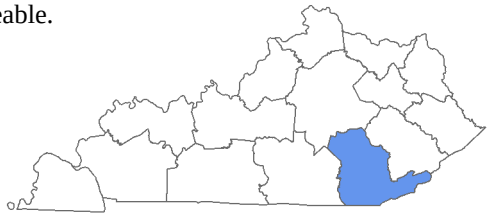
Project Rankings For Buffalo Trace Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21135007	Garrison Quincy Water District-Phase 4	0-2 Years	Not Funded	$2,500,000	Lewis	1	1
WX21069037	Phase 2 - Flemingsburg Bypass Water Line Extension	0-2 Years	Not Funded	$525,000	Fleming	2	1
WX21161024	Mayslick Tank	3-5 Years	Not Funded	$1,400,000	Mason	3	1
WX21201016	BTWA-KY1029 From Ogden Ridge to KY 165	6-10 Years	Not Funded	$400,000	Robertson	4	1
WX21023045	BCWD-KY 19 Master Meter to Kelly Ridge	0-2 Years	Fully Funded	$358,000	Bracken	5	1
WX21023039	Augusta Lagoon Cleaning	3-5 Years	Not Funded	$80,000	Bracken	6	2
WX21201013	BTWA-Scattered Lines	6-10 Years	Not Funded	$365,000	Robertson	7	2
WX21161034	BTWA-Sardis Upgrade	3-5 Years	Not Funded	$150,000	Mason	8	2
WX21069022	FCWA 12" Bypass Water Line	3-5 Years	Not Funded	$501,000	Fleming	9	2
WX21135015	GQWD- Phase I AC Water Line Replacement-Bentleyville to Quincy	6-10 Years	Not Funded	$430,000	Lewis	10	2
WX21135018	GQWD- Phase II, AC Water Line Replacement- Old County Ln (In Qui	3-5 Years	Not Funded	$600,000	Lewis	11	3
WX21069034	Flemingsburg Water - East Water Street Water Line Replacement	3-5 Years	Not Funded	$215,000	Fleming	12	3
WX21161033	BTWA-Happy Ridge Upgrade	3-5 Years	Not Funded	$205,000	Mason	13	3
WX21201014	Mt. Olivet Water Upgrade-Waterworks Rd/KY 617/KY 165 S	6-10 Years	Not Funded	$370,000	Robertson	14	3
WX21023036	Augusta-New Water Tank & Loop	3-5 Years	Not Funded	$1,300,000	Bracken	15	3
WX21023044	BCWD-Shofstall Road	0-2 Years	Not Funded	$400,000	Bracken	16	4
WX21201010	BTWA - KY 1029 & Gayles Gorge	6-10 Years	Not Funded	$550,000	Robertson	17	4
WX21161038	BTWA - Old Sardis Pike	6-10 Years	Not Funded	$200,000	Mason	18	4
WX21069032	Western Fleming AC Replacement	6-10 Years	Not Funded	$5,049,000	Fleming	19	4
WX21161022	WLRWD - Office Tank	3-5 Years	Not Funded	$1,450,000	Mason	20	5
WX21069030	WFWD-Nepton Rd & Connector Rd	3-5 Years	Not Funded	$40,000	Fleming	21	5
WX21023043	Bracken County Water District-KY 19 Upgrade	3-5 Years	Not Funded	$500,000	Bracken	22	5
WX21023042	BCWD-County Roads Without Water	3-5 Years	Not Funded	$279,000	Bracken	23	6
WX21161013	Maysville Utility Telemetry/Security Improvements	6-10 Years	Not Funded	$150,000	Mason	24	6
WX21069035	WFWD-Office Upgrade	6-10 Years	Not Funded	$50,000	Fleming	25	6
WX21161035	Maysville Plant Upgrade	6-10 Years	Not Funded	$30,000	Mason	26	7
WX21069010	Western Fleming Water District Automatic Read Meters	3-5 Years	Not Funded	$170,150	Fleming	27	7
WX21023025	Bracken Co Water District - Asbsetos Cement Water Line Replacement	3-5 Years	Not Funded	$977,000	Bracken	28	7
WX21023033	BCWD - Shofstall to Locust Creek & Old 19	6-10 Years	Not Funded	$750,000	Bracken	29	8
WX21161029	Washington Pressure Zone Upgrade	3-5 Years	Not Funded	$75,000	Mason	30	8
WX21069018	Flemingsburg Automatic Read Meters	6-10 Years	Not Funded	$350,000	Fleming	31	8
WX21069013	GFCRWC- Phase III	11-20 Years	Not Funded	$16,338,000	Fleming	32	9
WX21161040	WLRWD Well 3 Rehab	6-10 Years	Not Funded	$30,000	Mason	33	9
WX21023034	BCWD-Phase V-Roads Without Water & Upgrades	6-10 Years	Not Funded	$549,500	Bracken	34	9
WX21023032	Brooksville Improvements	6-10 Years	Not Funded	$500,000	Bracken	35	10
WX21161037	WMWD-Augusta Dover Road Water Line Upgrade	3-5 Years	Not Funded	$385,000	Mason	36	10

Project Rankings For Buffalo Trace Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21069019	GFCRWC Lime Softening Upgrade	11-20 Years	Not Funded	$4,800,000	Fleming	37	10
WX21069008	Greater Fleming County Regional Water Commission -Phase 2 Extension	11-20 Years	Not Funded	$7,944,000	Fleming	38	11
WX21161036	WMWD-Walton Pike Water Line Upgrade	6-10 Years	Not Funded	$209,000	Mason	39	11
WX21023037	Brooksville & Augusta AMR & GIS	6-10 Years	Not Funded	$250,000	Bracken	40	11
WX21023031	Bracken County Water District AMR and GIS	6-10 Years	Not Funded	$280,000	Bracken	41	12
WX21023020	AA Highway	11-20 Years	Not Funded	$1,100,000	Bracken	42	13
			Total Cost:	**$52,804,650**			

Cumberland Valley Area Development District (CVADD)



- 2010 census population of 236,618 (104,865 households) with 97% serviceable.
- Projected 2020 population of 237,501 (change of 883).
- 4,526.22 miles of existing water lines.
- 152.00 miles of line extensions proposed in the next 10 years.
- 67.00 miles of line rehabilitation proposed in the next 10 years.
- 46.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $74,328,089.
- Estimated funding needs for projects from 6 to 10 years: $12,409,398.
- Average age of structures: water treatment plants is 35 years; water tanks is 25 years.
- Total number of interconnected systems is 37.
- 27 miles of asbestos concrete pipe currently in use.
- 963 miles of water lines less than 15 years old.
- 1,904 miles of water lines between 15 and 30 years old.
- 606 miles of water lines between 31 and 50 years old.
- 219 miles of water lines between 51 and 70 years old.
- $ 44 miles of water lines greater than 70 years old.

Cumberland Valley Area Development District has a 2010 census population count of 236,618 (104,865 households) with a projected 2020 population count of 237,501 (97,085 households). Public water is currently available to approximately 97 percent of the district's households based on 2010 census counts. Over the next ten years approximately 10,605 serviceable households will be added through the construction of 152.00 miles of water line extensions and approximately 151,880 instances of improved service through the rehabilitation of 67.00 miles of existing water lines and other appurtenances. 46.00 miles of transmission lines are also proposed within this district.

County Summary for Cumberland Valley Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Bell	28,691	13,154	27,648	11,714	12,853	98%	$ 11,568,978
Clay	21,730	8,875	20,289	7,421	8,355	94%	$ 10,095,200
Harlan	29,278	13,513	26,099	10,856	12,947	96%	$ 5,987,809
Jackson	13,494	6,523	13,771	5,961	6,101	94%	$ 8,491,410
Knox	31,883	14,485	32,132	13,362	14,141	98%	$ 8,270,750
Laurel	58,849	25,446	64,713	26,415	25,255	99%	$ 22,169,417
Rockcastle	17,056	7,703	17,593	7,308	7,424	96%	$ 9,656,676
Whitley	35,637	15,166	35,256	14,048	14,659	97%	$ 10,497,247
Totals	**236,618**	**104,865**	**237,501**	**97,085**	**101,735**	**97%**	**$ 86,737,487**

Community Drinking Water Systems in Cumberland Valley Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0070353	Pineville Water System	Bell	15,609	7,060
KY0070282	Water Service Corporation of Kentucky	Bell	12,022	5,726
KY0260737	Manchester Water Works	Clay	13,187	5,701
KY0260266	North Manchester Water Association Inc	Clay	6,657	2,282
KY0480265	BMUD - Ages/Coxton	Harlan	1,019	448
KY0480277	BMUD - Dayhoit	Harlan	1,960	915
KY0480341	BMUD - Green Hills	Harlan	1,377	621
KY0480603	BMUD - Kenvir	Harlan	758	331
KY0480498	BMUD - Louellen	Harlan	785	380
KY0480650	BMUD - Rosspoint	Harlan	1,823	851
KY0480461	BMUD - Sukey Ridge	Harlan	790	369
KY0480572	BMUD - Wallins	Harlan	1,670	761
KY0480565	Cawood Water District	Harlan	4,516	1,974
KY0483727	Cawood Water District - Pathfork	Harlan	486	231
KY0480028	City of Benham	Harlan	758	398
KY0480262	City of Lynch	Harlan	825	490
KY0483458	Coap, Inc.	Harlan	73	31
KY0480092	Cumberland Municipal Water Works	Harlan	3,551	1,724
KY0480125	Evarts Municipal Water Plant	Harlan	3,409	1,396
KY0480178	Harlan Municipal Water Works	Harlan	4,281	2,048
KY0550784	City of McKee	Jackson	845	446
KY0550209	Jackson County Water Association Inc	Jackson	11,656	5,538
KY0610016	Barbourville Utility Commission	Knox	15,846	7,072
KY0610110	Knox County Utility Commission	Knox	7,849	3,768
KY0630797	East Laurel Water District	Laurel	12,979	5,485
KY0630238	Laurel Water District #2	Laurel	14,677	6,151
KY0630255	London Utility Commission	Laurel	9,161	4,159
KY0630451	West Laurel Water Association	Laurel	12,265	5,274
KY0630477	Wood Creek Water District	Laurel	11,746	5,130
KY1020889	City of Brodhead	Rockcastle	1,512	680
KY1020299	City of Mount Vernon	Rockcastle	4,319	1,991
KY1020288	Eastern Rockcastle County Water Association	Rockcastle	1,590	783
KY1020253	Livingston Municpal Water Works	Rockcastle	376	194
KY1020891	Western Rockcastle Water Association	Rockcastle	10,733	4,731
KY1180085	Corbin Utilities Commission	Whitley	14,916	6,852
KY1180093	Cumberland Falls Highway Water District	Whitley	8,909	3,694
KY1180468	Whitley County Water District #1	Whitley	3,322	1,411
KY1180962	Whitley County Water District #2	Whitley	4,891	2,145
KY1180999	Whitley County Water District #3	Whitley	2,934	1,245
KY1183728	Whitley County Water District - 92 West	Whitley	434	188
KY1180471	Williamsburg Municipal WTP	Whitley	5,123	1,925
		Totals:	231,639	102,599

Cumberland Valley Area Development District
Regional Water Needs Assessment

Primary Need: **Extend Services to Unserved Areas**
Secondary Need: **Improve Security Risks**

Discussion of Area Development District Needs:

The Cumberland Valley Area Water Management Planning Council held meetings at the county level to assess current and future water needs in the region. Most of those water needs are described in project profiles, but information on potential growth areas (subdivisions) is not available. During the review it was noted that repair and replacing aging infrastructure is common need in the entire region while extending lines to unserved areas is not a need in Laurel and a few other counties. All customers in those counties have access to public water if needed. Counties with unserved customers include: Bell County 400, Jackson County 619, Harlan County 35, and Knox Count 150 customers and Rockcastle county 13 customes. Other needs in the region are water storage, regionalization, source protection, improved security , economic stimulation and meeting regulatory requirement.

Repair or replace aging infrastructure, remain a major need in the Cumberland Valley ADD region. That need is reflected by the number of proposed projects in the database. Extending lines to unserved customers is the primary need in the region because of the Council's goal to extend lines to unserved households by 2020. Many miles of older lines have been replaced since 2001 when the planning process began, but some line connections installed before 1930 are still in use. Cumberland Fall Stake Park in Whitley County has more older lines than any other utility. The Park is owned by the State of Kentucky and cannot propose and submit project through the Water Management Planning Council like other utilities. As such no line replacement has taken place. The water management planning council is working hard to ensure that all aging infrastructure is replaced and unserved households have access to public water by the year 2020.

Description and Determination of Planning Units:

The Cumberland Valley Area Development District is divided into eight planning units that are based on the eight counties in the Cumberland Valley Area. The planning units are: Bell County, Clay County, Harlan County, Jackson County, Knox County, Laurel County, Rockcastle County, and Whitley County.

In the Bell County planning unit, there are two water utilities (Water Service Corporation of Kentucky and Pineville Water System) that serve approximately 12,853 households.

The City of Manchester and the North Manchester are the water utilities in the Clay County planning unit and serve approximately 8,355 households.

The Harlan County planning unit is comprised of seven utilities (Black Mountain Utility District, Cawood Water District, City of Benham, Cumberland Municipal Water Works, Evarts Municipal Water Plant, Harlan Municipal Water Works, and the City of Lynch) that serve approximately 12,947 households.

The City of McKee and the Jackson County Water Association are the water utilities in the Jackson County planning unit and serve approximately 6,101 households.

The Knox County planning unit has two water utilities (Barbourville Utility Commission and Knox county Utility Commission) that serve approximately 14,141 households.

The Laurel County planning unit has five water utilities (London Utility Commission, Corbin Utilities Commission, Laurel County Water District #2, West Laurel Water Association, and Wood Creek Water District) that serve approximately 25,255 households.

The Rockcastle County planning unit serves approximately 7,424 households with five water utilities (City of Brodhead, Livingston Municipal Water Works, City of Mount Vernon, East Laurel Water Association, and Western Rockcastle County Water Association).

The City of Williamsburg, Corbin Utilities Commission, Cumberland Falls Highway Water District, and the Whitley County Water District are the water utilities in the Whitley County planning unit and serves approximately 14,659 households.

Cumberland Valley Area Development District
Project Ranking Methodology

The annual ranking in the Cumberland Valley area begins with a series of county-wide meetings comprised of all the water and sewer utilities in the county where the meeting is taking place. Each utility present decides which of their projects is to be ranked and determines the importance of those for themselves. The county ranking process is based on a consensus decision by the members present at the meeting.

While the county rankings are based on a consensus, the regional ranking process uses a quantitative points system to determine the importance of each project ranked at the county level. The points given to each project fall within 7 categories: Project Type, Compliance, Financial, Project Status, County Ranking, Water Loss, and Regional Importance.

Project Type

A.	Elimination of Public Water System (PWS) through a merger	25
B.	Elimination of a water treatment plant through an interconnection.	23
C.	Construction of a new water treatment plant for regional provider.	20
D.	Construction of a supplemental potable/raw water supply	17
E.	Rehabilitation and/or replacement of aging infrastructure or for hydraulic necessity	15
F.	Construction of a new water treatment plant or expansion	15
G.	Construction of a new water storage tank	10
H.	Extension of Service to Unserved Households	
a.	9+ households per mile	20
b.	7-8 households per mile	19
c.	5-6 households per mile	18
d.	3-4 households per mile	15
e.	1-2 households per mile	10

Compliance with Enforcement Action

	Is the project necessary to achieve full or partial compliance with a court order, agreed order, or a judicial or administrative consent decree?	20

Financial

A.	Documented financing plan in Project Profile	10
B.	Utility service area has a MHI less than $32,958	20
C.	Utility service area with a MHI between $41,197 and $32,959	10

Project Status

A.	Estimated engineer's budget complete	5
B.	Estimated bid date and construction start date	5

County Ranking

A.	Number one ranked project	24
B.	Number two ranked project	20
C.	Number three ranked project	16
D.	Number four ranked project	14
E.	Number five ranked project	12

Water Loss

A.	Utility has a water loss percentage less than 15%	20
B.	Utility has a water loss percentage between 15% to 25%	15
C.	Utility has a water loss percentage between 25% to 35%	10

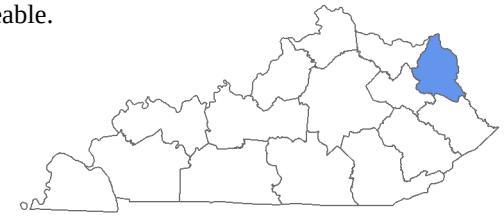
Regional Importance

A project can be awarded points at the discretion of the regional water management council.
No more than thirty points can be awarded by the council to water projects in the regional ranking.

Project Rankings For Cumberland Valley Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21013918	Pineville: WTP Expansion Project	3-5 Years	Not Funded	$3,214,030	Bell	1	1
WX21235002	CFHWYWD - Line Replacement and Reinforcement	3-5 Years	Partially Funded	$1,723,000	Whitley	2	3
WX21203006	Brodhead: Waterline Replacement and Upgrade	3-5 Years	Not Funded	$1,136,000	Rockcastle	3	4
WX21051005	Water Tank Project	0-2 Years	Not Funded	$1,700,000	Clay	4	1
WX21121001	Barbourville - Knox County Regionalization	3-5 Years	Not Funded	$3,000,000	Knox	5	1
WX21235004	Knox County Utility Commission - Whitley County Line Extension	3-5 Years	Not Funded	$420,000	Whitley	6	2
WX21095004	Raw Water/WTP Rehab	3-5 Years	Not Funded	$350,000	Harlan	7	1
WX21109003	Jackson County Water Association - Water Line Extensions Phase I	3-5 Years	Not Funded	$685,960	Jackson	8	1
WX21235434	Whitley County: Water System Improvements	3-5 Years	Not Funded	$937,500	Whitley	9	1
WX21203005	Mount Vernon - Phase #3 - Water Treatment Plant Improvements	3-5 Years	Not Funded	$800,000	Rockcastle	10	1
WX21095670	City of Cumberland 10 Inch Waterline Upgrade	0-2 Years	Not Funded	$973,809	Harlan	11	3
WX21121002	Remaining balance of WX21121532	3-5 Years	Unknown	$0	Knox	12	3
WX21121006	Barbourville - KY 1527 Waterline Replacement	0-2 Years	Not Funded	$279,250	Knox	13	2
WX21109004	Jackson County Water Association - Water Line Extensions Phase II	6-10 Years	Not Funded	$680,450	Jackson	14	2
WX21203558	Western Rockcastle Water Association - Hummel Road Water Line Extension	3-5 Years	Not Funded	$291,000	Rockcastle	15	5
WX21125012	Hawk Creek Water Line Replacement	3-5 Years	Not Funded	$917,674	Laurel	16	2
WX21203007	Water Pump Replacement & Repairs	3-5 Years	Not Funded	$30,000	Rockcastle	17	2
WX21125007	Bakersfield Subdivision Water Line Upgrade Project	3-5 Years	Not Funded	$179,693	Laurel	18	1
WX21125015	HWY 1006 Water Line Extension Project	3-5 Years	Not Funded	$271,763	Laurel	19	4
WX21051008	Waterline Extensions in Clay County	3-5 Years	Not Funded	$900,000	Clay	20	2
WX21051006	Water Meter Replacement	3-5 Years	Not Funded	$1,000,000	Clay	21	5
WX21095003	Cumberland Water System Improvements	3-5 Years	Not Funded	$1,664,000	Harlan	22	5
WX21125009	Meadowlane Subdivision Water Line Extension Project	3-5 Years	Not Funded	$198,662	Laurel	23	5
WX21210139	Pmria- Waterline Ext. to Proposed Industrial Park	0-2 Years	Not Funded	$6,500,000	Bell	24	3
WX21013920	Pineville: Browns Creek Cubbage Hill	0-2 Years	Over Funded	$1,650,000	Bell	25	2
WX21121004	Barbourville - Wal-Mart Tank Replacement	0-2 Years	Not Funded	$666,000	Knox	26	4
WX21051010	New Water Meters	3-5 Years	Not Funded	$62,000	Clay	27	3
WX21203004	Livingston - New Master Meter	0-2 Years	Unknown	$0	Rockcastle	28	3
WX21051007	Raw Water Pump Replacement - Goose Creek Intake Phase II	3-5 Years	Not Funded	$50,000	Clay	29	4
WX21125005	Parker Road to West KY 80 Waterline Extension	0-2 Years	Not Funded	$334,960	Laurel	30	3
			Total Cost:	**$30,615,751**			

Five County Area Development District (FIVCO)



- 2010 census population of 137,884 (61,101 households) with 95% serviceable.
- Projected 2020 population of 139,098 (change of 1,214).
- 2,414.36 miles of existing water lines.
- 59.00 miles of line extensions proposed in the next 10 years.
- 10.00 miles of line rehabilitation proposed in the next 10 years.
- 11.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $44,577,273.
- Estimated funding needs for projects from 6 to 10 years: $236,400.
- Average age of structures: water treatment plants is 33 years; water tanks is 27 years.
- Total number of interconnected systems is 17.
- 46 miles of asbestos concrete pipe currently in use.
- 563 miles of water lines less than 15 years old.
- 761 miles of water lines between 15 and 30 years old.
- 867 miles of water lines between 31 and 50 years old.
- 18 miles of water lines between 51 and 70 years old.
- $ 123 miles of water lines greater than 70 years old.

Five County Area Development District has a 2010 census population count of 137,884 (61,101 households) with a projected 2020 population count of 139,098 (56,252 households). Public water is currently available to approximately 95 percent of the district's households based on 2010 census counts. Over the next ten years approximately 1,776 serviceable households will be added through the construction of 59.00 miles of water line extensions and approximately 59,736 instances of improved service through the rehabilitation of 10.00 miles of existing water lines and other appurtenances. 11.00 miles of transmission lines are also proposed within this district.

County Summary for Five County Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Boyd	49,542	21,803	49,446	20,040	21,737	100%	$ 6,465,475
Carter	27,720	12,311	28,459	11,508	11,590	94%	$ 7,349,750
Elliott	7,852	3,371	8,078	3,011	3,108	92%	-
Greenup	36,910	16,330	36,923	15,046	15,116	93%	$ 29,613,448
Lawrence	15,860	7,286	16,192	6,647	6,604	91%	$ 1,385,000
Totals	**137,884**	**61,101**	**139,098**	**56,252**	**58,155**	**95%**	**$ 44,813,673**

Community Drinking Water Systems in Five County Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0100011	Ashland Water Department	Boyd	35,815	16,137
KY0100944	Big Sandy Water District	Boyd	13,738	5,942
KY0100064	Cannonsburg Water District	Boyd	8,937	3,710
KY0100004	Overland Development	Boyd	269	104
KY0220164	Grayson Water Department	Carter	10,817	4,588
KY0220335	Olive Hill Water Department	Carter	4,953	2,335
KY0220555	Rattlesnake Ridge Water District	Carter	11,418	5,202
KY0320383	Sandy Hook Water District	Elliott	3,722	1,514
KY0450132	Flatwoods Water Department	Greenup	8,030	3,553
KY0450169	Greenup Water Department	Greenup	10,299	4,478
KY0450365	Raceland Water Department	Greenup	3,185	1,446
KY0450376	Russell Water Department	Greenup	4,893	2,141
KY0450410	South Shore Water Department	Greenup	4,590	2,170
KY0450478	Worthington Water Department	Greenup	1,613	684
KY0450479	Wurtland Water Department	Greenup	1,476	632
KY0640257	Louisa Water Department	Lawrence	5,476	2,474
		Totals:	129,231	57,110

Five County Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Meet Regulartory Requirements**

Discussion of Area Development District Needs:

Just the mention of aging infrastructure effectively blocks out all other discussion of area needs for the water utilities, but, in truth, most of the specifics all relate back to that general problem. Tanks in need of inspection, cleaning or painting is a function of age. Waterlines breaking are often the result of age or inferior materials or both. The City of Olive Hill, for example, has a 50 year old water treatment plant and a distribution system to match. In many cases there are projects to address these needs but not always. The utilities itemize there needs in the form of projects according to what needs to be done first or what might actually be feasible. Some comment that listing every need is the same as listing none; the task is crippling and stops all progress.

Description and Determination of Planning Units:

The FIVCO Planning Units consist of the FIVCO Counties. With few exceptions, the water systems do not have large customer bases in multiple counties. The exceptions to this are Rattlesnake Ridge Water District covering Carter, Elliott and Lawrence Counties, and the Big Sandy Water District in Boyd and Lawrence Counties. The other 14 water systems are bounded by their county lines. It is good to note that every system in the ADD is in some way interconnected with every other for emergency purposes or as a means of addressing pressure problems in more rural areas. In 2005, Hal Rogers secured funds for a study to connect 40 counties in Eastern Kentucky for the purposes of uninterrupted water supply. The ADDs involved in this study were FIVCO, Gateway, Big Sandy, Kentucky River, Cumberland Valley and Lake Cumberland. At least in the FIVCO area all the systems used the same chlorination process which eased the problems of interconnection somewhat. Though connectivity in the ADD is high, each county has its own plans for economic growth which makes division of the Planning Units by county understandable.

Boyd County is served by the City of Ashland (a large producer) and the Big Sandy Water District (a large distributor) and Cannonsburg Water District. Coverage is nearly 100% though BSWD is only recently working on an interconnect with Ashland. Previously, the Water District purchased the bulk of its supply from the City of Kenova in West Virginia and the City of Louisa in Lawrence County Kentucky.

Carter County is served by the Cities of Grayson and Olive Hill as well as the Rattlesnake Ridge Water District. The Water District has its corporate office in Carter County and its treatment plant in Elliott County.

Elliott County is served by Sandy Hook Water District and Rattlesnake Ridge Water District. Most of the County is served with only small "spurs" remaining to complete coverage.

Lawrence County is served by the Louisa Water and Sewer Commission and the Big Sandy Water District. In the past year, Paintsville Water has been invited to extend service into the southern region of the County around the City of Blaine. The Fiscal Court has paid for this extension.

Greenup County is served by seven of the sixteen water systems with corporate offices in the County as well as service from Ashland Water Department and the Cannonsburg Water District, both from Boyd County. Most of these systems are localized municipalities but the City of Greenup has expanded to provide service to most of the unserved areas of the County. Cannonsburg Water District provides service along the southern part of the Industrial Parkway and provides an interconnect with Greenup Water to help with pressure problems in the more remote reaches on their system.

Five County Area Development District
Project Ranking Methodology

The annual ranking in the FIVCO ADD area begins with a series of county-wide meetings comprised of all the water and sewer utilities in the county where the meeting is taking place. Each utility present decides which of their projects is to be ranked (typically two or three from their list) and determines the importance of those for themselves.

A point system is not used as the members of the Council feel that the importance of a project exists independent of a score based on its position in the development process. To provide some structure to the ranking, however, priority was given to projects dealing with:

- Immanent public health issues
- Critical system failures (current or threatening) that might bring down a utility lacking a backup plan
- Input from DOW such as a Notice of Violation (NOV) or an Agreed Order
- Regionalization

Projects are considered based on the aforementioned criteria and a ranking is produced following amicable discussion by all those present.

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If a Ranking cannot be agreed upon, FIVCO ADD has a backup plan using the following point system:

Points / Problem Addressed by Project

7 Immanent public health issues or critical system failures that might bring down a utility
6 Agreed Order from DOW
5 Notice of Violation from DOW
4 Regionalization of services
3 Maintenance projects on existing infrastructure
2 Upgrades to the treatment plants, pumps, or the distribution/collection system
1 Extension of new service lines

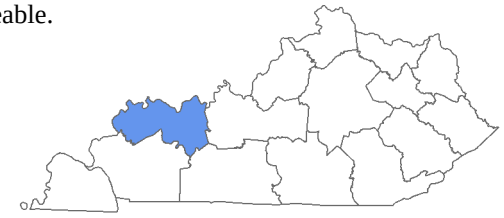
Add five (5) points if plans have been engineered and submitted to DOW for approval.

Discussion within the group can override the points attached to each problem addressed by the project.

Project Rankings For Five County Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21043038	Grayson: WTP Emergency Power Generators	0-2 Years	Not Funded	$333,000	Carter	1	1
WX21089011	Russell: New Water Treatment Plant	0-2 Years	Not Funded	$16,000,000	Greenup	2	1
WX21019047	Ashland: Debord Hill Water Tank Upgrade	0-2 Years	Not Funded	$900,000	Boyd	3	1
WX21043042	Olive Hill: New Backwash Pump at WTP	0-2 Years	Not Funded	$85,000	Carter	4	3
WX21089068	Russell: Construct New 500,000 Gallon Water Tank	3-5 Years	Not Funded	$836,000	Greenup	5	2
WX21043041	Olive Hill: Replace Downtown Area Water Line	3-5 Years	Not Funded	$325,000	Carter	6	2
WX21089065	Raceland: Leak Detection Survey for Water Loss Abatement	0-2 Years	Not Funded	$19,488	Greenup	7	4
WX21089061	Raceland: Relocate RR Water Main to Corkey Lane	0-2 Years	Not Funded	$236,100	Greenup	8	3
WX21089067	South Shore: WTP Upgrade	0-2 Years	Not Funded	$500,000	Greenup	9	5
WX21043040	Grayson: Keyhoe Water Line Extension Phase 2	3-5 Years	Not Funded	$150,000	Carter	10	4
WX21089073	Raceland: Caroline Road Waterline Extension	0-2 Years	Not Funded	$65,000	Greenup	11	6
WX21089063	Raceland: Water Meter Replacement Project	0-2 Years	Not Funded	$369,900	Greenup	12	7
WX21089079	Russell: Upgrade 2 Pump Stations	0-2 Years	Not Funded	$140,000	Greenup	13	8
WX21043028	RRWD: Carter County Line Extensions	3-5 Years	Not Funded	$628,750	Carter	14	5
			Total Cost:	**$20,588,238**			

Green River Area Development District (GRADD)



- 2010 census population of 213,472 (92,066 households) with 97% serviceable.
- Projected 2020 population of 220,544 (change of 7,072).
- 3,998.11 miles of existing water lines.
- 124.00 miles of line extensions proposed in the next 10 years.
- 80.00 miles of line rehabilitation proposed in the next 10 years.
- 59.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $79,747,730.
- Estimated funding needs for projects from 6 to 10 years: $18,078,111.
- Average age of structures: water treatment plants is 34 years; water tanks is 28 years.
- Total number of interconnected systems is 30.
- 183 miles of asbestos concrete pipe currently in use.
- 697 miles of water lines less than 15 years old.
- 1,409 miles of water lines between 15 and 30 years old.
- 1,461 miles of water lines between 31 and 50 years old.
- 264 miles of water lines between 51 and 70 years old.
- $ 203 miles of water lines greater than 70 years old.

Green River Area Development District has a 2010 census population count of 213,472 (92,066 households) with a projected 2020 population count of 220,544 (89,593 households). Public water is currently available to approximately 97 percent of the district's households based on 2010 census counts. Over the next ten years approximately 931 serviceable households will be added through the construction of 124.00 miles of water line extensions and approximately 130,896 instances of improved service through the rehabilitation of 80.00 miles of existing water lines and other appurtenances. 59.00 miles of transmission lines are also proposed within this district.

County Summary for Green River Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Daviess	96,656	41,452	102,214	41,878	39,695	96%	$ 3,464,878
Hancock	8,565	3,734	8,843	3,502	3,686	99%	$ 4,944,646
Henderson	46,250	20,320	47,600	19,851	20,069	99%	$ 42,477,709
McLean	9,531	4,264	9,271	3,821	4,083	96%	$ 25,919,958
Ohio	23,842	10,219	24,781	9,786	9,888	97%	$ 4,269,250
Union	15,007	6,141	14,436	5,463	5,883	96%	$ 2,899,601
Webster	13,621	5,936	13,399	5,292	5,732	97%	$ 13,849,799
Totals	**213,472**	**92,066**	**220,544**	**89,593**	**89,036**	**97%**	**$ 97,825,841**

Community Drinking Water Systems in Green River Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0300109	East Daviess County Water Association	Daviess	11,128	4,519
KY0300336	Owensboro Municipal Utilities	Daviess	58,408	26,473
KY0300387	Southeast Daviess County Water District	Daviess	11,580	4,521
KY0300450	West Daviess County Water District	Daviess	10,708	4,246
KY0300467	Whitesville Water Works	Daviess	3,483	1,325
KY0460182	Hawesville Water Works	Hancock	2,749	1,193
KY0460248	Lewisport Municipal Water Works	Hancock	2,595	1,166
KY0510189	Henderson County Water District	Henderson	16,024	6,468
KY0510188	Henderson Water Utility - North	Henderson	30,098	13,760
KY0750529	Beech Grove Water Association	McLean	1,130	493
KY0750055	Calhoun Water Works	McLean	973	489
KY0750207	Island Water Department	McLean	1,056	471
KY0750252	Livermore Water Works	McLean	1,426	679
KY0300320	North McLean County Water District	McLean	2,946	1,223
KY0750907	Sacramento Water Works	McLean	1,824	823
KY0920025	Beaver Dam Municipal Water & Sewer System	Ohio	3,595	1,527
KY0920070	Centertown Water System	Ohio	1,139	478
KY0920136	Fordsville Water Works	Ohio	925	426
KY0920181	Hartford Municipal Water Works	Ohio	2,704	1,166
KY0920332	Ohio County Water District	Ohio	14,790	6,311
KY1130293	Morganfield Water Works	Union	5,553	1,910
KY1130422	Sturgis Water Works	Union	2,453	1,192
KY1130433	Union County Water District	Union	5,258	2,255
KY1130434	Uniontown Water & Sewer Department	Union	1,142	522
KY1170073	Clay Water Works	Webster	1,290	555
KY1170104	Dixon Water Department	Webster	650	231
KY1170361	Providence Water Works	Webster	3,598	1,779
KY1170388	Sebree Water Department	Webster	1,596	601
KY1170400	Slaughters Water Works	Webster	584	248
KY1170995	Webster County Water District	Webster	5,305	2,237
		Totals:	206,710	89,287

Green River Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Source Protection**

Discussion of Area Development District Needs:

The GRADD region covers seven counties and their individual needs vary widely. The counties all know the importance and value of rationalization and regional projects and strive to build them. However, these individual systems do have other needs that need to be addressed on a daily basis, while regional projects can take years to plan and complete.

In the GRADD region, the primary and most important need is the repair and replacement of existing infrastructure. All seven counties of the GRADD region have repair and replacement of existing infrastructure as either their primary or secondary need. Under this need, the most important aspect is repair/replacement of aging water lines to eliminate water loss, improve pressure, and improve water quality. In addition, this need extends to repairing/replacing equipment in the water distribution system such as water pumps and water tanks.

The secondary need of the area is source protection. The need for this varies, but each of the systems in the GRADD region have projects that they have looked at that will protect their source of water. These source protection projects vary from emergency interconnects, work needed at water plants and repair work needed to raw water and transmission lines. However, the three counties of Hancock, Ohio and Union all have direct projects that are looking at protect their water sources.

Description and Determination of Planning Units:

The GRADD Water Management Council adopted the GRADD geographical boundary as its services area. Additional areas were also incorporated into the planning area based on the service areas of the water providers located in the GRADD district. For example, Barren River ADD incorporated a small portion of Ohio County into their planning area based on the service area of one of the water providers in their district.

The following systems serve communities in the Green River Area Development District, and their service areas are included in the Water Management Planning Area:

*Daviess County
1. East Daviess County Water Association
2. Owensboro Municipal Utilities
3. Southeast Daviess County Water District
4. West Daviess County Water District
5. Whitesville Water Works

*Hancock County
1. Hawesville Water Works
2. Lewisport Municipal Water Works

*Henderson County
1. Henderson County Water District
2. Henderson Water Utility--North
3. Henderson Water Utility--South

*McLean County
1. Beech Grove Water Board
2. Calhoun Water Works
3. Island Water Department
4. North McLean County Water District
5. Livermore Water Works
6. Sacramento Water Works

*Ohio County
1. Beaver Dam Municipal Water
2. Fordsville Water Works
3. Hartford Municipal Water Works
4. Ohio County Water District

*Union County
1. Morganfield Water Works
2. Sturgis Water Works
3. Union County Water District
4. Uniontown Water Department

*Webster County
1. Clay Water Works
2. Dixon Water Department
3. Providence Water Works
4. Sebree Water Department
5. Slaughters Water Works
6. Webster County Water District

Green River Area Development District
Project Ranking Methodology

Basic Information

- Project County
- Project Owner
- WRIS Project Number
- Project Description
- Estimated Project Cost

Type of Project

Unserved

• 9 or more per mile	20 pts
• 7-8 per mile	19 pts
• 5-6 per mile	18 pts
• 3-4 per mile	15 pts
• 1-2 per mile	10 pts
• <1 per mile	5 pts

Underserved

• 80-100% total customer base impacted	20 pts
• 60-79% total customer base impacted	19 pts
• 40-59% total customer base impacted	18 pts
• 20-39% total customer base impacted	15 pts
• 10-19% total customer base impacted	10 pts
• less than 10% customer base impacted	5 pts

Economic Development

• 100 or more jobs created or retained	20 pts
• 75-99 jobs created or retained	19 pts
• 50-74 jobs created or retained	18 pts
• 20-49 jobs created or retained	15 pts
• 10-19 jobs created or retained	10 pts
• less than 10 jobs created or retained	5 pts

Other (a project that does not meet above criteria, i.e. a building for chemicals)

- 3 pts

Combination

- If a project is a combination of the above, whichever category the project scored higher in (unserved, underserved, or economic development) the project will get those points, plus 3 additional pts

Maximum of 20 points for this section

Delivery Area

• Regional – Consolidation into single system	30 pts
• Regionalization of a WTP or WWTP	20 pts
• Project benefits multiple systems/communities	15 pts
• Project benefits two systems/communities	10 pts
• Non-regional	5 pts
• Non-regional project that eliminates a lift station/ package treatment plant/pump station	10 pts

Project Status

- Engineering plans and specs submitted to DOW 20 pts
- PER 15 pts
- Engineering procurement completed 10 pts
- Cost estimate by PE 10 pts
- Preliminary planning by system 5 pts

Funding Status

A project costing greater than $100,000

1. Funding committed for 50% or more 20 pts
2. Funding committed for 25-49% 10 pts
3. Funding committed for 1-24% 5 pts
4. Pending applications 3 pts

A project costing less than $100,000

1. 10 pts as long as the project is in one of the above four processes

Environmental Factors

Any project can receive as many (or none) of the points below

- Water loss reduction/I&I reduction 5 pts
- Replacing inefficient pumps/motors with high efficiency ones 5 pts
- Use of some other Green Technology not listed above 5 pts

Tie breaker is cost per connection

County Ranking

The highest scoring project in a county will be the number one ranking project for that county. The number two and subsequently ranked projects will follow in order of next highest scoring. The top five ranked projects in the county will be sent to be ranked regionally; however, all county ranked projects will still be submitted to KIA.

Regional Ranking

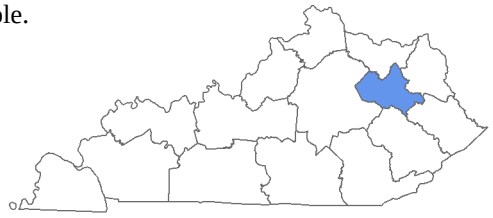
The highest scoring projects in the region will be determined from the highest ranked projects in the counties.

Project Rankings For Green River Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21233017	Clayton Avenue Waterline Rehab Project	3-5 Years	Partially Funded	$106,459	Webster	1	1
WX21091096	Hancock County Fiscal Court Water Lines Improvements	0-2 Years	Not Funded	$39,065	Hancock	2	1
WX21183038	Rochester Dam Regional Water Commission	0-2 Years	Not Funded	$3,300,000	Ohio	3	1
WX21233090	Hwy 132 - Hwy 109 S. Water Line Replacement and West Elm Replace	3-5 Years	Not Funded	$84,000	Webster	4	3
WX21233009	Webster County Water District Water Tank Maintenance/ Mixing System	3-5 Years	Not Funded	$500,000	Webster	5	2
WX21059032	Sawmill Road Water Line Extension	6-10 Years	Not Funded	$51,300	Daviess	6	1
WX21091056	Hawesville/Lewisport Emergency Interconnection	3-5 Years	Not Funded	$76,500	Hancock	7	2
WX21225021	Morganfield Raw Water Main Replacement Continuation Project	3-5 Years	Partially Funded	$3,200,000	Union	8	1
WX21059026	Yelvington Grandview Road Water Line	3-5 Years	Not Funded	$14,178	Daviess	9	2
WX21059031	Ward Road Water Line Upgrade	3-5 Years	Not Funded	$197,675	Daviess	10	3
WX21059045	Jack Hinton Road Water Main Project	3-5 Years	Not Funded	$499,280	Daviess	11	4
WX21233102	Reworking Mt. Pleasant to Dixon Pumpstation	0-2 Years	Not Funded	$80,000	Webster	12	4
WX21101001	North System Improvements	3-5 Years	Not Funded	$2,100,000	Henderson	13	1
WX21225044	Highway 130 Water Main Replacement Project	0-2 Years	Not Funded	$116,370	Union	14	2
WX21059030	Morgantown Road Water Line Loop	3-5 Years	Not Funded	$72,500	Daviess	15	5
WX21183036	Rehab Sunnydale Pump Station	6-10 Years	Not Funded	$25,000	Ohio	16	2
WX21149022	431 Tank Project	0-2 Years	Partially Funded	$1,488,000	McLean	17	1
WX21149061	Sacramento Scattered Line Replacement	11-20 Years	Not Funded	$60,000	McLean	18	2
WX21225039	East Side Water Line Extension	0-2 Years	Not Funded	$50,000	Union	19	3
WX21091082	Hawesville Water Treatment Plant Upgrade	3-5 Years	Not Funded	$300,000	Hancock	20	3
WX21091062	Windward Heights Water Line Rehab	6-10 Years	Not Funded	$400,000	Hancock	21	4
WX21091075	Lewisport/EDCWA Emergency Interconnect	3-5 Years	Not Funded	$41,000	Hancock	22	5
WX21183033	Fordsville Water Loss Project	0-2 Years	Not Funded	$246,550	Ohio	23	4
WX21233095	Providence Line Extension	6-10 Years	Not Funded	$1,000,000	Webster	24	5
WX21101116	Henderson Riverport Infrastructure Extension, Water Line	0-2 Years	Not Funded	$66,788	Henderson	25	2
WX21149037	Garrett Street Water Line Improvements Project	3-5 Years	Not Funded	$53,880	McLean	26	3
WX21101108	US 41 South A/C Main Replacement	3-5 Years	Not Funded	$1,046,452	Henderson	27	3
WX21149058	Sacramento Water Meter Replacement	3-5 Years	Not Funded	$150,000	McLean	28	4
WX21101009	HWU - South Water Treatment Plant Expansion	3-5 Years	Not Funded	$3,500,000	Henderson	29	4
WX21149005	Beech Grove Water System Storage Tank Addition	0-2 Years	Not Funded	$1,305,650	McLean	30	5
WX21183021	Oak Wood Drive Water Main Replacement	6-10 Years	Not Funded	$132,000	Ohio	31	3
WX21183039	Ohio County Water District Water Main Upgrade Project	0-2 Years	Not Funded	$1,630,000	Ohio	32	5
WX21225045	Morganfield Combined Sewer Separation Project Phase 3	3-5 Years	Not Funded	$450,000	Union	33	4
WX21225046	Uniontown Water Tanks and Repair Project	6-10 Years	Not Funded	$200,000	Union	34	5
WX21101110	Hwy 351 Main Replacement	0-2 Years	Not Funded	$1,550,219	Henderson	35	5

Total Cost:	**$24,132,866**			

Gateway Area Development District (GWADD)



- 2010 census population of 81,652 (36,780 households) with 96% serviceable.
- Projected 2020 population of 87,651 (change of 5,999).
- 1,818.94 miles of existing water lines.
- 18.00 miles of line extensions proposed in the next 10 years.
- 20.00 miles of line rehabilitation proposed in the next 10 years.
- 1.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $10,448,920.
- Estimated funding needs for projects from 6 to 10 years: $6,440,045.
- Average age of structures: water treatment plants is 40 years; water tanks is 22 years.
- Total number of interconnected systems is 29.
- 32 miles of asbestos concrete pipe currently in use.
- 644 miles of water lines less than 15 years old.
- 425 miles of water lines between 15 and 30 years old.
- 835 miles of water lines between 31 and 50 years old.
- 142 miles of water lines between 51 and 70 years old.
- $ 12 miles of water lines greater than 70 years old.

Gateway Area Development District has a 2010 census population count of 81,652 (36,780 households) with a projected 2020 population count of 87,651 (34,583 households). Public water is currently available to approximately 96 percent of the district's households based on 2010 census counts. Over the next ten years approximately 105 serviceable households will be added through the construction of 18.00 miles of water line extensions and approximately 171,349 instances of improved service through the rehabilitation of 20.00 miles of existing water lines and other appurtenances. 1.00 miles of transmission lines are also proposed within this district.

County Summary for Gateway Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Bath	11,591	5,405	12,132	5,006	5,146	95%	$ 4,917,470
Menifee	6,306	3,744	6,038	2,422	3,487	93%	$ 2,248,150
Montgomery	26,499	11,699	30,750	12,483	11,652	100%	$ 4,632,445
Morgan	13,923	5,830	14,023	5,126	5,126	88%	$ 1,190,900
Rowan	23,333	10,102	24,708	9,546	9,904	98%	$ 3,900,000
Totals	**81,652**	**36,780**	**87,651**	**34,583**	**35,315**	**96%**	**$ 16,888,965**

Community Drinking Water Systems in Gateway Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0060022	Bath County Water District	Bath	8,842	3,990
KY0060338	Owingsville Water and Sewer	Bath	1,919	959
KY0060392	Sharpsburg Water District	Bath	3,157	1,426
KY0830148	Frenchburg Water and Sewer	Menifee	5,204	3,231
KY0870212	Jeffersonville Water System	Montgomery	4,634	2,016
KY0870147	Judy Water Association	Montgomery	4,606	1,939
KY0870246	Levee Road Water Association, Inc	Montgomery	2,166	917
KY0870290	Montgomery County Water District #1	Montgomery	1,812	756
KY0870298	Mount Sterling Water and Sewer System	Montgomery	12,030	5,533
KY0870367	Reid Village Water District	Montgomery	2,543	1,081
KY0880594	Morgan County Water District	Morgan	8,434	3,876
KY0880452	West Liberty Water Works	Morgan	3,398	880
KY1030480	Morehead State University	Rowan	1,693	180
KY1030292	Morehead Utility Plant Board	Rowan	7,925	3,540
KY1030375	Rowan Water, Inc	Rowan	16,156	7,514
		Totals:	84,519	37,838

Gateway Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Meet Regulartory Requirements**

Discussion of Area Development District Needs:

There are a total of 16 water systems serving the Gateway Area Development District. Each water utility in the Gateway ADD was provided with the opportunity to identify the needs for the system. The needs of every system were considered in the determination of the Gateway Area Development District's primary and secondary Drinking Water needs.

The District's primary Drinking Water need is Repair/Replace Existing Infrastructure. This is the primary need for four of the five planning units, excluding Rowan County. Many of the utilities have identified this as their primary need due to aging waterline infrastructure in which line breaks are becoming more prevalent. Numerous other valve replacements, tank cleanings, and pump station projects are in need of attention due to age and increases in population served.

The secondary Drinking Water need is Meet Regulatory Requirements in the Gateway District. With more stringent rules and regulations being enforced, utilities need additional resources to keep up with changes. Rehabilitation work to treatment plant filters and flushing valves throughout the distribution systems will help keep chemical levels, in the water, within specified requirements.

Additional needs for the District, as identified by utilities, are Increase Storage Capacity to better serve existing customers and, to add additional customers on existing lines. Improve Security Risks by adding cameras and alarm systems to treatment plants and system appurtenances and Extend Services to Un-Served Areas.

Description and Determination of Planning Units:

The Gateway Area Development District covers five planning units, each following a political county boundary. The five planning units are: Bath County, Menifee County, Montgomery County, Morgan County, and Rowan County.

There are three water utilities in Bath County. Two water districts, Bath County Water District and Sharpsburg Water District, and one municipality, City of Owingsville Water and Sewer.

Two utilities are included in the Menifee County Planning Unit, City of Frenchburg Water and Sewer, a municipality, and Cave Run Water Commission. Cave Run Water Commission is a wholesale water producer and does not have residential customers. Cave Run supplies water to the City of Frenchburg Water and Sewer, Jeffersonville Water, and Morgan County Water District.

The Montgomery County Planning unit includes six water utilities. Two utilities are municipalities; Mount Sterling Water and Sewer and Jeffersonville Water, two associations; Judy Water and Levee Road Water, and two water districts; Montgomery County Water District #1 and Reid Village.

One municipality, West Liberty Water Works, and one water district, Morgan County Water District, make up the two water utilities in the Morgan County Planning Unit.

Three water systems are located in the Rowan County Planning Unit. There is one municipality, Morehead Utility Plant Board, one association, Rowan Water, Inc., and one higher education institution, Morehead State University. Morehead State University only serves the population on campus.

Gateway Area Development District
Project Ranking Methodology

The Gateway Area Water Management Council prioritizes projects based on points. Points are given under the following categories: Project Impact and Project Status.

Project Impact

Under this category, points are awarded based on the regional needs met by the project, the scope of impact, and the delivery of the project. Regional needs are based on the Regional Needs Assessment and projects are warded points based upon which regional need is met. Each regional need has a point value established by the Water Management Council. The scope of impact includes the impact of the project to un-served households, underserved households, and economic stimulation. Un-served households are homes that currently do not have public water/wastewater service available to them. Underserved households are homes that have public water/wastewater service, but the completion of the proposed project will improve service and/or quality to said areas in the utility's system. Points are allocated to the economic stimulation group based on the number of jobs the completed project will create. The more households and jobs that a project affects/creates, the more points the project is given. Projects that have more than one scope can receive an additional 5 points and other unlisted project scopes can receive 5 points - maximum points possible for project scope is 20 points. Project Delivery is allotted 20 points for a regional project and 5 points for a non-regional project. A regional project affects more than one utility.

Project Status

Under this category, points are awarded based on project development, commitment of funds, project timeline, and funding type. For project development, projects are given 5 points for preliminary planning, 10 points for attaining a cost estimate from a project engineer or for procuring an engineer for the project, 15 points if a preliminary engineering report is completed, or 20 points if engineering plans and specs have been completed and submitted to Division of Water. The maximum value of point awarded for commitment of funds is 20 points for projects with more than 50% of the total project cost committed - projects with 25-49% of project funds receive 10 points and projects with less than 25% of project funds committed or with pending applications receive 5 points. Projects with a timeline that is more than 10 years receive 5 points, project scheduled for 6-10 years receive 10 points, and project that will take place in 5 years or less receive 20 points. Finally, projects are awarded points based on the type of anticipated funding - projects that will utilize 100% loan funding receive 20 points, projects that will utilize both loan and grant funding receive 10 points, and projects that will only utilize grant funds receive 5 points.

The category totals are added together for a maximum of 140 points possible. The higher the cumulative total, the higher the project is ranked. For projects with the same overall point total, a cost per connection tie breaker is utilized. The cost per connection tie breaker is calculated using the estimated project cost divided by the total number of households the project will affect. The lower the cost per connection, the higher ranking the project receives.

All profiled projects that are submitted to the Water Management Council are prioritized and receive both a county and regional ranking. The prioritization of the projects is based on the points allocated during the ranking process.

Project Rankings For Gateway Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21165023	System Improvement Project	0-2 Years	Not Funded	$700,000	Menifee	1	1
WX21011034	Scattered Site System Improvements 2015	0-2 Years	Not Funded	$925,470	Bath	2	1
WX21205047	Morehead Utility Plant Board Water Treatment Plant Rehabilitation	0-2 Years	Not Funded	$320,440	Rowan	3	1
WX21205045	Morehead Utility Plant Board MMRC Water Tank Rehabilitation	0-2 Years	Not Funded	$320,440	Rowan	4	2
WX21205027	Morehead Utility Plant Board Paint US 60 Water Tank Project	0-2 Years	Not Funded	$256,920	Rowan	5	3
WX21011011	City of Owingsville Water Storage Tank Project - Phase 1.1	0-2 Years	Not Funded	$1,100,000	Bath	6	2
WX21175022	City of West Liberty Highway 519 Water Storage Tank Improvement Project	3-5 Years	Not Funded	$209,600	Morgan	7	1
WX21175023	City of West Liberty Johnson Hill Storage Tank Rehabilitation	3-5 Years	Not Funded	$170,600	Morgan	8	2
WX21205028	Morehead Utility Plant Board Guardian Pump Station Rehabilitation	0-2 Years	Not Funded	$102,200	Rowan	9	4
WX21205041	Morehead Utility Plant Board Water Treatment Plant Improvement Project	3-5 Years	Not Funded	$200,000	Rowan	10	5
WX21205039	Morehead Utility Plant Board 500,000 Gallon Water Tank Project	6-10 Years	Not Funded	$800,000	Rowan	11	6
WX21173134	Mount Sterling Water and Sewer Bottom of Filter Chlorine Analyzers	3-5 Years	Not Funded	$25,000	Montgomery	12	1
WX21173043	Mt. Sterling Water & Sewer WTP Backwash Valve Replacement	3-5 Years	Not Funded	$75,000	Montgomery	13	2
WX21205035	Morehead Utility Plant Board 801 South Waterline Rehab Project	3-5 Years	Not Funded	$900,000	Rowan	14	7
WX21175013	Morgan County District Water Tank Rehab Project	3-5 Years	Not Funded	$200,000	Morgan	15	3
WX21205043	Rowan Water Inc. Water Tank Rehab Project	3-5 Years	Not Funded	$600,000	Rowan	16	8
WX21011019	Sharpsburg Water District Meter Replacement Project	3-5 Years	Not Funded	$200,000	Bath	17	3
WX21011021	Sharpsburg Water District Water Tank Rehab Project	3-5 Years	Not Funded	$500,000	Bath	18	4
WX21175021	City of West Liberty Davis Lane Waterline Replacement Project	3-5 Years	Not Funded	$135,700	Morgan	19	4
WX21011016	Bath County Water District Standby Power Generator Project	6-10 Years	Not Funded	$120,000	Bath	20	5
WX21175030	City of West Liberty Broadway, Main, and Prestonburg Streets Line Replacement Project	3-5 Years	Not Funded	$300,000	Morgan	21	5
WX21175009	City of West Liberty McClain Way Increase Pressure Project	3-5 Years	Not Funded	$75,000	Morgan	22	6
WX21173094	Mt. Sterling Water & Sewer System Automatic Flush Valve Project	3-5 Years	Not Funded	$35,000	Montgomery	23	3
WX21173102	Montgomery County Water District No. 1 Automatic Flush Valve Project	3-5 Years	Not Funded	$7,500	Montgomery	24	4
WX21173095	Mt. Sterling Water & Sewer System Valve Replacement Project	6-10 Years	Not Funded	$150,000	Montgomery	25	5
WX21173090	Levee Road Water Association Gate Valve Project	3-5 Years	Not Funded	$50,000	Montgomery	26	6
WX21173133	Montgomery County Water District #1 US 460 Vault Valve Replacement	6-10 Years	Not Funded	$60,000	Montgomery	27	7
WX21173112	City of Jeffersonville Radio Read Meter Project	3-5 Years	Not Funded	$342,000	Montgomery	28	8
WX21205029	Rowan Water Inc. Tank Rehab and Meter Pit Project	0-2 Years	Not Funded	$250,000	Rowan	29	9
WX21173106	Judy Water Association Meter Change-Out Project	3-5 Years	Not Funded	$200,000	Montgomery	30	9
WX21173041	Mt. Sterling Water & Sewer Main Street Water Main Replacement	3-5 Years	Not Funded	$800,000	Montgomery	31	10
WX21173047	Levee Road Water Association Countryside Drive Waterline Extension	6-10 Years	Not Funded	$246,045	Montgomery	32	11
WX21165017	City of Frenchburg Mountain Ridge Road Waterline Extension	3-5 Years	Not Funded	$91,150	Menifee	33	2

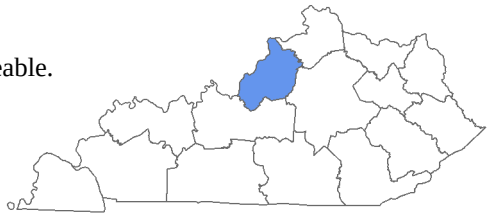
Project Rankings For Gateway Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21173121	Judy Water Association Water Tank Inspection Project	3-5 Years	Not Funded	$50,000	Montgomery	34	12
WX21173066	Mt. Sterling Water & Sewer System Fire Hydrant Project	6-10 Years	Not Funded	$168,000	Montgomery	35	13
WX21173065	Mt. Sterling Water & Sewer System South Queen Project	3-5 Years	Not Funded	$326,000	Montgomery	36	14
WX21173125	City of Jeffersonville Welch Road Project - Phase II	11-20 Years	Not Funded	$250,000	Montgomery	37	15
WX21011018	Bath County Water District Mapping & GPS Data Collection Project	11-20 Years	Not Funded	$106,000	Bath	38	6
WX21173059	City of Jeffersonville Highway 599 Water Tank Rehab Project	6-10 Years	Not Funded	$99,000	Montgomery	39	16
WX21173110	Montgomery County Water District #1 Fire Hydrant Improvement Project	3-5 Years	Not Funded	$70,000	Montgomery	40	17
WX21173096	Mt Sterling Water & Sewer System GIS Project	3-5 Years	Not Funded	$225,000	Montgomery	41	18
WX21173135	Mount Sterling Water and Sewer Storage Tank Demolition and Maintenance	3-5 Years	Not Funded	$225,000	Montgomery	42	19
WX21173008	Mt. Sterling Water & Sewer Spencer Road Water Main Extension	6-10 Years	Not Funded	$250,000	Montgomery	43	20
WX21173044	Montgomery County Water District #1 Whitaker Lane Vault Valve Replacement	6-10 Years	Not Funded	$60,000	Montgomery	44	21
WX21173101	Montgomery County Water District No. 1 System Improvement Project	11-20 Years	Not Funded	$300,000	Montgomery	45	22
WX21173107	Levee Road Water Association Phase III Meter Replacement Project	3-5 Years	Not Funded	$100,000	Montgomery	46	23
WX21173136	Levee Road Water Association Radio Read Meter Replacement Project	3-5 Years	Not Funded	$2,400	Montgomery	47	24
WX21173116	City of Jeffersonville Fay Street Tie In Project	3-5 Years	Not Funded	$15,000	Montgomery	48	25
WX21205034	Morehead Utility Plant Board Waterline Rehab Project	6-10 Years	Not Funded	$150,000	Rowan	49	10
WX21173111	Mount Sterling Water and Sewer Waterline Rehab Projects - Various Sites	6-10 Years	Not Funded	$600,000	Montgomery	50	26
WX21011020	Sharpsburg Water District AC Line Replacement Project	6-10 Years	Not Funded	$300,000	Bath	51	7
WX21011027	Bath County Water District Scattered Site System Improvement Project	3-5 Years	Not Funded	$140,000	Bath	52	8
WX21011009	Sharpsburg Water District Rich Lan Road Waterline Extension Project	6-10 Years	Not Funded	$100,000	Bath	53	9
WX21165022	City of Frenchburg Leatherwood Area Waterline Extension Project	6-10 Years	Not Funded	$1,432,000	Menifee	54	3
WX21165010	Cave Run Water Commission Storage Building Project	3-5 Years	Not Funded	$25,000	Menifee	55	4
WX21173137	Levee Road Water Association Line Checking Meter Project	3-5 Years	Not Funded	$3,500	Montgomery	56	27
WX21173117	City of Jeffersonville Equipment Project	3-5 Years	Not Funded	$10,000	Montgomery	57	28
WX21173132	Montgomery County Water District #1 Building Project Phase II	3-5 Years	Not Funded	$15,000	Montgomery	58	29
WX21173115	City of Jeffersonville Utility Truck Project	3-5 Years	Not Funded	$50,000	Montgomery	59	30
WX21173128	Mt. Sterling Water & Sewer System Equipment Project	6-10 Years	Not Funded	$175,000	Montgomery	60	31
WX21175020	Morgan County Water District Equipment Project	3-5 Years	Not Funded	$100,000	Morgan	61	7
WX21205044	Rowan Water Inc. New Pump Station and Tank Project	11-20 Years	Not Funded	$600,000	Rowan	62	11
WX21173050	City of Jeffersonville New Cut Rd Line Replacement Project	6-10 Years	Not Funded	$50,000	Montgomery	63	32
WX21173088	Judy Water Association Bourbon County Line Upgrade Project	6-10 Years	Not Funded	$300,000	Montgomery	64	33
WX21173051	City of Jeffersonville Corey Lane Improvement Project	6-10 Years	Not Funded	$18,000	Montgomery	65	34

Project Rankings For Gateway Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21011030	City of Owingsville Atkinson Road Waterline Extension Project	6-10 Years	Not Funded	$100,000	Bath	66	10
WX21173138	Levee Road Water Association Fence Replacement Project	6-10 Years	Not Funded	$10,000	Montgomery	67	35
WX21173048	City of Jeffersonville Highway 1050 Line Replacement Project	11-20 Years	Not Funded	$300,000	Montgomery	68	36
WX21173109	Montgomery County Water District #1 Concrete Abestos Pipe Replacement	11-20 Years	Not Funded	$400,000	Montgomery	69	37
WX21173126	City of Jeffersonville Lower Spruce Tie In Project	11-20 Years	Not Funded	$120,000	Montgomery	70	38
WX21173114	City of Jeffersonville Harpers Ridge Waterline Tie-In Project	11-20 Years	Not Funded	$100,000	Montgomery	71	39
WX21173113	City of Jeffersonville Spruce Valley Waterline Tie In Project	11-20 Years	Not Funded	$80,000	Montgomery	72	40
WX21173049	City of Jeffersonville Highway 213 Line Replacement Project	11-20 Years	Not Funded	$275,000	Montgomery	73	41
WX21173123	Montgomery County Water District No. 1 Equipment Project	11-20 Years	Not Funded	$15,000	Montgomery	74	42
WX21173054	Mount Sterling Water and Sewer Storage Building Project	11-20 Years	Not Funded	$120,000	Montgomery	75	43
WX21173120	Reid Village Water District Maintenance Building Project	11-20 Years	Not Funded	$50,000	Montgomery	76	44
WX21173124	Montgomery County Water District No. 1 Backhoe & Dump Truck Project	11-20 Years	Not Funded	$105,000	Montgomery	77	45
WX21173139	Reid Village Water District Office Building Purchase Project	11-20 Years	Not Funded	$275,000	Montgomery	78	46
			Total Cost:	**$18,732,965**			

Kentuckiana Regional Planning and Development Agency (KIPDA)



- 2010 census population of 959,091 (421,502 households) with 98% serviceable.
- Projected 2020 population of 1,058,343 (change of 99,252).
- 6,284.94 miles of existing water lines.
- 156.00 miles of line extensions proposed in the next 10 years.
- 50.00 miles of line rehabilitation proposed in the next 10 years.
- 91.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $228,329,795.
- Estimated funding needs for projects from 6 to 10 years: $37,193,754.
- Average age of structures: water treatment plants is 19 years; water tanks is 33 years.
- Total number of interconnected systems is 15.
- 188 miles of asbestos concrete pipe currently in use.
- 48 miles of water lines less than 15 years old.
- 126 miles of water lines between 15 and 30 years old.
- 1,095 miles of water lines between 31 and 50 years old.
- 413 miles of water lines between 51 and 70 years old.
- $ 411 miles of water lines greater than 70 years old.

Kentuckiana Regional Planning and Development Agency has a 2010 census population count of 959,091 (421,502 households) with a projected 2020 population count of 1,058,343 (437,016 households). Public water is currently available to approximately 98 percent of the district's households based on 2010 census counts. Over the next ten years approximately 96,418 serviceable households will be added through the construction of 156.00 miles of water line extensions and approximately 61,938 instances of improved service through the rehabilitation of 50.00 miles of existing water lines and other appurtenances. 91.00 miles of transmission lines are also proposed within this district.

County Summary for Kentuckiana Regional Planning and Development Agency

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Bullitt	74,319	29,318	88,508	34,970	28,123	96%	$ 21,624,800
Henry	15,416	6,640	15,915	6,405	6,327	95%	$ 9,517,855
Jefferson	741,096	337,616	793,817	336,744	334,993	99%	$ 124,318,808
Oldham	60,316	20,688	74,990	26,354	17,914	87%	$ 17,960,750
Shelby	42,074	16,606	51,944	19,663	16,201	98%	$ 80,165,064
Spencer	17,061	6,704	23,655	9,025	6,268	94%	$ 2,534,172
Trimble	8,809	3,930	9,514	3,855	3,629	92%	$ 9,402,100
Totals	**959,091**	**421,502**	**1,058,343**	**437,016**	**413,455**	**98%**	**$ 265,523,549**

Community Drinking Water Systems in Kentuckiana Regional Planning and Development Agency County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0150242	Lebanon Junction Water Works	Bullitt	2,202	937
KY0150300	Mount Washington Water & Sewer Company	Bullitt	19,320	7,681
KY0520122	Eminence Water Works	Henry	2,525	1,091
KY0520192	Henry County Water District #2	Henry	14,546	6,111
KY0520520	New Castle Water Works	Henry	930	428
KY0560258	Louisville Water Company	Jefferson	806,903	362,013
KY0930481	Lagrange Utilities Commission	Oldham	6,796	2,692
KY0930333	Oldham County Water District	Oldham	19,840	5,829
KY1060324	North Shelby Water Company	Shelby	10,899	4,359
KY1060394	Shelbyville Municipal Water & Sewer Commission	Shelby	22,037	8,922
KY1060436	US 60 Water District	Shelby	4,726	1,978
KY1060457	West Shelby Water District	Shelby	5,112	1,970
KY1080425	Taylorsville Water Works	Spencer	18,716	7,316
KY1120289	Milton Water & Sewer Department	Trimble	2,366	1,131
KY1120431	Trimble County Water District #1	Trimble	3,541	1,530
		Totals:	940,459	413,988

Kentuckiana Regional Planning and Development Agency
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

The KIPDA Regional Water Council through discussion recognizes that planning needs in the region are constantly changing. What may be viewed as the primary need in the near future could differ from what is viewed as the primary need in the present. All of the listed options are viewed as necessities throughout the region and many are viewed to be intertwined with none being mutually exclusive. With these thoughts in consideration, the KIPDA Regional Water Management Council identified the Repair and Replacement of Existing Infrastructure as its primary planning need which may require Increased Storage Capacity and Regionalization leading to Economic Stimulation.

Much of the current infrastructure in the KIPDA region is aging with many lines approaching 100 years. This causes problems for systems throughout the region in the form of breaks and leaks which lead to substantial water loss. Many of these lines are undersized and not capable of providing fire protection or adequate flow and pressure. Providing redundancy to the existing system is also placed in high priority which can be achieved by adding pipes and Increased Storage Capacity. The Council has placed a high priority on projects that set out to achieve these goals. Additionally, Regionalization is a driving force to provide an alternative water source in times of emergency and to meet future demands. The top priority project in the KIPDA Region is the I-64 Transmission Main which would provide an alternative water source for utilities in Shelby County through a pipeline to Jefferson County and Louisville Water Company. This project would additionally provide for Increased Storage Capacity within the county.

Realizing that capabilities must be in place to drive commercial, industrial, and residential development, the Repair and Replacement of Existing Infrastructure would additionally provide for Economic Stimulation. With a few exceptions, utilities upgrade existing infrastructure when it is replaced. The increased capabilities from these upgrades enables systems to meet demands and provide improved services to areas that may be currently underserved. Through increasing line sizes, water treatment capacity, and storage; cities and counties are much more attractive for future development. The Council realizes that for there to be Economic Stimulation, the infrastructure must be in place.

When the KIPDA Regional Water Management Council was originally formed, providing service to unserved areas was the goal with the initiative of all unserved areas having access to potable drinking water by 2020. Much effort has been provided to accomplish this goal, and systems in the region estimate that better than 97% of residents in the region are either being served or have access to public water. The Council recognizes that the provision of water service is still of high priority due to it's impact on public health, for this reason Extending Service to Unserved areas was consider the Secondary Need of the region. Elected officials and water providers throughout the KIPDA Region continue to work with residents of their communities to identify areas in need of potable water and work in conjunction to develop projects in order to provide this service. Projects that provide water to currently unserved areas take precedence over similarly scored projects during the annual priority ranking process.

Description and Determination of Planning Units:

After reviewing water systems and their respected service areas, the KIPDA Regional Water Management Council designated the KIPDA boundary to be used as the regional management area. Further, the Council designated the seven (7) water management areas in the KIPDA region to be defined by county boundaries.

1. Bullitt County Water Management Planning Area
   - Lebanon Junction, City of
   - Mount Washington Water and Sewer Company

2. Henry County Water Management Planning Area
- Eminence , City of
- Henry County Water District #2
- New Castle, City of

3. Jefferson County Water Management Planning Area
- Louisville Water Company

4. Oldham County Water Management Planning Area
- Oldham County Water District
- LaGrange Utilities Commission

5. Shelby County Water Management Planning Area
- North Shelby Water Company
- Shelbyville Municipal Water and Sewer Commission
- U.S. 60 Water District
- West Shelby Water District

6. Spencer County Water Management Planning Area
- Taylorsville, City of

7. Trimble County Water Management Planning Area
- Milton, City of
- Trimble County Water District #1

Kentuckiana Regional Planning and Development Agency
Project Ranking Methodology

he KIPDA Regional Water Management Council prioritizes projects using local input and an established priority ranking scoresheet.

Before projects are brought before the KIPDA Regional Water Management Council to be prioritized, they are ranked at the County level. The County Water Management Councils consist of utility representatives and local elected officials. Projects are ranked based on perceived importance within the county.

To bring continuity and fairness throughout the region, the KIPDA Regional Water Management Council requires all projects that are to be considered for Regional Prioritization to complete a Priority Ranking Scoresheet. The methodology for the scoresheet was established in 2007 by a group of Area Development Water Management Coordinators along with KIA staff. This is no longer required for all water and wastewater projects requesting State funding, but the KIPDA Council choice to continue using this method due to past success.

The scoresheet provides for a maximum of 100 points to be assigned to each project depending on how it scores according to the following criteria:

Type of Project (20 point Maximum)

For unserved and underserved projects, households served are the basis for the priority scoring while jobs created are the consideration for economic development projects. Feasibility studies and other projects that don't involve unserved, underserved, commercial, or industrial development are assigned a specified score.

Project Delivery (20 point Maximum)

Projects are scored on whether they are Regional or Non-Regional. For this purpose, regional is defined as projects involving two or more systems that, through shared or consolidated resources, improve services to consumers and achieve economy of scale.

Project Status (20 point Maximum)

Projects are scored based on their status relative to the planning process, the status of the development of engineering plans and specifications, and the detail of the data used to develop the estimated cost of the project. Projects that are further along in the process will receive a higher priority score.

Funding Status (20 point Maximum)

The projects are categorized based on their status relative its size and the funding needed to execute. Projects that are further along in the funding process will receive a higher priority as indicated below.

Local Importance (20 point Maximum)

The projects are assigned priority points based on their importance to the county as determined by consensus during the County Water Management Councils.

With the intention of each county having equal representation on the priority ranking list, the top projects from each county are ranked against each other according to their priority ranking score. This method is continued for the second, third, fourth, etc projects until all submitted projects receive a ranking.

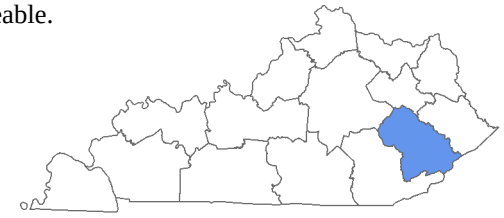
Project Rankings For Kentuckiana Regional Planning and Development Agency

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21185013	Halls Hill Road Extension	3-5 Years	Not Funded	$300,000	Oldham	1	1
WX21223004	Tilley Lane Ext.	3-5 Years	Not Funded	$125,000	Trimble	2	1
WX21111164	Hardin County/FT Knox Transmission	3-5 Years	Partially Funded	$19,492,000	Jefferson	3	1
WX21029280	Halls Lane Water Main Extension	3-5 Years	Not Funded	$262,000	Bullitt	4	1
WX21215003	Kings Church Road/Dales Lane SR 1319	0-2 Years	Not Funded	$525,000	Spencer	5	1
WX21103052	City of New Castle - East College St. Water Line Replacement	3-5 Years	Not Funded	$89,000	Henry	6	1
WX21211084	US 60 Transmission Main	0-2 Years	Not Funded	$2,326,000	Shelby	7	1
WX21211068	I-64 Transmission Pipeline - Phase II	0-2 Years	Partially Funded	$6,000,000	Shelby	8	2
WX21223031	Barebone Rd Waterline Extension	3-5 Years	Not Funded	$50,000	Trimble	9	2
WX21111168	North Shelby Regional Storage	3-5 Years	Not Funded	$2,500,000	Jefferson	10	2
WX21185030	Storage Tank US 42 and Liberty Lane	0-2 Years	Partially Funded	$2,200,000	Oldham	11	2
WX21103054	Elm Street Water Main Extension	6-10 Years	Not Funded	$159,826	Henry	12	2
WX21215005	Bloomfield Road – South SR 55 Upgrade	6-10 Years	Not Funded	$220,000	Spencer	13	2
WX21029166	Roe Hill Road	6-10 Years	Not Funded	$192,500	Bullitt	14	2
WX21211080	I-64 Transmission Pipeline - Phase III	0-2 Years	Not Funded	$5,200,000	Shelby	15	3
WX21111163	Water Main Rehabilitation	3-5 Years	Partially Funded	$7,455,001	Jefferson	16	3
WX21185017	South Highway 1694 Extension	3-5 Years	Not Funded	$390,000	Oldham	17	3
WX21223010	S. Spillman Lane Ext.	6-10 Years	Not Funded	$70,000	Trimble	18	3
WX21029282	Water Main - Kings Hollow Road	3-5 Years	Not Funded	$288,000	Bullitt	19	3
WX21215006	Bloomfield Road North SR 55 - Upgrade	3-5 Years	Not Funded	$85,000	Spencer	20	3
WX21103048	City of New Castle - College St Water Line Replacement	3-5 Years	Not Funded	$104,000	Henry	21	3
WX21211071	Shelbyville Downtown Water Tank	0-2 Years	Partially Funded	$1,947,000	Shelby	22	4
WX21185050	18-inch water main connecting Buckner Crossing with Quality Place	6-10 Years	Not Funded	$1,600,000	Oldham	23	4
WX21215002	Mill Road Upgrade SR 1795	6-10 Years	Not Funded	$330,000	Spencer	24	4
WX21111161	Crittenden Drive, 5018 to 7800 Block	3-5 Years	Not Funded	$700,000	Jefferson	25	4
WX21223028	Watson Lane Waterline Extension	6-10 Years	Not Funded	$100,000	Trimble	26	4
WX21029208	Derby - Walnut - Bank Street Upgrades	3-5 Years	Not Funded	$79,200	Bullitt	27	4
WX21029288	Preston Hwy from Collings Hill Rd to Rolling Fork Transmission M	3-5 Years	Not Funded	$6,781,000	Bullitt	28	5
WX21223034	Rowlett Lane Waterline Replacement	0-2 Years	Not Funded	$20,000	Trimble	29	5
WX21103058	Eminence, KY Water Storage Tower Rehabilitation	0-2 Years	Not Funded	$250,000	Henry	30	4
WX21111169	English Station Storage	3-5 Years	Not Funded	$10,700,000	Jefferson	31	5
WX21215007	Normandy Road – Upgrade	3-5 Years	Not Funded	$225,000	Spencer	32	5
WX21103057	Turkey Run Waterline	3-5 Years	Not Funded	$190,229	Henry	33	5
WX21111172	Vernetta Way Water Main Extension	3-5 Years	Partially Funded	$210,000	Jefferson	34	6
WX21029289	Salt River Booster Pump Station	3-5 Years	Not Funded	$1,300,000	Bullitt	35	6

Project Rankings For Kentuckiana Regional Planning and Development Agency

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21223035	Sunnyside Dr Waterline Replacement	0-2 Years	Not Funded	$30,000	Trimble	36	6
WX21215014	Goose Creek Loop Line	3-5 Years	Not Funded	$90,000	Spencer	37	6
WX21111173	Buttermilk Ridge Rd Main Extension	3-5 Years	Partially Funded	$165,000	Jefferson	38	7
WX21029287	Preston Hwy from Chapeze Rd to Beech Grove Rd Transmission Main	3-5 Years	Not Funded	$1,062,000	Bullitt	39	7
WX21223033	Milton-Bedford Pike Waterline Extension	3-5 Years	Not Funded	$150,000	Trimble	40	7
WX21215008	Town Hill Road – Upgrade	3-5 Years	Not Funded	$80,000	Spencer	41	7
WX21111186	Harrod's Old Trace Main Extension	6-10 Years	Partially Funded	$362,000	Jefferson	42	8
WX21029283	Beech Grove Booster Pump Station	3-5 Years	Not Funded	$800,000	Bullitt	43	8
WX21223032	Cutshaw Lane Upgrade	3-5 Years	Not Funded	$200,000	Trimble	44	8
WX21215009	Southville Pike – SR 44 Upgrade	3-5 Years	Not Funded	$375,000	Spencer	45	8
WX21029285	Cedar Grove Transmission Main	3-5 Years	Not Funded	$228,000	Bullitt	46	9
WX21223029	Lower Middle Creek Waterline Extension	6-10 Years	Not Funded	$300,000	Trimble	47	9
WX21215011	Plum Ridge Road Upgrade	6-10 Years	Not Funded	$170,000	Spencer	48	9
WX21029284	Cedar Grove Booster Pump Station Improvements	3-5 Years	Not Funded	$200,000	Bullitt	49	10
WX21223021	Trimble Area Optimization Plan	6-10 Years	Not Funded	$2,000,000	Trimble	50	10
WX21215004	Elk Creek/Wilsonville Road Upgrade	6-10 Years	Not Funded	$145,000	Spencer	51	10
WX21029286	Preston Hwy from Belmont Rd to Timber Ridge Ct Transmission Main	3-5 Years	Not Funded	$926,000	Bullitt	52	11
WX21029290	New Water Tower at Armstrong Lane	0-2 Years	Unknown	$0	Bullitt	53	12
WX21029241	Ramblin Road Water Main Extension	3-5 Years	Not Funded	$86,000	Bullitt	54	13
			Total Cost:	**$79,834,756**			

Kentucky River Area Development District (KRADD)



- 2010 census population of 114,762 (52,786 households) with 84% serviceable.
- Projected 2020 population of 111,267 (change of -3,495).
- 2,303.09 miles of existing water lines.
- 324.00 miles of line extensions proposed in the next 10 years.
- 10.00 miles of line rehabilitation proposed in the next 10 years.
- 5.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $93,995,342.
- Estimated funding needs for projects from 6 to 10 years: $8,850,414.
- Average age of structures: water treatment plants is 23 years; water tanks is 16 years.
- Total number of interconnected systems is 13.
- 44 miles of asbestos concrete pipe currently in use.
- 1,156 miles of water lines less than 15 years old.
- 803 miles of water lines between 15 and 30 years old.
- 312 miles of water lines between 31 and 50 years old.
- 8 miles of water lines between 51 and 70 years old.
- $ 0 miles of water lines greater than 70 years old.

Kentucky River Area Development District has a 2010 census population count of 114,762 (52,786 households) with a projected 2020 population count of 111,267 (45,823 households). Public water is currently available to approximately 84 percent of the district's households based on 2010 census counts. Over the next ten years approximately 3,655 serviceable households will be added through the construction of 324.00 miles of water line extensions and approximately 28,326 instances of improved service through the rehabilitation of 10.00 miles of existing water lines and other appurtenances. 5.00 miles of transmission lines are also proposed within this district.

County Summary for Kentucky River Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Breathitt	13,878	6,231	12,495	5,046	5,236	84%	$ 16,019,215
Knott	16,346	7,461	15,635	6,332	6,037	81%	$ 28,207,381
Lee	7,887	3,436	7,820	3,014	3,121	91%	$ 1,354,036
Leslie	11,310	5,278	10,603	4,377	4,291	81%	$ 9,740,000
Letcher	24,519	11,601	24,237	10,161	8,117	70%	$ 29,965,684
Owsley	4,755	2,328	4,704	1,971	2,211	95%	$ 9,134,960
Perry	28,712	12,791	28,137	11,637	11,789	92%	$ 5,417,257
Wolfe	7,355	3,660	7,636	3,285	3,303	90%	$ 3,007,223
Totals	**114,762**	**52,786**	**111,267**	**45,823**	**44,105**	**84%**	**$ 102,845,756**

Community Drinking Water Systems in Kentucky River Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0131012	Breathitt County Water District	Breathitt	6,574	2,920
KY0130208	Jackson Municipal Water Works	Breathitt	4,719	2,172
KY0600198	Hindman Water Department	Knott	3,271	1,566
KY0600062	Knott Co Water & Sewer District	Knott	8,494	3,752
KY0600129	Phoenix Place Water System	Knott	299	136
KY0650024	Beattyville Water Works	Lee	7,289	3,132
KY0660204	Hyden Leslie Co Water District	Leslie	9,245	4,296
KY0670279	Fleming-Neon Water Company	Letcher	3,198	1,587
KY0670213	Jenkins Water System	Letcher	2,786	1,334
KY0670462	Letcher County Water and Sewer District	Letcher	7,991	3,767
KY0670466	Whitesburg Water System	Letcher	3,159	1,461
KY0950036	Booneville Water and Sewer	Owsley	4,755	2,329
KY0970184	Hazard Water Department	Perry	22,973	10,272
KY0970484	Vicco Water Supply	Perry	2,922	1,284
KY0971007	Village of Buckhorn	Perry	944	402
KY1190061	Campton Water System	Wolfe	6,738	3,376
		Totals:	95,357	43,786

Kentucky River Area Development District
Regional Water Needs Assessment

Primary Need: **Extend Services to Unserved Areas**
Secondary Need: **Repair and Replace Existing Infrastructure**

Discussion of Area Development District Needs:

The Kentucky River region's main concerns for water projects are those that address establishing new water service to areas that currently rely on failing or contaminated wells and areas that must haul water. The region is also faced with major rehab as most systems have lines that have been in place for 40+ years as well as rehabilitation of existing plants and in cases where rehab is to expensive then the construction of new plants.

Description and Determination of Planning Units:

The Kentucky River Area Water Management Council reviewed the water systems and their service areas located within the Kentucky River Area Development District. The Council designated the Kentucky River Area Development District boundary as the regional management area. Within the Kentucky River Region, the following water systems and their respective water management planning areas were designated by the Council:

Kentucky River Area Water Management Planning Areas

1. Breathitt County Water Management Planning Area
   a) Breathitt County Water District
   b) Jackson Municipal Water Works
   c) Mount Carmel High Boarding School

2. Knott County Water Management Planning Area
   a) Hindman Water Department
   b) Knott Co. Water and Sewer District
   c) Phoenix Place Water System

3. Lee County Water Management Planning Area
   a) Beattyville Water Works

4. Leslie County Water Management Planning Area
   a) Hyden/Leslie Co Water District

5. Letcher County Water Management Planning Area
   a) Fleming-Neon Water Company
   b) Jenkins Water System
   c) Letcher County Water and Sewer District
   d) Whitesburg Water System

6. Owsley County Water Management Planning Area
   a) Booneville Water and Sewer

7. Perry County Water Management Planning Area
   a) Hazard Water Department
   b) Vicco Water Supply
   c) Village of Buckhorn

8. Wolfe County Water Management Planning Area
   a) Campton Water System

Kentucky River Area Development District
Project Ranking Methodology

The KRADD Water Management Council meets once a year to prioritize projects in our area. Our area's utility managers and chief executives begin the ranking by first reviewing the previous year's prioritization and then pair off by county to discuss their current projects. Each county is given a list of the profiles they have in the WRIS and then they rank their basic needs during this portion of the meeting.

Once the counties rank their projects the Council then begins the process of prioritizing the projects that are of the most concern for the region. The council first discusses everyone's top ranked county project. This discussion is based on service population, violations the entity has received, current funding, whether the project is for new or existing customers and the overall community need. Following this discussion the council then begins the process of selecting the top regional projects based on the information presented. The county with the most critical overall need is the first ranked and then the other counties follow suit.

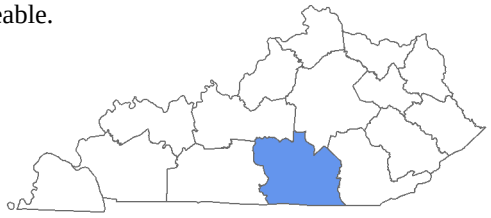
The Kentucky River region's main concerns for water projects are those that address establishing new water service to areas that currently rely on failing or contaminated wells and areas that must haul water. The region is also faced with major rehab as most systems have lines that have been in place for 40+ years as well as rehabilitation of existing plants and in cases where rehab is to expensive then the construction of new plants.

Wastewater concerns are focused on rehabilitation of lift stations and plants and when rehabilitation of the plants is not feasible construction of new ones. The majority of the area is now beginning to turn to wastewater service extensions as the past has mostly been focused on providing reliable and safe potable water to the residents. The majority of our counties are now reaching 80% served and some have even achieved 95-98% served. Our entities are now looking to improve the water quality and the environment by providing a reliable means of wastewater removal which will improve the streams that empty into the rivers most utilize for their water source.

Project Rankings For Kentucky River Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21025511	Jackson HWY 15 Water Improvement Project	3-5 Years	Not Funded	$1,472,970	Breathitt	1	1
WX21119022	Logan Gap Master Meter Replacement Project	0-2 Years	Not Funded	$5,874	Knott	2	1
WX21129004	Beattyville - Bear Track Waterline Replacement	3-5 Years	Not Funded	$612,000	Lee	3	1
WX21131002	Phase III Water System Improvements	3-5 Years	Partially Funded	$6,430,000	Leslie	4	1
WX21133500	Cumberland River Water Line Extension - Phase I	3-5 Years	Partially Funded	$669,000	Letcher	5	1
WX21189500	Booneville Radio Read Meter Project	3-5 Years	Not Funded	$498,500	Owsley	6	1
WX21193018	Fort Branch Water Line Extension Project	0-2 Years	Partially Funded	$977,829	Perry	7	1
WX21237011	Campton Tank Replacement Project	3-5 Years	Not Funded	$1,578,000	Wolfe	8	1
WX21237012	Trace Fork Waterline Project	3-5 Years	Not Funded	$80,190	Wolfe	9	2
WX21193023	Pomp Hollow Waterline Extension	0-2 Years	Partially Funded	$152,493	Perry	10	2
WX21189506	Booneville Pump Station Upgrade	3-5 Years	Not Funded	$111,600	Owsley	11	2
WX21133018	Cumberland River Waterline Extension Project - Phase II	3-5 Years	Partially Funded	$1,070,000	Letcher	12	2
WX21131111	Hyden/Leslie Water System Improvements Phase II	0-2 Years	Partially Funded	$2,000,000	Leslie	13	2
WX21025040	South Fork Elk View Waterline	3-5 Years	Not Funded	$1,442,000	Breathitt	14	2
			Total Cost:	**$17,100,456**			

Lake Cumberland Area Development District (LCADD)



- 2010 census population of 207,256 (101,129 households) with 95% serviceable.
- Projected 2020 population of 221,481 (change of 14,225).
- 5,493.00 miles of existing water lines.
- 311.00 miles of line extensions proposed in the next 10 years.
- 99.00 miles of line rehabilitation proposed in the next 10 years.
- 67.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $135,094,939.
- Estimated funding needs for projects from 6 to 10 years: $20,540,917.
- Average age of structures: water treatment plants is 38 years; water tanks is 26 years.
- Total number of interconnected systems is 21.
- 55 miles of asbestos concrete pipe currently in use.
- 1,343 miles of water lines less than 15 years old.
- 2,382 miles of water lines between 15 and 30 years old.
- 1,598 miles of water lines between 31 and 50 years old.
- 98 miles of water lines between 51 and 70 years old.
- $ 162 miles of water lines greater than 70 years old.

Lake Cumberland Area Development District has a 2010 census population count of 207,256 (101,129 households) with a projected 2020 population count of 221,481 (92,378 households). Public water is currently available to approximately 95 percent of the district's households based on 2010 census counts. Over the next ten years approximately 756 serviceable households will be added through the construction of 311.00 miles of water line extensions and approximately 46,322 instances of improved service through the rehabilitation of 99.00 miles of existing water lines and other appurtenances. 67.00 miles of transmission lines are also proposed within this district.

County Summary for Lake Cumberland Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Adair	18,656	8,568	20,052	8,151	7,698	90%	$ 16,393,215
Casey	15,955	7,487	16,433	6,791	7,305	98%	$ 8,119,000
Clinton	10,272	5,311	10,896	4,755	5,181	98%	$ 5,000,700
Cumberland	6,856	3,690	6,649	2,840	3,553	96%	$ 4,010,600
Green	11,258	5,324	11,112	4,660	5,203	98%	$ 6,567,900
McCreary	18,306	7,507	18,314	6,819	6,270	84%	$ 29,412,747
Pulaski	63,063	31,443	71,036	29,901	30,541	97%	$ 39,337,194
Russell	17,565	9,993	18,782	8,112	9,729	97%	$ 8,889,885
Taylor	24,512	10,864	26,079	10,663	10,582	97%	$ 21,592,115
Wayne	20,813	10,942	22,128	9,686	9,748	89%	$ 16,312,500
Totals	**207,256**	**101,129**	**221,481**	**92,378**	**95,810**	**95%**	**$ 155,635,856**

Community Drinking Water Systems in Lake Cumberland Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0010702	Columbia/Adair Utilities District	Adair	16,728	7,610
KY0230556	East Casey County Water District	Casey	12,033	5,729
KY0230987	Liberty Water & Gas	Casey	2,303	1,003
KY0270003	Albany Municipal Water & Sewer	Clinton	9,908	5,112
KY0290049	Burkesville Municipal Water Works	Cumberland	1,909	951
KY0290271	Cumberland County Water District	Cumberland	4,770	2,612
KY0440167	Green-Taylor Water District	Green	11,336	5,185
KY0440168	Greensburg Water Department	Green	2,284	1,138
KY0740276	McCreary County Water District	McCreary	14,875	6,266
KY1000043	Bronston Water Association	Pulaski	3,099	1,938
KY1000050	Burnside Municipal Water Works	Pulaski	1,165	678
KY1000124	Eubank Water System	Pulaski	10,142	4,468
KY1000362	Science Hill Water Works	Pulaski	4,756	2,055
KY1000403	Somerset Utilities	Pulaski	17,104	8,273
KY1000311	Southeastern Water Association	Pulaski	15,014	8,038
KY1000363	Western Pulaski County Water District	Pulaski	16,902	8,917
KY1000973	Woodson Bend Property Owners Association	Pulaski	149	371
KY1040210	Jamestown Utilities	Russell	7,381	4,204
KY1040377	Russell Springs Sewer & Water Works	Russell	9,270	4,806
KY1090060	Campbellsville Municipal Water & Sewer System	Taylor	21,047	9,370
KY1160291	Monticello Utility Commission	Wayne	17,494	8,633
		Totals:	199,669	97,357

Lake Cumberland Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

The Lake Cumberland Area Development District planning units are in need of repairing and replacing existing infrastructure. The systems in the Lake Cumberland Area need to repair and/or replace pump stations, water lines and tanks due to aging infrastructure. The some systems also need to upgrade the existing treatment plants with safer, more efficient methods of treatment.

The Lake Cumberland Area Development District planning units would like to provide service to more customers by extending service to unserved areas. Providing service to unserved areas will eliminate the use of contaminated individual wells in rural areas.

The needs of the Lake Cumberland Regional Water Management Council are a very diverse collection. Other needs of the area include meeting regulatory requirements, increasing storage capacity, and regionalization.

Description and Determination of Planning Units:

The Lake Cumberland Area Development District is made up of fifteen planning units. The planning units were determined by the Lake Cumberland Regional Water Management Council based on local issues in the area such as location, size of area, number of customers, number of systems, and need and ability of systems to plan together. The planning units are Adair (Columbia/Adair County Water Commission and Columbia/Adair Utilities District), Bronston/Burnside (Bronston Water Association and Burnside Municipal Water Works), Campbellsville (Campbellsville Municipal Water & Sewer System), Casey (East Casey County Water District and Liberty Water & Gas), Clinton (Albany Municipal Water & Sewer), Cumberland (Burkesville Municipal Water Works and Cumberland County Water District), Eubank/Science Hill (City of Eubank Water System and Science Hill Water Works), Green-Taylor (Green-Taylor Water District),Greensburg (Greensburg Water Department), McCreary (McCreary County Water District), Russell (Jamestown Utilities and Russell Springs Sewer & Water Works), Somerset (Somerset Utilities), Southeastern (Southeastern Water Association), Wayne (Monticello Utility Commission), and Western (Western Pulaski County Water District).

Lake Cumberland Area Development District
Project Ranking Methodology

The current needs in the Lake Cumberland ADD region are quite sizeable. While water service has been provided to most residents some are still in need of service, expanded treatment capacity and replacement of aging or undersized lines are becoming more and more necessary. For wastewater, the needs include system expansion, unserved areas, aging infrastructure, and expanded treatment capacity.

The Lake Cumberland Regional Water Management Council uses a point based rankling system to rank the needs of the area. Each local system was asked to submit their most needed projects to the Council for ranking. Projects were scored on a series of criteria including Type of Project, Regionalism, Shovel Readiness, Funding Status, and Local Need. Additional bonus points were assigned at the discretion of the Council for projects deemed most deserving. In the event of a tie, the project's Cost per Connection was used as the deciding factor.

The following point criterion was approved by the Lake Cumberland Regional Water Management Council on September 4, 2014 and will be used to rank projects on December 4, 2014:

Type of Project (up to 20 points assigned)

Unserved – Points based on number of households served per mile
AVERAGE 9 OR GREATER HOUSEHOLDS PER MILE - 20
AVERAGE 5-6 HOUSEHOLDS PER MILE - 18
AVERAGE 3-4 HOUSEHOLDS PER MILE - 15
AVERAGE 1-2 HOUSEHOLDS PER MILE - 10
AVERAGE OF LESS THAN 1 HOUSEHOLDS PER MILE – 5

Underserved – Points based on percentage of total customer base impacted
80-100% OF TOTAL CUSTOMER BASE IMPACTED - 20
60-79% OF TOTAL CUSTOMER BASE IMPACTED - 19
40-59% OF TOTAL CUSTOMER BASE IMPACTED - 18
20-39% OF TOTAL CUSTOMER BASE IMPACTED- 15
10-19% OF TOTAL CUSTOMER BASE IMPACTED - 10
LESS THAN 10% OF TOTAL CUSTOMER BASE IMPACTED - 5

Industrial/Commercial – Points based on number of jobs created/retained
100 OR MORE NEW JOBS CREATED OR JOBS RETAINED - 20
75-99 NEW JOBS CREATED OR JOBS RETAINED - 19
50-74 NEW JOBS CREATED OR JOBS RETAINED - 18
20-49 NEW JOBS CREATED OR JOBS RETAINED - 15
10-19 NEW JOBS CREATED OR JOBS RETAINED - 10
LESS THAN 10 NEW JOBS CREATED OR JOBS RETAINED – 5

Other – 3 points assigned for projects not meeting the above types

Combination – Most favorable listed category plus an additional 3 points

Project Delivery (up to 20 points assigned)
Regional - 20 points
Non-Regional – 5 points

Project Status (up to 20 points assigned)
Engineering Plans and specs submitted to DOW - 20 points
Preliminary Engineering Report completed - 15 points
Engineering procurement completed – 10 points
Preliminary planning by system - 5 points

Funding Status (up to 20 points assigned)

Projects with estimated costs greater than $100,000
Funding committed for 50% or more - 20 points
Funding committed for 25-49% or more - 15 points
Funding committed for 1-24% - 10 points
Pending applications - 3 points
Projects with estimated costs of $100,000 or less - 10 points

Local Need (up to 20 points assigned)

Points assigned based on the planning unit ranking

1ST – 20 POINTS
2ND – 16 POINTS
3RD – 13 POINTS
4TH – 11 POINTS
5TH – 9 POINTS
6TH – 7 POINTS
7TH – 6 POINTS
8TH – 5 POINTS
9TH – 4 POINTS
10TH – 3 POINTS
11TH – 2 POINTS
12TH – 1 POINTS
13TH OR HIGHER – 0 POINTS

Council Input (up to 10 points assigned)

Council assigns 10 bonus points to 15% of projects
Special consideration is given to any project that addresses an agreed order, tap-on-ban, NOV, or other specific violation from the Kentucky Division of Water.

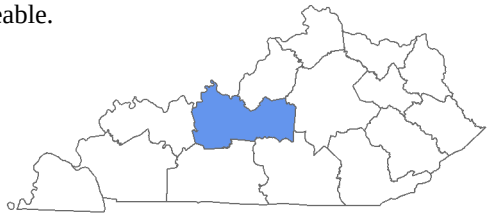
Tie Breaker (no points assigned)

Cost per connection - only used to break point based ties
Lowest cost per connection is ranked highest

Project Rankings For Lake Cumberland Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21147023	MCWD – Emergency Water Plant Power Supply	3-5 Years	Partially Funded	$1,072,000	McCreary	1	1
WX21217022	Taylor County School Water & Sewer System Extension	3-5 Years	Not Funded	$180,600	Taylor	2	1
WX21199123	Water System Improvements & Replacements	3-5 Years	Not Funded	$3,304,000	Pulaski	3	1
WX21147022	MCWD – New Pine Knot & Marshes Sidings Storage Tanks	3-5 Years	Not Funded	$4,596,000	McCreary	4	2
WX21199122	Green Hill Estate, Cedar Hill Heights, & Old Schoolhouse Road Water Line Replacement & Improvements	3-5 Years	Not Funded	$1,039,000	Pulaski	5	1
WX21217018	Campbellsville – Taylor County Scattered Sites – Phase 3	3-5 Years	Not Funded	$2,074,615	Taylor	6	2
			Total Cost:	**$12,266,215**			

Lincoln Trail Area Development District (LTADD)



- 2010 census population of 269,117 (116,687 households) with 92% serviceable.
- Projected 2020 population of 295,040 (change of 25,923).
- 4,886.27 miles of existing water lines.
- 386.00 miles of line extensions proposed in the next 10 years.
- 36.00 miles of line rehabilitation proposed in the next 10 years.
- 41.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $159,975,898.
- Estimated funding needs for projects from 6 to 10 years: $990,400.
- Average age of structures: water treatment plants is 46 years; water tanks is 24 years.
- Total number of interconnected systems is 27.
- 97 miles of asbestos concrete pipe currently in use.
- 1,566 miles of water lines less than 15 years old.
- 650 miles of water lines between 15 and 30 years old.
- 890 miles of water lines between 31 and 50 years old.
- 1,372 miles of water lines between 51 and 70 years old.
- $ 71 miles of water lines greater than 70 years old.

Lincoln Trail Area Development District has a 2010 census population count of 269,117 (116,687 households) with a projected 2020 population count of 295,040 (117,392 households). Public water is currently available to approximately 92 percent of the district's households based on 2010 census counts. Over the next ten years approximately 2,702 serviceable households will be added through the construction of 386.00 miles of water line extensions and approximately 92,910 instances of improved service through the rehabilitation of 36.00 miles of existing water lines and other appurtenances. 41.00 miles of transmission lines are also proposed within this district.

County Summary for Lincoln Trail Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Breckinridge	20,059	10,630	21,489	8,788	7,900	74%	$ 41,328,627
Grayson	25,746	13,561	27,048	11,007	13,358	99%	$ 10,715,038
Hardin	105,543	43,261	116,612	46,055	40,774	94%	$ 67,584,485
Larue	14,193	6,172	14,961	6,069	5,269	85%	$ 5,096,000
Marion	19,820	8,182	21,424	8,332	8,093	99%	$ 12,782,145
Meade	28,602	11,762	30,901	11,964	9,162	78%	$ 7,000,683
Nelson	43,437	18,075	50,119	20,219	17,759	98%	$ 7,863,100
Washington	11,717	5,044	12,486	4,958	4,935	98%	$ 8,596,220
Totals	**269,117**	**116,687**	**295,040**	**117,392**	**107,250**	**92%**	**$ 160,966,298**

Community Drinking Water Systems in Lincoln Trail Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0140079	Cloverport Water & Sewer System	Breckinridge	1,102	547
KY0140966	Hardinsburg Water Department	Breckinridge	11,494	6,483
KY0140206	Irvington Water System	Breckinridge	1,419	655
KY0430063	Caneyville Municipal Water Works	Grayson	1,667	816
KY0430616	Grayson County Water District	Grayson	14,122	6,997
KY0430244	Leitchfield Utilities	Grayson	6,534	2,902
KY0470990	Hardin Co. Water District No. 1 Fort Knox System	Hardin	127	35
KY0470175	Hardin County Water District #2	Hardin	45,034	18,152
KY0470393	Hardin County Water District No. 1	Hardin	27,350	11,652
KY0470440	Vine Grove Water Department	Hardin	3,572	1,520
KY0470455	West Point Water Department	Hardin	835	443
KY0620200	Hodgenville Water Works	Larue	2,002	845
KY0620237	Larue County Water District #1	Larue	9,130	3,894
KY0780241	Lebanon Water Works Co Inc	Marion	6,115	2,840
KY0780268	Marion County Water District	Marion	14,706	5,776
KY0820041	Brandenburg Water Works	Meade	3,318	1,420
KY0820369	Meade County Water District	Meade	15,936	6,188
KY0820481	Muldraugh Water Department	Meade	947	539
KY0900017	Bardstown Municipal Water Department	Nelson	25,517	10,799
KY0900031	Bloomfield Water & Sewer Department	Nelson	4,191	1,790
KY0900312	New Haven Municipal Water Works	Nelson	1,351	579
KY0900323	North Nelson Water District	Nelson	10,923	4,332
KY1150415	Springfield Water & Sewer Commission	Washington	10,411	4,496
		Totals:	217,803	93,700

Lincoln Trail Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Increase Storage Capacity**

Discussion of Area Development District Needs:

The Lincoln Trail ADD region has experienced moderate growth in the more urban areas and urban fringes and slow to stagnant growth in the small, rural communities. This has presented different challenges to each area. The concentrations of population in Hardin and Nelson Counties has focused attention on meeting growing demand needs with upgraded facilities (greater capacities).

The least densely populated areas of the region in Breckinridge and Meade Counties still have large geographic areas without potable water but they have made significant progress in reaching areas expressing interest in public water. There is still some need to meet isolated unserved populations; however, the remaining unserved households are very sparsely settled and the cost per household and potential maintenance and water quality issues will be difficult to overcome.

The smaller, more rural communities have seen slow to negative growth and face increasing pressure to repair and replace aging lines and facilities. Many lines in downtown areas were constructed in the 1940's and 1950's and are nearing their life expectancy and their capacities. Treatment facilities in those communities are also facing outdated technologies, difficulty in meeting new regulatory requirements and, high cost of operation (inefficiency). The smaller systems also face unique challenges in keeping qualified personnel as their populations age and decline. They find it difficult to compete financially for experienced personnel or to train new personnel.

Area systems that serve rural or wide geographic populations have difficulties in maintaining water quality in the face of increasing regulations and limitations, particularly those associated with disinfection by-products. A balance between adequate storage and frequent turnover of water supplies is difficult to meet. Projects that aid in reducing disinfection by-product development (tank mixing, automatic flushing, etc.) may become increasingly important.

Overall, the district's utilities have done well in adjusting to new demands but on the horizon, financial burdens may prevent many smaller systems from making necessary repairs and upgrades.

Description and Determination of Planning Units:

Planning units in the Lincoln Trail Region are primarily set by county boundaries. They generally compose a large enough geographic area and small enough grouping of utilities to provide reasonable interaction, feedback, and information to be a useful planning unit. Two Counties do not have a "County Water District" that is responsible for unserved rural populations - Breckinridge and Washington. The City of Hardinsburg in Breckinridge County has taken on the challenge of serving the rural population while Washington County has formed the Springfield Water Commission that has county responsibility.

Lincoln Trail Area Development District
Project Ranking Methodology

The Lincoln Trail Area Water Management Planning Council will be meeting on December 3rd to do our yearly water and wastewater project prioritization. Our prioritization process is adapted from an outline previously developed by KIA and Senate Bill 409. The process is hopefully inclusive and allows for discussion at the local level to improve understanding of a project's intent and impact.

In the past month we've held a County Advisory Committee meeting in each County. Those meetings are hosted by each County Judge/Executive (as the Advisory chairperson) with each local utility, Mayor, and local Health Department invited to participate. All proposed projects are reviewed by the committee and given an initial score based upon how the project meets five criteria (project type, regional connections, design status, funding status, and local need). Most of the discussion by each County committee is centered on how projects address the greatest local needs. Since there can be diverse interests represented, committee members must work together to determine what needs are most important in their community and what projects will meet them. Discussions, while lively in some cases, also serve as a forum to hear about important things affecting local utilities and share information that impacts all of our communities.

After all the County Advisory meetings have taken place, the Area Water Management Council meets to finalize the priorities and adopt the regional list. ADD Staff provides a summary tabulation of profile points based upon the Advisory Committee recommendations. The Council then reviews the list and discusses any changes. In the past two years, the Council has only included the top five projects from each County Advisory group to be ranked in the prioritization list.

Project prioritization is provided to the KY Infrastructure Authority and to LRC. In the past, the prioritization list has been utilized by the General Assembly for KIA line item funding; but given the current budget situation, we are not optimistic for that happening. Although no federal funding pools use our prioritization list, nearly all the funding programs are using portions of the WRIS project profile to feed information for their applications and funding decisions so it is important that we continue the process to help our region produce good infrastructure projects that meet locally expressed needs.

If you would like more information on the process or if you have further questions, please feel free to contact Aaron Hawkins or me at the ADD.

Profile Scoring Criteria for ranked projects:

Project type [20 points max to 5 points min.]: matched to the primary project activities

Unserved (customers / mile): 7>/mile=20 pts, 5-6/mile=15 pts, 3-4/mile=10 pts, 2</mile=5 pts;

Underserved/Improved Service (% of system improved): 75-100%=20 pts, 50-75%=15 pts, 25-49%=10 pts, <25% / maintenance = 5 pts;

Economic Development (# of jobs assisted) 25+ committed= 20pts, 15-24 committed= 15pts, less than 15 committed= 10pts, no quantified jobs= 5 pts;

Other (technical improvements, feasibility studies, etc.) = 10 points

Regional Connection
Regional [20 points] project that connects or merges 2 or more systems for the sale or production of water or wastewater treatment;
Increased connectivity [10 points]: improved existing connection or emergency connection;
Non-regional [5 points]

Design Status: Division of Water approved plans (20 pts.); Preliminary Engineering Report completed (15 pts.); Engineer procured for final design (10 pts.); Engineer developed profile (5 pts.)

Funding Status: The percentage of cost committed from local sources
50% or more from local sources= 20pts,
25-49% from local sources= 15pts,
less than 25% from local or submitted applications (CDBG, RD, KIA, etc)= 10pts,
other= 5pts.

Local Need:
Most important project within the planning unit (20 pts);
2nd most important project (16 pts);
3rd most important project (13 pts);
4th most important project (11 pts);
5th most important project (9 pts).
Only the top five in each planning unit are generally scored for local need.

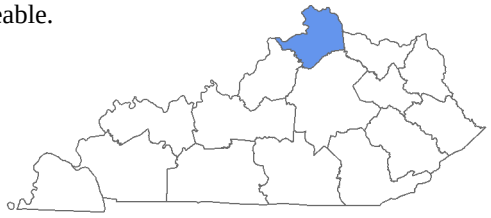
Project Rankings For Lincoln Trail Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21229009	Springfield Danville Interconnect	0-2 Years	Not Funded	$250,000	Washington	1	1
WX21163016	Phase VIII Water System Improvements/ Meade Co. Water District	3-5 Years	Not Funded	$2,000,000	Meade	2	2
WX21155036	Marion County Water District Lebanon Bypass Elevated Tank	3-5 Years	Not Funded	$2,055,000	Marion	3	1
WX21027027	City of Hardinsburg - Area 2 Waterline Extension	3-5 Years	Not Funded	$1,341,850	Breckinridge	4	1
WX21027046	Cloverport Service Line Replacement & Extension	3-5 Years	Not Funded	$430,810	Breckinridge	5	2
WX21155040	Lebanon Water Co. Woodlawn Ave. Replacement	3-5 Years	Not Funded	$600,000	Marion	6	2
WX21027044	Hardinsburg Water Treatment Plant Expansion Phase I	3-5 Years	Not Funded	$1,249,240	Breckinridge	7	4
WX21179014	Bloomfield Water System Improvements	3-5 Years	Not Funded	$800,000	Nelson	8	1
WX21093039	HCWD #1 - New Elevated Storage Tank	3-5 Years	Not Funded	$4,000,000	Hardin	9	1
WX21163007	Brandenburg Old State Road Replacement	3-5 Years	Not Funded	$300,000	Meade	10	1
WX21027008	Rehabilitation of Irvington Water System	3-5 Years	Not Funded	$1,004,055	Breckinridge	11	3
WX21085007	City of Leitchfield-Water Tower	3-5 Years	Not Funded	$1,325,000	Grayson	12	3
WX21155035	Marion County Water District Telemetry Project	0-2 Years	Not Funded	$265,200	Marion	13	3
WX21163022	Flaherty Water Transmission Main	0-2 Years	Not Funded	$1,376,785	Meade	14	3
WX21093009	HCWD #2 Cecilia Tank #2	3-5 Years	Not Funded	$2,500,000	Hardin	15	2
WX21085030	Leitchfield Water AMR Upgrade Project	0-2 Years	Not Funded	$306,500	Grayson	16	1
WX21123008	Lincoln Blvd. South Replacement	0-2 Years	Not Funded	$593,000	Larue	17	1
WX21155023	Lebanon Water Works Co. Calvary Rd Waterline Replacement	3-5 Years	Not Funded	$1,200,000	Marion	18	5
WX21093035	West Point- South Dixie Water Tower	3-5 Years	Not Funded	$925,000	Hardin	19	3
WX21123025	Larue Co. W.D. - Hwy 84 Pump Station	3-5 Years	Not Funded	$250,000	Larue	20	3
WX21229010	Springfield - Willisburg Lake Improvements	3-5 Years	Not Funded	$1,500,000	Washington	21	3
WX21085032	Caneyville Meter Replacement / Upgrade Project	0-2 Years	Not Funded	$233,000	Grayson	22	2
WX21163023	Muldraugh Finished Water Connection	3-5 Years	Not Funded	$455,000	Meade	23	4
WX21179024	New Haven Downtown Waterline Replacement	3-5 Years	Not Funded	$250,000	Nelson	24	2
WX21179010	North Nelson Hwy 245 Replacement	3-5 Years	Not Funded	$450,500	Nelson	25	4
WX21229011	US 150 Bypass Water Main Extension	0-2 Years	Not Funded	$940,000	Washington	26	2
WX21027009	Rehabilitation of Water Storage Tank In Cloverport	3-5 Years	Not Funded	$262,990	Breckinridge	27	5
WX21123024	Larue Co. Water District #1 GIS Technology	0-2 Years	Not Funded	$85,000	Larue	28	5
WX21179011	Bardstown Rubble Dam	3-5 Years	Not Funded	$500,000	Nelson	29	5
WX21179015	Bloomfield Water Line Extensions and Telemetry	3-5 Years	Not Funded	$675,000	Nelson	30	3
WX21123026	Larue Co. W.D. - Meter Tap Upgrade	0-2 Years	Not Funded	$50,000	Larue	31	2
WX21123017	Hodgenville Phase 1a Water System Improvements	3-5 Years	Not Funded	$962,000	Larue	32	4
WX21155022	Marion County Water District McElroy Phase 2 Water System Extens	3-5 Years	Not Funded	$660,000	Marion	33	4
WX21229005	City of Springfield Waterline Replacement/Upgrade	3-5 Years	Not Funded	$1,000,000	Washington	34	4
WX21093018	HCWD No. 2, 2020 Project Phase VI	3-5 Years	Not Funded	$4,800,000	Hardin	35	4
WX21229008	Springfield Water Supply Study	0-2 Years	Not Funded	$100,000	Washington	36	

Project Rankings For Lincoln Trail Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21093027	Hardin County Water District #1, Vulnerability and Protection Measures	0-2 Years	Not Funded	$120,000	Hardin	37	5
WX21085023	Grayson Co. Water District - Tank Mixing Upgrades	3-5 Years	Not Funded	$250,000	Grayson	38	4
WX21085024	City of Caneyville- Tank Mixing Upgrade	3-5 Years	Not Funded	$250,000	Grayson	39	5
WX21027028	City of Hardinsburg - Area 3 Waterline Extension	3-5 Years	Not Funded	$2,347,090	Breckinridge	40	
			Total Cost:	**$38,663,020**			

Northern Kentucky Area Development District (NKADD)



- 2010 census population of 438,647 (185,049 households) with 97% serviceable.
- Projected 2020 population of 488,377 (change of 49,730).
- 3,569.54 miles of existing water lines.
- 433.00 miles of line extensions proposed in the next 10 years.
- 41.00 miles of line rehabilitation proposed in the next 10 years.
- 2.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $190,388,264.
- Estimated funding needs for projects from 6 to 10 years: $40,140,592.
- Average age of structures: water treatment plants is 38 years; water tanks is 9 years.
- Total number of interconnected systems is 24.
- 45 miles of asbestos concrete pipe currently in use.
- 706 miles of water lines less than 15 years old.
- 833 miles of water lines between 15 and 30 years old.
- 1,541 miles of water lines between 31 and 50 years old.
- 206 miles of water lines between 51 and 70 years old.
- $ 253 miles of water lines greater than 70 years old.

Northern Kentucky Area Development District has a 2010 census population count of 438,647 (185,049 households) with a projected 2020 population count of 488,377 (194,345 households). Public water is currently available to approximately 97 percent of the district's households based on 2010 census counts. Over the next ten years approximately 3,004 serviceable households will be added through the construction of 433.00 miles of water line extensions and approximately 202,914 instances of improved service through the rehabilitation of 41.00 miles of existing water lines and other appurtenances. 2.00 miles of transmission lines are also proposed within this district.

County Summary for Northern Kentucky Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Boone	118,811	46,154	153,933	59,951	44,336	96%	$ 36,008,147
Campbell	90,336	39,523	91,642	37,713	38,588	98%	$ 53,436,668
Carroll	10,811	4,696	11,440	4,408	4,620	98%	$ 470,000
Gallatin	8,589	3,786	9,264	3,592	3,711	98%	$ 661,500
Grant	24,662	9,942	26,917	9,870	9,789	99%	$ 58,874,753
Kenton	159,720	68,975	168,458	68,111	67,790	98%	$ 46,377,157
Owen	10,841	5,634	11,336	4,713	4,850	86%	$ 13,893,318
Pendleton	14,877	6,339	15,387	5,987	5,809	92%	$ 20,807,313
Totals	**438,647**	**185,049**	**488,377**	**194,345**	**179,493**	**97%**	**$ 230,528,856**

Community Drinking Water Systems in Northern Kentucky Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0080034	Boone County Water District	Boone	75,972	27,865
KY0081013	Boone-Florence Water Commission	Boone	91	57
KY0080135	Florence Water & Sewer Commission	Boone	30,736	13,441
KY0080442	Walton Waterworks Department	Boone	3,902	1,556
KY0210066	Carroll County Water District #1	Carroll	5,926	2,864
KY0210067	Carrollton Utilities	Carroll	4,698	2,000
KY0210008	West Carroll Water District - Carrollton	Carroll	2,376	1,047
KY0210637	West Carroll Water District - Milton	Carroll	95	50
KY0390130	Gallatin County Water District	Gallatin	5,292	2,228
KY0390444	Warsaw Water Works	Gallatin	1,988	948
KY0410047	Bullock Pen Water District	Grant	19,439	7,487
KY0410662	Corinth Water District	Grant	2,964	1,310
KY0410107	Dry Ridge Water Works Commission	Grant	2,035	811
KY0410472	Williamstown Municipal Water Department	Grant	4,593	1,961
KY0590220	Northern Kentucky Water District	Kenton	242,841	105,582
KY0960051	Butler Water Works	Pendleton	617	284
KY0960112	East Pendleton Water District	Pendleton	5,104	2,168
KY0960126	Falmouth Water Department	Pendleton	2,568	1,179
KY0960348	Pendleton County Water District #1 North	Pendleton	4,792	1,953
KY0960499	Pendleton County Water District #1 South	Pendleton	1,393	569
		Totals:	417,422	175,360

Northern Kentucky Area Development District
Needs Assessment

Primary Need: **Extend Services to Unserved Areas**
Secondary Need: **Repair and Replace Existing Infrastructure**

Discussion of Area Development District Needs:

The Northern Kentucky Area Development District's eight counties each have unique challenges. The urban counties have issues with aging infrastructure in the cities in the northern parts, population growth in the suburbs in the middle, and unserved, low density population areas in the south. The rural counties have areas of low density that are a challenge to serve in an economically viable manner, aging infrastructure in the cities, and in some cases, water plants that are at or near capacity.

Description and Determination of Planning Units:

The Northern Kentucky Area Development District is composed of the eight counties of Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen, and Pendleton.

Regional Overview - Northern Kentucky ADD
The Northern Kentucky Development District region had an estimated population of 185,000 households in 2012 with a projected population of 194,000 households in 2020. There are approximately 3000 miles of water lines in the region serving about 178,000 households, or about 96% of the region's population. 465 miles of proposed water line extensions for the period 2012-2020 would provide service to an additional 3500 households. About 17,500 people in the region rely on private domestic water systems: 1,500 on wells and 16,000 on hauled water and other sources.

There are 35 public and semi-public water systems serve the region: 19 community systems, 6 non-community systems and 2 non-transient non-community systems.

The NKADD Water Management Council reviewed the water systems and their service areas located within the Northern Kentucky Area Development District. The Council designated the Northern Kentucky Area Development District boundary as the regional management area. Within NKADD, the following water systems and their respective water management planning areas were designated by the Council:

1. Boone County Water Management Planning Area
   - Boone County Water District
   - Florence Water & Sewer Commission
   - Walton Waterworks Department

2. Kenton/Campbell Water Management Planning Area
   - Northern Kentucky Water District

3. Carroll County Water Management Planning Area
   - Carrollton Utilities
   - West Carroll Water District
   - Carroll County Water District #1

4. Gallatin County Water Management Planning Area
   - Gallatin County Water District
   - Warsaw Water Works

5. Grant County Water Management Planning Area
   - Bullock Pen Water District
   - Corinth Water District
   - Dry Ridge Water Works Commission
   - Williamstown Municipal Water Department

6. Owen County Water Management Planning Area
   - Kentucky American Water Company

7. Pendleton County Water Management Planning Area
   - Pendleton County Water District #1
   - East Pendleton Water District
   - Butler Water Works
   - Falmouth Water Department

Northern Kentucky Area Development District
Project Ranking Methodology

The Water Management Council created a subcommittee to develop a ranking methodology for NKADD. This was based on the methodology created by KIA along with modifications instituted by other ADDs. A point system was developed that looked at several aspects of the projects based on the following criteria:

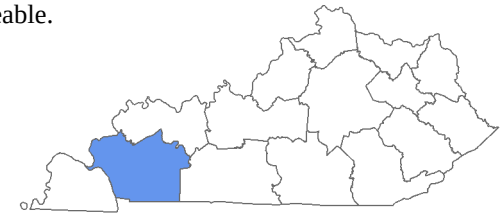
- Consolidation or regionalization of systems
- Local rankings
- Number of unserved/underserved customers affected
- Cost per household
- Amount of planning and development work completed
- Capacity to provide wastewater service (for waterline extensions)
- Local funding

A meeting is held with each Planning Unit to rank their projects. The projects are scored using a matrix developed from the established criteria. At the Water Management Council meeting, these scores are used the rank the projects for the whole ADD. NKADD uses a tiered system so that each Planning Units number one project is in the top 8: the highest number one project is first, the second highest number one project is second, the third highest number one project is third … until all of the projects ranked by the Planning Units are ranked for the whole ADD.

Project Rankings For Northern Kentucky Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21081001	Williamstown - New Water Treatment Plant	0-2 Years	Partially Funded	$17,249,165	Grant	1	1
WX21041003	500K Carroll and Gallatin County Hwy. 42 Elevated Industrial Tan	0-2 Years	Not Funded	$1,706,000	Carroll	2	1
WX21191004	2014 Pendleton County Water Project	0-2 Years	Not Funded	$1,310,424	Pendleton	3	1
WX21037311	NKWD - Newport/Bellevue/Dayton Water Main Replacement Project	0-2 Years	Not Funded	$5,000,000	Campbell	4	1
WX21117303	NKWD - Kenton County Unserved Water Project 2013 (Subdistrict O)	0-2 Years	Not Funded	$3,965,808	Kenton	5	10
WX21015400	Boone County Rural Water Project - Phase II	0-2 Years	Partially Funded	$9,910,000	Boone	6	1
WX21037310	NKWD - Campbell County Unserved and Underserved Project 2012 - Subdistrict J	0-2 Years	Not Funded	$5,202,600	Campbell	7	2
WX21015301	Boone-Florence Water Commission - Northwest Water Storage Tank	0-2 Years	Not Funded	$5,000,000	Boone	8	2
WX21191003	Water Storage Reservoir Repair and Roof Replacement	0-2 Years	Not Funded	$548,709	Pendleton	9	2
WX21117212	NKWD - Covington Water Main Replacement Project	0-2 Years	Not Funded	$5,000,000	Kenton	10	20
WX21041004	CCWD - Fairview 170K Tank Improvements	3-5 Years	Not Funded	$203,600	Carroll	11	2
WX21081005	City of Dry Ridge 200,000 Gallon Elevated Tank	0-2 Years	Not Funded	$785,735	Grant	12	2
WX21015510	Goodridge Avenue Water Main Relining	0-2 Years	Not Funded	$600,000	Boone	13	3
WX21081305	Bullock Pen - Raw Water Intake	0-2 Years	Not Funded	$95,000	Grant	14	3
WX21117002	Latonia Lakes Water Main Replacement Project	0-2 Years	Partially Funded	$1,834,917	Kenton	15	30
WX21037005	City of Mentor Water Main Replacement Project	0-2 Years	Not Funded	$661,926	Campbell	16	3
WX21015514	BCWD - Williams Rd. to Garrison Creek Rd. Phase A	3-5 Years	Not Funded	$1,296,200	Boone	17	4
WX21081002	2012 Water System Improvements	0-2 Years	Not Funded	$100,000	Grant	18	4
WX21117003	Campbell and Kenton County Water Main Replacement and SCADA Impr	0-2 Years	Not Funded	$5,425,000	Kenton	19	40
WX21117210	NKWD - Emergency Power Generation for Taylor Mill Water Treatment Plant and Licking River Pump Station	0-2 Years	Not Funded	$8,900,000	Kenton	20	50
			Total Cost:	**$74,795,084**			

Pennyrile Area Development District (PEADD)



- 2010 census population of 219,305 (97,910 households) with 95% serviceable.
- Projected 2020 population of 226,580 (change of 7,275).
- 5,124.82 miles of existing water lines.
- 170.00 miles of line extensions proposed in the next 10 years.
- 91.00 miles of line rehabilitation proposed in the next 10 years.
- 11.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $206,656,134.
- Estimated funding needs for projects from 6 to 10 years: $18,427,372.
- Average age of structures: water treatment plants is 42 years; water tanks is 27 years.
- Total number of interconnected systems is 52.
- 845 miles of asbestos concrete pipe currently in use.
- 1,086 miles of water lines less than 15 years old.
- 287 miles of water lines between 15 and 30 years old.
- 2,600 miles of water lines between 31 and 50 years old.
- 691 miles of water lines between 51 and 70 years old.
- $ 527 miles of water lines greater than 70 years old.

Pennyrile Area Development District has a 2010 census population count of 219,305 (97,910 households) with a projected 2020 population count of 226,580 (89,133 households). Public water is currently available to approximately 95 percent of the district's households based on 2010 census counts. Over the next ten years approximately 1,006 serviceable households will be added through the construction of 170.00 miles of water line extensions and approximately 101,098 instances of improved service through the rehabilitation of 91.00 miles of existing water lines and other appurtenances. 11.00 miles of transmission lines are also proposed within this district.

County Summary for Pennyrile Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Caldwell	12,984	6,292	12,948	5,518	6,219	99%	$ 10,431,433
Christian	73,955	29,459	77,840	28,340	26,582	90%	$ 56,757,081
Crittenden	9,315	4,569	9,156	3,775	4,332	95%	$ 4,049,500
Hopkins	46,920	21,180	48,007	19,684	20,577	97%	$ 13,990,459
Livingston	9,519	4,824	9,438	4,074	4,650	96%	$ 5,056,000
Lyon	8,314	4,791	8,523	3,430	4,671	98%	$ 2,878,000
Muhlenberg	31,499	13,699	31,466	12,337	13,254	97%	$ 15,362,632
Todd	12,460	5,286	12,958	4,989	5,051	96%	$ 108,045,500
Trigg	14,339	7,810	16,244	6,986	7,632	98%	$ 8,512,901
Totals	**219,305**	**97,910**	**226,580**	**89,133**	**92,968**	**95%**	**$ 225,083,506**

Community Drinking Water Systems in Pennyrile Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0170528	Caldwell County Water District	Caldwell	5,105	2,449
KY0170146	Fredonia Water Department	Caldwell	721	327
KY0170360	Princeton Water & Wastewater Commission	Caldwell	7,008	3,442
KY0240521	Christian County Water District	Christian	15,643	6,593
KY0240201	Hopkinsville Water Environment Authority	Christian	36,228	16,441
KY0240329	Oak Grove Water Department	Christian	8,050	3,556
KY0280267	Marion Water Department	Crittenden	3,034	1,489
KY0540958	Dawson Springs Water & Sewer System	Hopkins	2,641	1,253
KY0540108	Earlington Water & Sewer Department	Hopkins	1,453	728
KY0540656	Hanson Water System	Hopkins	1,149	452
KY0540936	Madisonville Municipal Utilities	Hopkins	21,931	10,223
KY0540269	Mortons Gap Water Department	Hopkins	865	401
KY0540977	Nebo Water District	Hopkins	3,769	1,552
KY0540138	North Hopkins Water District	Hopkins	3,096	1,307
KY0540328	Nortonville Water Department	Hopkins	1,759	778
KY0540406	South Hopkins Water District	Hopkins	7,079	3,171
KY0540465	White Plains Water Department	Hopkins	1,552	667
KY0700532	Crittenden-Livingston County Water District	Livingston	9,037	4,511
KY0700162	Grand Rivers Water System	Livingston	1,999	1,153
KY0700243	Ledbetter Water District	Livingston	2,725	1,210
KY0700380	Salem Municipal Water System	Livingston	749	359
KY0700401	Smithland Water & Sewer System	Livingston	497	261
KY0720113	Eddyville Water Department	Lyon	2,893	1,121
KY0720227	Kuttawa Water Department	Lyon	764	407
KY0720933	Lyon County Water District	Lyon	4,031	2,917
KY0890071	Central City Municipal Water & Sewer System	Muhlenberg	4,791	2,219
KY0890106	Drakesboro Water & Sewer	Muhlenberg	663	308
KY0890170	Greenville Utilities Commission	Muhlenberg	4,728	2,131
KY0890302	Muhlenberg County Water District #1	Muhlenberg	14,015	6,160
KY0890304	Muhlenberg County Water District #3	Muhlenberg	4,965	2,225
KY1100121	Elkton Utilities	Todd	2,167	957
KY1100171	Guthrie Water Works	Todd	1,399	639
KY1100944	Todd County Water District	Todd	8,425	3,744
KY1100428	Trenton Water Works	Todd	584	269
KY1110019	Barkley Lake Water District	Trigg	10,250	5,933
KY1110054	Cadiz Water & Sewer Commission	Trigg	3,940	1,818
		Totals:	199,705	93,171

Pennyrile Area Development District
Regional Water Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Increase Storage Capacity**

Discussion of Area Development District Needs:

The Pennyrile Area has a lot of varied projects but at this time the majority of our needs fall under the heading of replacing aging infrastructure. This category ranges from replacing aging lines and pumps to replacing tanks and plants. At this time, a large majority of the lines and infrastructure in the Pennyrile region is approaching its designed lifespan. Each system is unique and has different needs but the overall trend is to replace aging cast iron pipe, aging AC (asbestos concrete) lines, and aging pvc lines with newer pvc and ductile iron. One of the problems that we are running into is the shear scope of the replacement projects. In many situations we find that a system needs to replace large sections of their lines or infrastructure. The reason for these large scale replacement projects is that whole sections of the systems were installed during one large project. In the cases of some small municipalities these older projects can cover most of the city. Why do these projects need to addressed? It is because an aging system costs money. These aging systems are inefficient and expensive to maintain. As an area ages it takes more time and resources to address the problems that arise. When a problem area is fixed it frees up manpower and resources which can be used for system maintenance, expansion, and rate stabilization.

The secondary need in the Pennyrile region is an off shoot of the primary need. In many cases the systems do not need to just replace an aging tank but increase the amount of available storage and lines feeding the new structure. Tanks in general are a long term investment for a system. These structures provide the backbone of the system providing pressure and short term storage to the customers. As water systems grow and expand an undersized tank can become a large problem. These undersized tanks can create low pressure zones, bottle necks in the system, and increased pumping and production times at the water treatment plants.

Description and Determination of Planning Units:

The planning units in the Pennyrile region are based on the existing county boundaries. By keeping the planning units based on the county boundaries the systems are familiar with the political structure and the current relationship between them and their neighbors. Currently the Pennyrile region has nine planning units (Caldwell County, Christian County, Crittenden County, Hopkins County, Livingston County, Lyon County, Muhlenberg County, Todd County, and Trigg County). These planning units vary in number of systems from as little as two to as many as ten. In each of these instances the county based planning units seem to work well for the Pennyrile region. Many of the counties systems have grown interconnected and interdependent over the last several years. These relationships help foster cooperation and county/regional planning.

Pennyrile Area Development District
Project Ranking Methodology

Each year, the Water Management Council of the Pennyrile Area Development District (PADD) completes a ranking process of water and wastewater projects in the region. This is a "grassroots" process as it begins at the local (system) level and ends with all projects being ranked on a regional basis.

We begin the process with county-wide ranking meetings during which all water/wastewater systems meet with the PADD Water Management Coordinator and their respective County Judge Executive. We discuss the individual projects from each system and rank them according to the priorities within the county. These rankings are then used in the overall regional ranking process.

The PADD Water Management Council has elected to use a point system to determine the overall regional ranking of each project. Projects are ranked based on five categories; Project Type (Unserved Customers, Underserved Customers, and Aging Infrastructure), Regionalization, Level of Engineering/Project Status, Funding Status, and Local Importance. Projects may receive up 20 points in each category except for regionalization. The Water Management Council recognizes the increasing importance of regionalization and has weighted this category heavier. Overall, a project can achieve 110 points. In the instances where two project score the same numerical value the Water Council has elected to use a simple cost analysis to break the tie. The system that is serving the most people with the least amount of money receives the higher ranking (cost of the project/number of customers served).

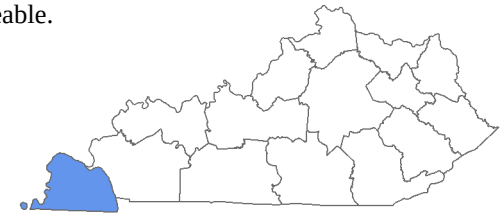
Project Rankings For Pennyrile Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21033009	Caldwell County Water District Waterline Extension	3-5 Years	Partially Funded	$2,092,010	Caldwell	1	1
WX21047013	HWEA - US 41A Water Main Improvement, 2 MG Southpark Tank, and Interconnect Project	0-2 Years	Partially Funded	$7,006,000	Christian	2	1
WX21139026	Crittenden-Livingston Water District - Distribution Upgrade	3-5 Years	Not Funded	$1,160,000	Livingston	3	1
WX21219035	Logan Todd RWC – Springfield, Tennessee Supply Project	0-2 Years	Not Funded	$26,500,000	Todd	4	1
WX21055009	Crittenden-Livingston WD - Moore Hill Tank (Crittenden Co.)	3-5 Years	Not Funded	$1,039,500	Crittenden	5	1
WX21107034	South Hopkins Water District - Waterline Extension & Tank	3-5 Years	Not Funded	$1,224,004	Hopkins	6	1
WX21177018	Muhlenberg County Water District Nebo Pump Station, Watermain & Tank	3-5 Years	Not Funded	$1,175,985	Muhlenberg	7	1
WX21177027	Greenville - Tanks and Chemical Storage Building Upgrade	0-2 Years	Over Funded	$290,000	Muhlenberg	8	2
WX21033006	Princeton - Water Distribution Improvements	3-5 Years	Partially Funded	$500,000	Caldwell	9	2
WX21143006	City of Kuttawa - Water Quality Project	3-5 Years	Partially Funded	$200,000	Lyon	10	7
WX21177036	Central City - Tank Rehabilitation	0-2 Years	Not Funded	$500,000	Muhlenberg	11	3
WX21047014	Christian County Water District: System Extension Project	0-2 Years	Partially Funded	$800,000	Christian	12	4
WX21219032	Logan/Todd - 12" Waterline Upgrade (Elkton to Allender's Hill)	3-5 Years	Unknown	$0	Todd	13	3
WX21219018	Todd County Water District - KY Hwy 181 Upgrade	3-5 Years	Not Funded	$4,200,000	Todd	14	2
WX21221009	Cadiz - IGA Water Tank Replacement	3-5 Years	Not Funded	$957,000	Trigg	15	1
WX21143011	City of Kuttawa - I-24 Water Storage Tank	3-5 Years	Not Funded	$700,000	Lyon	16	1
WX21047035	Christian County Water District - Waterline Replacement & Extension	3-5 Years	Not Funded	$3,818,000	Christian	17	5
WX21107041	Nebo - Water System Improvements	3-5 Years	Partially Funded	$106,282	Hopkins	18	5
WX21047038	Christian Count Water District - Phase VIII Upgrade Project	3-5 Years	Not Funded	$2,500,000	Christian	19	3
WX21055013	Marion - Sludge Basin Rehabilitation	3-5 Years	Not Funded	$375,000	Crittenden	20	2
WX21139012	Salem - Water Distribution Upgrades	3-5 Years	Partially Funded	$100,000	Livingston	21	4
WX21047019	Oak Grove - Hugh Hunter Road Waterline Replacement	0-2 Years	Not Funded	$865,000	Christian	22	2
WX21143008	LCWD - System Rehabilitation and Improvements	3-5 Years	Not Funded	$1,038,000	Lyon	23	2
WX21107038	Madisonville North Pressure Zone Improvements	3-5 Years	Not Funded	$2,299,227	Hopkins	24	2
WX21177025	Muhlenberg County Water District #1 - Tank Rehabiliation Project	3-5 Years	Partially Funded	$922,885	Muhlenberg	25	5
WX21221008	Barkley Lake Water District - Water Line Extension	3-5 Years	Not Funded	$3,850,000	Trigg	26	2
WX21107022	White Plains - Hwy 813 - South Hopkins Water District Interconnect	6-10 Years	Not Funded	$965,000	Hopkins	27	14
WX21055011	CLWD - Line Extensions (Crittenden)	3-5 Years	Not Funded	$975,000	Crittenden	28	3
WX21033015	Princeton - System Upgrade	3-5 Years	Not Funded	$1,445,000	Caldwell	29	3
WX21107040	Mortons Gap Water System Rehab	3-5 Years	Not Funded	$835,000	Hopkins	30	3
WX21221013	Cadiz - Line Rehabilitation - Will Jackson Road Hwy 778	3-5 Years	Not Funded	$962,500	Trigg	31	3
WX21047036	Christian County Water District Princeton Road Tank & System Upgrade	3-5 Years	Not Funded	$1,750,000	Christian	32	6
WX21107008	Madisonville Noel Av Line Replacement	3-5 Years	Not Funded	$587,600	Hopkins	33	4

Project Rankings For Pennyrile Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21047027	HWEA - Crofton Water Line Replacement	3-5 Years	Not Funded	$4,060,995	Christian	34	7
WX21219033	Elkton - Water System Rehabilitation and Upgrade project	3-5 Years	Unknown	$0	Todd	35	4
WX21047004	HWEA - Crofton Water Main Extension Project	3-5 Years	Not Funded	$4,746,749	Christian	36	8
WX21047002	HWEA - Crofton 750K Tank & Water Main Replacement	0-2 Years	Not Funded	$2,545,000	Christian	37	13
WX21219023	Logan-Todd Rwc/Guthrie - Clarksville, Tn Interconnection	6-10 Years	Not Funded	$13,000,000	Todd	38	8
WX21221014	Barkley Lake Water District - Sludge Storage Lagoon Improvements	3-5 Years	Not Funded	$349,901	Trigg	39	4
WX21107044	White Plains - Red Hill Road Ph. III Christian County Interconne	3-5 Years	Not Funded	$155,000	Hopkins	40	9
WX21219014	Trenton - Water System Improvements	3-5 Years	Not Funded	$400,000	Todd	41	5
WX21139022	Ledbetter - Holland Road Main Extension	3-5 Years	Not Funded	$300,000	Livingston	42	5
WX21033016	Caldwell County WD - Water Tank Replacement and Upgrades	6-10 Years	Not Funded	$2,252,372	Caldwell	43	5
WX21219008	Guthrie Water System Rehabilitation Project	0-2 Years	Not Funded	$1,300,000	Todd	44	6
WX21177037	MCWD #1 - Cornett Road Replacement	3-5 Years	Not Funded	$100,000	Muhlenberg	45	4
WX21177023	Muhlenberg County Water District #1 - System Rehabilitation	3-5 Years	Not Funded	$584,397	Muhlenberg	46	7
WX21107025	White Plains - Phase 2 Red Hill Tank, Pump Station and Waterline Extension	3-5 Years	Not Funded	$670,000	Hopkins	47	7
WX21219024	Elkton - Water Storage Tank Improvements	3-5 Years	Not Funded	$200,000	Todd	48	7
WX21107029	White Plains - Concord Tank & Pump Station	3-5 Years	Not Funded	$770,000	Hopkins	49	8
WX21139023	Ledbetter - Paris Rd Main Extension	3-5 Years	Not Funded	$150,000	Livingston	50	8
WX21139018	Grand Rivers - Newbern Road Water Line Extension	3-5 Years	Not Funded	$175,000	Livingston	51	9
WX21047003	HWEA Hopkinsville Water Main Extension Project	3-5 Years	Not Funded	$8,163,337	Christian	52	9
WX21139013	Grand Rivers - Waterline Replacement Project	3-5 Years	Not Funded	$850,000	Livingston	53	6
WX21047031	Christian County Water District - Waterline Extensions (10)	3-5 Years	Not Funded	$1,800,000	Christian	54	10
WX21107009	Madisonville Dozier Heights Waterline Replacement	3-5 Years	Not Funded	$354,413	Hopkins	55	6
WX21033019	Caldwell County Water District - U.S. Hwy 62 Area Water System Improvements	3-5 Years	Not Funded	$1,456,561	Caldwell	56	7
WX21139025	CLWD - Line Extensions (Livingston)	3-5 Years	Not Funded	$565,000	Livingston	57	7
WX21107021	White Plains - US 62/Concord Ch. Rd. - MG Int. (P2)	6-10 Years	Not Funded	$210,000	Hopkins	58	13
WX21177033	MCWD #3 - Pump Station Efficiency Upgrade	0-2 Years	Not Funded	$47,250	Muhlenberg	59	9
WX21047029	HWEA - Hopkinsville Industrial Foundation Commerce Park West Loop	3-5 Years	Not Funded	$210,000	Christian	60	11
WX21033018	Princeton - Tank Rehabilitation	3-5 Years	Not Funded	$300,000	Caldwell	61	6
WX21047010	HWEA - Westside 2 MG Tank & Water Main Extension	0-2 Years	Partially Funded	$6,000,000	Christian	62	14
			Total Cost:	**$123,454,968**			

Purchase Area Development District (PUADD)



- 2010 census population of 196,393 (93,709 households) with 79% serviceable.
- Projected 2020 population of 201,697 (change of 5,304).
- 2,178.64 miles of existing water lines.
- 17.00 miles of line extensions proposed in the next 10 years.
- 484.00 miles of line rehabilitation proposed in the next 10 years.
- 13.00 miles of transmission lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $106,937,624.
- Estimated funding needs for projects from 6 to 10 years: $8,026,440.
- Average age of structures: water treatment plants is 34 years; water tanks is 38 years.
- Total number of interconnected systems is 21.
- 641 miles of asbestos concrete pipe currently in use.
- 257 miles of water lines less than 15 years old.
- 155 miles of water lines between 15 and 30 years old.
- 830 miles of water lines between 31 and 50 years old.
- 547 miles of water lines between 51 and 70 years old.
- $ 391 miles of water lines greater than 70 years old.

Purchase Area Development District has a 2010 census population count of 196,393 (93,709 households) with a projected 2020 population count of 201,697 (86,121 households). Public water is currently available to approximately 79 percent of the district's households based on 2010 census counts. Over the next ten years approximately 603 serviceable households will be added through the construction of 17.00 miles of water line extensions and approximately 72,453 instances of improved service through the rehabilitation of 484.00 miles of existing water lines and other appurtenances. 13.00 miles of transmission lines are also proposed within this district.

County Summary for Purchase Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Ballard	8,249	3,885	8,217	3,484	1,936	50%	$ 2,245,050
Calloway	37,191	18,065	40,411	17,019	12,190	68%	$ 6,800,100
Carlisle	5,104	2,441	4,947	2,093	951	39%	$ 11,889,978
Fulton	6,813	3,372	6,223	2,728	2,955	88%	$ 2,146,523
Graves	37,121	16,777	37,630	15,459	11,469	68%	$ 24,227,877
Hickman	4,902	2,342	4,625	1,938	906	39%	$ 850,176
McCracken	65,565	31,079	66,621	29,278	29,458	95%	$ 34,901,180
Marshall	31,448	15,748	33,023	14,122	14,267	91%	$ 31,903,180
Totals	**196,393**	**93,709**	**201,697**	**86,121**	**74,132**	**79%**	**$ 114,964,064**

Community Drinking Water Systems in Purchase Area Development District County

Note: Serviceable counts include households outside the area development district.

PWSID	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0040020	Barlow Water System	Ballard	740	385
KY0040223	Kevil Water Department	Ballard	1,361	648
KY0040228	LaCenter Municipal Water Company	Ballard	1,070	501
KY0040259	Lovelaceville Water Company	Ballard	142	78
KY0040469	Wickliffe Municipal Water System	Ballard	996	463
KY0180509	Center Ridge #2	Calloway	116	119
KY0180502	Center Ridge #3	Calloway	87	59
KY0180549	Center Ridge Water District	Calloway	36	54
KY0180102	Dexter Almo Heights Water District	Calloway	2,143	929
KY0180308	Murray Water District #2	Calloway	715	328
KY0180309	Murray Water District #3	Calloway	643	282
KY0180306	Murray Water System	Calloway	21,108	10,013
KY0180185	South 641 Water District	Calloway	725	357
KY0180914	Stella Trailer Park	Calloway	44	22
KY0200009	Arlington Water Department	Carlisle	387	197
KY0200018	Bardwell City Utilities	Carlisle	796	430
KY0200095	Cunningham Water District	Carlisle	306	147
KY0200284	Milburn Water District	Carlisle	311	144
KY0380149	Fulton Municipal Water System	Fulton	3,282	1,763
KY0380193	Hickman Water Department	Fulton	2,867	1,298
KY0420084	Graves County Water District (Consumers)	Graves	4,882	2,133
KY0420027	Graves County Water District (Fancy Farm)	Graves	1,216	528
KY0420172	Graves County Water District (Hardeman)	Graves	873	405
KY0420194	Graves County Water District (Hickory)	Graves	3,303	1,503
KY0420405	Graves County Water District (South Graves)	Graves	2,327	1,057
KY0420274	Mayfield Electric & Water System	Graves	10,710	5,015
KY0420534	Sedalia Water District	Graves	281	129
KY0420423	Symsonia Water District	Graves	703	362
KY0420475	Wingo Water & Sewer Department	Graves	709	310
KY0530083	Columbus Water Works	Hickman	193	96
KY0530077	Utilities Inc.	Hickman	1,513	707
KY0790029	Benton Water & Sewer System	Marshall	6,554	2,959
KY0790056	Calvert City Municipal Water Department	Marshall	3,564	1,606
KY0790173	Hardin Water Department	Marshall	1,707	768
KY0790216	Jonathan Creek Water District	Marshall	4,531	2,731
KY0790319	North Marshall Water District	Marshall	10,946	5,706
KY0730533	Paducah Water Works	McCracken	59,157	28,243
KY0730454	West McCracken County Water District	McCracken	3,759	1,623
		Totals:	154,803	74,098

Purchase Area Development District
Regional Water Needs Assessment

Primary Need: **Develop Long-term Planning That Allows for Sustainability**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

The majority of systems within the Purchase Area are smaller and have different needs than the larger, more self-sustaining systems. Long-term planning needs to be a major focus within these systems. The fallacy some systems fall into is being too focused on the short-term (day-to-day operations) and fail to acknowledge their Long-term needs and goals. A major issue for these smaller systems are their rate structure. Current rate structures must be updated to not only reflect a systems short-term priorities but allow for Long-term sustainability that will permit them to replace or repair the existing infrastructure.

The Purchase Area like the rest of the state has the majority of its area is covered as far as access to public water. There are a few areas that can still be reached with public water which is the secondary need for this area. The unserved areas that are still in need of public water are the rural areas. For the utilities to extend new service is very cost prohibitive since the areas are not heavily populated. Also the groundwater in the Purchase Area is very good and a lot of the unserved customers are not having problems with their private wells and there has not been a huge need to extend service to this areas.

Description and Determination of Planning Units:

The Purchase Area Development District is divided into eight separate planning units, which are based on the eight counties in the Purchase Area. The planning units are: Ballard County planning unit, Calloway County planning unit, Carlisle County planning unit, Fulton County planning unit, Graves County planning unit, Hickman County planning unit, Marshall County planning unit, and McCracken County planning unit.

In the Ballard County planning unit there are four water systems (City of Barlow, City of Kevil, City of Lacenter and City of Wickliffe) that serve approximately 1,936 serviceable households in Ballard County.

The Center Ridge Water District, Center Ridge Water District #2, Center Ridge Water District #3, Dexter-Almo Heights Water District, the City of Murray, Murray Water District #2, Murray Water District #3, South 641 Water District, and the Stella Trailer Park water system make up the seven water systems in the Calloway County planning unit and serve approximately 12,190 serviceable households.

The Carlisle County planning unit is comprised of four water systems (City of Arlington, City of Bardwell, Cunningham Water District, and the Milburn Water District) that serve approximately 951 serviceable households.

The Fulton County planning unit has two water systems (City of Fulton and City of Hickman) that serve approximately 2,955 serviceable households.

The Graves County planning unit also has nine water systems (Graves County Water District (Consumers), Graves County Water District (Fancy Farm), Graves County Water District (Hardeman), Graves County Water District (South Graves), Hickory Water District, Mayfield Electric & Water System, Sedalia Water District, Symsonia Water District, and the City of Wingo) that serve approximately 11,469 serviceable households in Graves County.

The Water Service Corporation of Kentucky and the City of Columbus are the two water systems in the Hickman County planning unit and serves approximately 906 serviceable households.

The Marshall County planning unit has five water systems. With those systems being the City of Benton, Calvert City, City of Hardin, Jonathan Creek Water District, and the North Marshall Water District. Together these systems serve approximately 14,267 serviceable households.

Paducah Water Works along with the West McCracken County Water District make up the McCracken County planning unit. These two systems serve approximately 29,458 serviceable households of McCracken County.

Purchase Area Development District
Project Ranking Methodology

The Purchase Area Water Management Council uses a drinking water ranking criteria to establish a regional priority list for water projects in the Purchase Area.

The drinking water ranking criteria consists of five separate categories.

Project Type:

1. Elimination of a Public Water System through a merger- project will receive 25 points if a public water system is being eliminated by merging with other system.
2. Elimination of a water treatment plant through an interconnection- projects will receive 23 points if system is eliminated their WTP and setting up an interconnection with another system to purchase water and will still be a separate system after the interconnection is complete.
3. Rehabilitation and/or replacing aging infrastructure- projects will receive 20 points if an utility is rehabbing any infrastructure within their system.
4. Construction of supplemental potable or raw water supply- projects will receive 17 points if an utility is constructing a new well to supplement their existing supply or an utility is constructing a new interconnect to supplement their existing interconnections.
5. Construction of a new WTP or expansion- projects will receive 15 points if an utility is constructing a new WTP, either to replace the old WTP or a secondary WTP, or if the utility is expanding the capacity of the existing WTP.
6. Construction of new water storage tank- projects will receive 10 points if an utility is constructing a water storage tank to supplement their existing tanks.
7. Extension of service to unserved households- project will receive 20 points if the proposed project will add an average of 9 or more new customers per mile, 19 points for an average of 7-8 new customers per mile, 18 points for an average of 5-6 new customers per mile, 15 points for an average of 3-4 new customers per mile, and 10 points for an average of 1-2 new customers per mile.

Compliance and Enforcement:

A project will receive 5 points if the utility is using this project to achieve full or partial compliance with a court or agreed order.

Funding Status

Projects that are 50%-99% funded and they receive 10 points, the second section is for projects that are 1%-49% funded and they receive 5 points. Any projects that are not funded receive zero points for this category.

Project Status

This category has three sections and a project can receive points in all sections if the utility has completed them. The first section is Engineering plans and specs submitted to DOW, a project will receive 15 points if this step has been completed. The second section is Preliminary engineering report complete, a project will receive 10 points if this step is completed. The third section is Estimated engineer's budget complete, a project will receive 5 points if this step is complete.

County Ranking

In this category, projects will receive points based on their county ranking. A number one ranked project in the county will receive 24 points, a number two ranked project in the county will receive 20 points, a number three ranked project in the county will receive 16 points, a number four ranked project in the county will receive 14 points, and a number five ranked project in the county will receive 12 points. Only the top 5 projects in each county will be ranked regionally. In the event of a tie-breaker between projects, the cost per household will be used to break the tie.

In the event of a tie-breaker between projects, the cost per household will be used to break the tie.

Project Rankings For Purchase Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
WX21035006	Dexter-Almo Water- Hopkins Rd Loop and Metering Installation	0-2 Years	Partially Funded	$455,000	Calloway	1	2
WX21157046	Marshall County Fiscal Court-Wv 2020 Projects	0-2 Years	Partially Funded	$6,000,000	Marshall	2	2
WX21145085	Paducah Water Work-24" Transmission Main Redundancy	3-5 Years	Not Funded	$4,493,000	McCracken	3	1
WX21157007	City of Benton-Line Replacement Along Main Street	3-5 Years	Not Funded	$465,000	Marshall	4	1
WX21075005	Hickman Water Department-WTP Rehab	0-2 Years	Partially Funded	$900,523	Fulton	5	2
WX21145001	Paducah Water Works-Interconnection Project	0-2 Years	Not Funded	$250,000	McCracken	6	4
WX21105009	Columbus Water Works - Upgrades to WTP and New Clearwell	3-5 Years	Not Funded	$400,000	Hickman	7	1
WX21039025	Milburn Water District - Water Tower	3-5 Years	Not Funded	$355,000	Carlisle	8	1
WX21007021	Wickliffe - Morning Meadows Waterline Loop	3-5 Years	Not Funded	$240,050	Ballard	9	1
WX21035008	City of Murray- System Improvements	3-5 Years	Not Funded	$315,000	Calloway	10	1
WX21075007	Fulton Municipal Water System-Line Replacement	0-2 Years	Partially Funded	$700,000	Fulton	11	4
WX21035027	Murray - SouthWest Water Main Extension	3-5 Years	Not Funded	$1,200,000	Calloway	12	3
WX21145016	Paducah Water-Lovelaceville Road Extension	3-5 Years	Not Funded	$105,000	McCracken	13	3
WX21105010	Columbus Water Works - Water Tank Maintenance	3-5 Years	Not Funded	$40,000	Hickman	14	2
WX21083051	Mayfield Electric & Water - Fuller Tank Rehab	3-5 Years	Not Funded	$250,000	Graves	15	2
WX21007019	LaCenter Municipal Water-Ac Line Replacement Phase I	3-5 Years	Not Funded	$200,000	Ballard	16	2
WX21039021	City of Bardwell-Well Relocation	3-5 Years	Not Funded	$300,000	Carlisle	17	2
WX21075002	Fulton Municipal Water-Demolition of Old Clear Well & Degasifier	3-5 Years	Not Funded	$386,000	Fulton	18	3
WX21083015	Symsonia Extension KY 131	3-5 Years	Not Funded	$333,697	Graves	19	1
WX21157034	City of Calvert City-Johnson Subdivision Extension	0-2 Years	Not Funded	$20,000	Marshall	20	4
WX21157039	City of Calvert City-New Well Field	3-5 Years	Not Funded	$200,000	Marshall	21	3
WX21083013	City of Wingo- Replace Water Tank	3-5 Years	Not Funded	$300,000	Graves	22	3
WX21039031	City of Arlington- WTP and Wells Relocation	3-5 Years	Not Funded	$600,000	Carlisle	23	3
WX21007024	Kevil - Apperson Road Water Main Extension	3-5 Years	Not Funded	$250,000	Ballard	24	3
WX21145079	Paducah Water Work-Massac Elevated Storage Tank	3-5 Years	Not Funded	$2,067,000	McCracken	25	2
WX21083075	Hickory Water District - AC Main Replacement On Treeland	3-5 Years	Not Funded	$80,000	Graves	26	4
WX21035001	Center Ridge Water District #2 & #3 System Improvements.	3-5 Years	Not Funded	$660,000	Calloway	27	4
WX21039005	Cunningham-Replace AC Mains	3-5 Years	Not Funded	$830,000	Carlisle	28	4
WX21075015	City of Hickman- New Water Tank	3-5 Years	Not Funded	$150,000	Fulton	29	1
WX21083020	Sedalia Water-Hydrants, Sample Stations, Land Acquisitions	3-5 Years	Not Funded	$10,000	Graves	30	5
WX21035026	South 641 Water District-Water Line Replacement & Isolation Valves Installation	3-5 Years	Not Funded	$100,000	Calloway	31	5
WX21145043	Paducah Water-Bryan Road Extension	3-5 Years	Not Funded	$165,000	McCracken	32	5
WX21039003	City of Bardwell-Extension to Cunningham	3-5 Years	Not Funded	$208,780	Carlisle	33	5
			Total Cost:	**$23,029,050**			

Wastewater

107

Kentucky

- 2010 census population of 4,339,367 (1,927,164 households) with 60% serviceable.
- Projected 2020 population of 4,672,754 (change of 333,387).
- 20,605 miles of existing sewer lines.
- 18 new sewage treatment plants proposed in the next 10 years.
- 1,886 miles of line extensions proposed in the next 10 years.
- 473 miles of line rehabilitation proposed in the next 10 years.
- 387 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $1,667,154,933.
- Estimated funding needs for projects from 6 to 10 years: $358,953,289.
- Average age of wastewater treatment plants is 30 years.
- Total number of interconnected systems is 44.
- 2,805 miles of sewer lines less than 15 years old.
- 4,270 miles of sewer lines between 15 and 30 years old.
- 4,698 miles of sewer lines between 31 and 50 years old.
- 3,116 miles of sewer lines between 51 and 70 years old.
- 2,096 miles of sewer lines greater than 70 years old.

Area Development District Demographic and Asset Condition Summary

Area Development District	2010 Population	2020 Population	Serviceable Population	Percent Serviceable	Planned Cost 0 to 10 Years
Bluegrass Area Development District	770,404	862,521	564,643	74%	$ 527,768,272
Barren River Area Development District	284,195	316,297	125,381	44%	$ 157,080,844
Big Sandy Area Development District	154,093	148,051	34,522	23%	$ 154,775,139
Buffalo Trace Area Development District	56,478	58,306	17,490	33%	$ 41,415,000
Cumberland Valley Area Development District	236,618	237,501	77,073	33%	$ 216,424,730
Five County Area Development District	137,884	139,098	71,309	53%	$ 121,296,445
Green River Area Development District	213,472	220,544	134,126	64%	$ 83,254,067
Gateway Area Development District	81,652	87,651	35,950	41%	$ 19,437,003
Kentuckiana Regional Planning and Development Agency	959,091	1,058,343	826,294	88%	$ 168,017,038
Kentucky River Area Development District	114,762	111,267	25,857	22%	$ 67,460,494
Lake Cumberland Area Development District	207,256	221,481	55,729	26%	$ 89,102,151
Lincoln Trail Area Development District	269,117	295,040	76,696	29%	$ 88,874,178
Northern Kentucky Area Development District	438,647	488,377	354,423	81%	$ 46,972,001
Pennyrile Area Development District	219,305	226,580	109,132	51%	$ 126,921,430
Purchase Area Development District	196,393	201,697	95,315	49%	$ 117,309,430
Demographic Totals	**4,339,367**	**4,672,754**	**2,603,940**	**60%**	**$ 2,026,108,222**

Area Development District	Average WWTP Age (yrs)	KISOPs	Lines < 15 yrs (mi)	Lines 15 to 30 yrs (mi)	Lines 31 to 50 yrs (mi)	Lines 51 to 70 yrs (mi)	Lines > 70 yrs (mi)
Bluegrass Area Development District	26	4	599	629	1,072	599	382
Barren River Area Development District	34	1	213	265	430	60	8
Big Sandy Area Development District	20	1	124	161	17	48	0
Buffalo Trace Area Development District	30	1	71	25	78	39	0
Cumberland Valley Area Development District	32	2	165	115	235	140	38
Five County Area Development District	35	8	58	367	77	74	6
Green River Area Development District	38	7	186	196	284	146	209
Gateway Area Development District	23	0	63	204	70	22	0
Kentuckiana Regional Planning and Development Agency	35	1	592	1,136	1,022	664	511
Kentucky River Area Development District	24	1	103	53	101	1	0
Lake Cumberland Area Development District	23	3	135	117	170	37	80
Lincoln Trail Area Development District	31	3	138	148	103	332	6
Northern Kentucky Area Development District	21	3	121	692	682	393	210
Pennyrile Area Development District	37	7	135	129	159	198	402
Purchase Area Development District	30	2	102	33	198	363	244
Asset Condition Averages and Totals:	**30**	**44**	**2,805**	**4,270**	**4,698**	**3,116**	**2,096**

Percent of Households Serviceable by Public Wastewater Systems in 2010

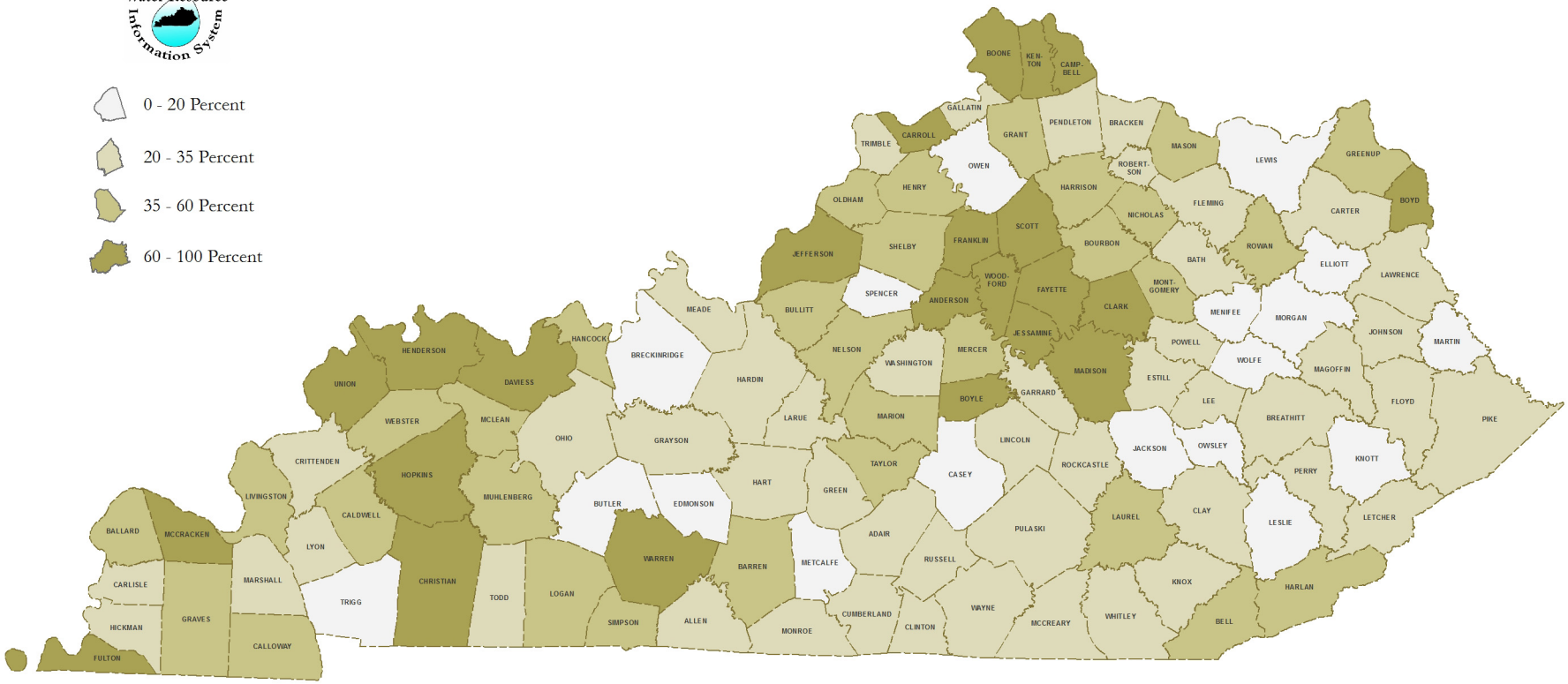
Prepared By:
Kentucky Infrastructure Authority

Kentucky Infrastructure Authority
1024 Capital Center Drive
Frankfort, KY 40601
(502) 573-0260
http://kia.ky.gov

February, 2015

Water Resource Information System

- 0 - 20 Percent
- 20 - 35 Percent
- 35 - 60 Percent
- 60 - 100 Percent



Percent Increase in Households Serviceable by Public Wastewater Systems from 2000 to 2010

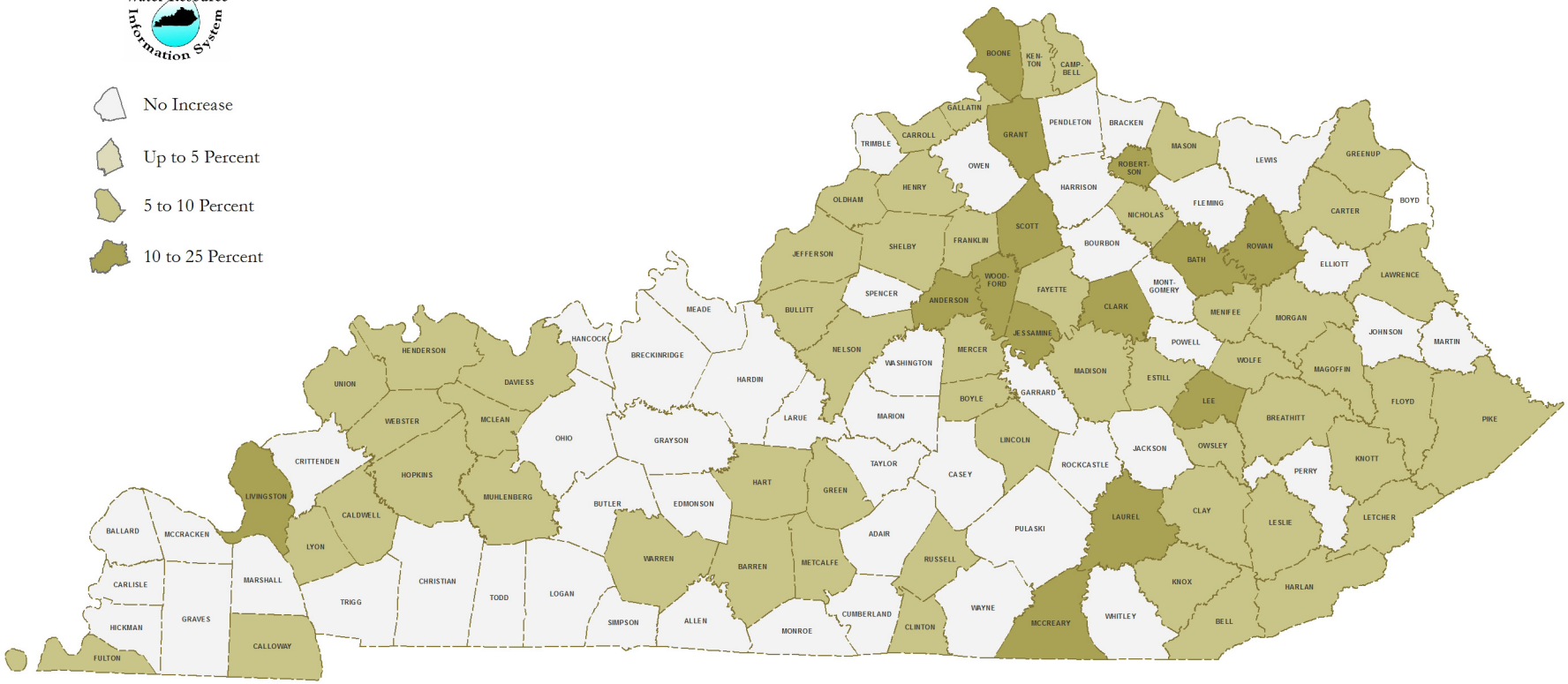
Prepared By:
Kentucky Infrastructure Authority

Kentucky Infrastructure Authority
1024 Capital Center Drive
Frankfort, KY 40601
(502) 573-0260
http://kia.ky.gov

February, 2015

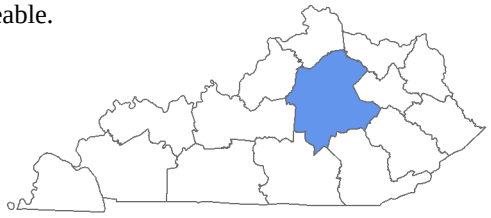
Water Resource Information System

- No Increase
- Up to 5 Percent
- 5 to 10 Percent
- 10 to 25 Percent



Bluegrass Area Development District (BGADD)

- 2010 census population of 770,404 (340,939 households) with 74% serviceable.
- Projected 2020 population of 862,521 (change of 92,117).
- 3,281.79 miles of existing sewer lines.
- 279.00 miles of line extensions proposed in the next 10 years.
- 95.00 miles of line rehabilitation proposed in the next 10 years.
- 112.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $403,997,022.
- Estimated funding needs for projects from 6 to 10 years: $123,771,250.
- Average age of wastewater treatment plants is 26 years.
- Total number of interconnected systems is 4.
- 599 miles of sewer lines less than 15 years old.
- 629 miles of sewer lines between 15 and 30 years old.
- 1,072 miles of sewer lines between 31 and 50 years old.
- 599 miles of sewer lines between 51 and 70 years old.
- 382 miles of sewer lines greater than 70 years old.



Bluegrass Area Development District has a 2010 census population count of 770,404 (340,939 households) with a projected 2020 population count of 862,521 (355,488 households). Public sewer is currently available to approximately 74 percent of the district's households based on 2010 census counts. Over the next ten years approximately 8,051 serviceable households will be added through the construction of 279.00 miles of sewer line extensions and approximately 81,963 instances of improved service through the rehabilitation of 95.00 miles of existing sewer lines and other appurtenances. 112.00 miles of interceptor lines are also proposed within this district.

County Summary for Bluegrass Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Anderson	21,421	9,127	23,555	9,582	5,749	63%	$ 2,146,000
Bourbon	19,985	8,927	20,530	8,478	5,312	60%	$ 16,554,000
Boyle	28,432	12,312	29,048	11,782	8,643	70%	$ 19,045,625
Clark	35,613	15,706	37,985	15,800	11,106	71%	$ 34,588,250
Estill	14,672	6,865	14,359	6,115	2,217	32%	$ 47,573,000
Fayette	295,803	135,160	334,733	141,152	131,252	97%	$ 95,406,294
Franklin	49,285	23,164	50,777	21,761	17,084	74%	$ 36,009,880
Garrard	16,912	7,463	19,122	7,917	1,854	25%	$ 4,616,420
Harrison	18,846	8,208	19,640	8,006	3,186	39%	$ 8,280,650
Jessamine	48,586	19,331	58,928	22,184	14,439	75%	$ 95,167,722
Lincoln	24,742	10,819	26,170	10,762	2,691	25%	$ 16,215,420
Madison	82,916	35,043	95,333	38,093	21,955	63%	$ 71,643,854
Mercer	21,331	9,941	21,810	9,299	4,349	44%	$ 35,489,350
Nicholas	7,135	3,261	7,411	3,012	1,262	39%	$ 600,000
Powell	12,613	5,598	12,319	4,860	1,923	34%	$ 5,533,308
Scott	47,173	19,303	63,984	25,538	13,093	68%	$ 3,170,000
Woodford	24,939	10,711	26,817	11,147	7,309	68%	$ 35,728,499
Totals	**770,404**	**340,939**	**862,521**	**355,488**	**253,424**	**74%**	**$ 527,768,272**

Public Sewer Systems in the Bluegrass Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0021067	Lawrenceburg Water and Sewer	Anderson	13,344	5,749
KY0020940	Millersburg Sewer Department	Bourbon	831	430
KY0031836	North Middletown Sewer Treatment Plant	Bourbon	664	279
KY0090654	Paris Sewer Department	Bourbon	10,102	4,610
KY0028355	Danville - Perryville WWTP	Boyle	866	407
KY0057193	Danville Municipal Sewer System	Boyle	19,226	8,339
KY0037991	Winchester Municipal Utilities	Clark	25,141	11,106
KY0095940	Estill County Water District	Estill	778	365
KY0025909	Irvine Municipal Utilities	Estill	3,728	1,852
KY0021491	LFUCG - Town Branch	Fayette	121,836	54,556
KY0022861	Frankfort Sewer Department	Franklin	34,505	17,094
KY0020974	Lancaster Wastewater Treatment Plant and Sewer Department	Garrard	3,991	1,854
05011006	Berry Sewer System	Harrison	288	118
KY0076635	Cedarbrook Subdivision	Harrison	131	45
KY0105856	Cynthiana Sewer Department	Harrison	6,532	3,020
KYP000072	Jessamine South Elkhorn Water District	Jessamine	1,667	741
KY0021504	LFUCG - West Hickman	Jessamine	164,940	76,737
KY0100404	Nicholasville Sewer Department	Jessamine	29,008	11,814
KY0028428	Wilmore Sewer Department	Jessamine	5,243	1,843
KY0065897	Crab Orchard Sewer Department	Lincoln	894	446
KY0024619	Stanford Sewer Department	Lincoln	4,851	2,142
KY0079898	Berea Sewer Department	Madison	13,846	5,735
KY0102971	Northern Madison County Sanitation District - Battlefield Estates	Madison	1,313	563
KY0056561	Northern Madison County Sanitation District - Executive Park Subdivision	Madison	195	89
KYP000071	Northern Madison County Sanitation District - Greens Crossing	Madison	790	362
KY0105376	Northern Madison County Sanitation District - Regional Plant	Madison	2,662	1,028
KY0107107	Richmond Utilities - Otter Creek	Madison	31,848	13,957
KY0103357	Richmond Utilities - Silver Creek	Madison	378	215
KY0027421	Harrodsburg Sewer Department	Mercer	8,778	4,126
KYP000080	Mercer County Sanitation District	Mercer	402	211
KY0020923	Carlisle Sewer Department	Nicholas	2,253	1,148
KIA181001	Nicholas County Sanitation District #2	Nicholas	183	107
KYP000084	Clay City WWTP	Powell	1,210	584
KY0104078	Powells Valley Water District Sewer Division	Powell	71	59
KY0034428	Red River Wastewater Authority	Powell	2,921	1,280
KY0020150	GMWSS STP #1	Scott	28,330	11,731
KY0082007	GMWSS STP #2	Scott	2,712	1,001
KY0050512	GMWSS STP #3 - Stamping Ground	Scott	803	359
KY0028410	Midway Sewer Department	Woodford	1,723	752
KY0020621	Versailles Municipal Wastewater	Woodford	15,614	6,547
		Totals:	564,598	253,401

Bluegrass Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Extend Services to Unserved**
Secondary Need: **Repair and Replace Existing Infrastructure Areas**

Discussion of Area Development District Needs:

The Bluegrass Area Development District (BGADD) estimates that approximately 946 persons do not have access to a community water supply out of a 2010 population of 770,404 people. This is consistent with a water-unserved population of about 0.13 percent and a water-served population of about 99.87 percent. The high percentage of access to public water within the BGADD has resulted in an increased need to access to public sewer service. The highest ranking projects in many of the planning units (Lincoln County Phase 1 Sewer Project, Georgetown/Scott County South Sewer Extension, Wisemantown Sewer Extensions, etc.) recognized the need to extend service to previously unserved populations. Extending service to unserved populations will also have positive side effects on public health, the environment and compliance with the Clean Water Act.

The secondary need is to repair an replace existing infrastructure. As new infrastructure is constructed, old and failing septic systems, straight pipes, etc. can be replaced with new and more efficient equipment. Upgrading old and failing infrastructure will also help meet the needs of growing communities.

Description and Determination of Planning Units:

The seventeen counties within our district are split up into seven (7) groups of two (2) to three (3) counties. These counties are adjacent to each other and have the potential to work on regional projects together. The Planning Units are designated as follows:

Planning Unit 1 Meeting - Estill and Powell

Planning Unit 2 Meeting – Bourbon, Harrison and Nicholas

Planning Unit 3 Meeting – Boyle, Garrard and Lincoln

Planning Unit 4 Meeting – Anderson and Mercer

Planning Unit 5 Meeting – Franklin, Scott and Woodford

Planning Unit 6 Meeting – Fayette and Jessamine

Planning Unit 7 Meeting – Clark and Madison

Bluegrass Area Development District
Project Ranking Methodology

The Bluegrass Area Water Management Council examined the following criteria in the ranking of water and wastewater projects for 2014:

- the current and potential customer base that would benefit;
- adequacy of existing water/wastewater infrastructure;
- optimization of scarce resources, cost per customer, and ability to pay;
- the dependability of existing infrastructure to provide adequate service;
- avoidance of duplication of service;
- current user rates as compared to the median for the region;
- Median Household Income (MHI), and
- Project type such as construction, operation, and maintenance types of projects.

To that end, a scoring matrix was developed with an available score between zero and 20 for the following seven categories:

1. Project Type: More credit was given for construction projects as opposed to projects that could be categorized as routine maintenance or operation efforts that could perhaps be financed from local revenues derived from user charges.

2. Readiness: The more committed to a project a project sponsor appeared to be, the more credit the project would be received in this scoring category. If a project had final engineering plans and specifications complete and regulatory agency approval in hand, it would receive more credit. Projects with only rough conceptual ideas would receive fewer points.

3. Enforcement Actions: If a project was in response to a state or a federal regulatory agency's enforcement action, it would receive more points. If a project was developed in an attempt to prevent a regulatory agency's enforcement action, it could be highly scored also, but perhaps not so highly scored as a utility already under an enforcement action.

4. Cost Effectiveness: Factors to be considered under this category were income levels of project area residents, cost per customer, funding already in place (be it local or non-local), project viability, and existing rates being charged.

5. Regionalization: Projects in which inter-local cooperation could in some way be demonstrated would receive more consideration than projects that were simply local in nature. Regional projects in general, tend to promote efficiency and effectiveness in utility delivery service. The Council was looking to give a boost to projects which were, in small part or in large part, regional in nature. Projects exhibiting more regional thought were given an advantage as compared to projects exhibiting less regional thought.

6. Local Rankings: This measure played heavily in the regional ranking process. A project that was first-ranked at its local ranking would receive 20 points in this scoring category; a second-ranked project, 18 points; a third-ranked project, 16 points, etc, and finally, a tenth-ranked project, 2 points. Projects locally ranked with an eleventh or twelfth ranking or higher would receive no points in the regional ranking and scoring process.

7. Best of Type: For both water projects and for wastewater projects, the first and second ranked locally ranked projects were disaggregated from the others. As a maximum, this would have resulted in a pool of 34 (17 counties x 2 projects per county) water projects and a similar pool of 34 wastewater projects. The Executive Council reviewed the project descriptions and the likely financial scenarios and ranked thsse projects top to bottom. The top 15 water projects were determined. The highest scoring project got the full 20 points; the next highest ranked project got 19 points, etc.; the 15th ranked water project received 6 points. For projects

not in the top 15, no points were awarded in this Best of Type category. The same process was repeated for wastewater projects.

A given project, if top-ranked in every category, could score 140 points.

Executive Council recommendations to the full Bluegrass Water Management Council can be modified by the full Council.

Project Rankings For Bluegrass Area Development District

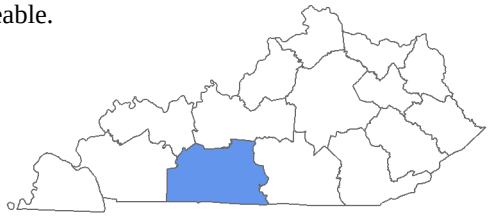
PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21209012	Georgetown/Scott County South Sewer Extension	0-2 Years	Partially Funded	$2,820,000	Scott	1	1
SX21049028	Hampton Manor Outfall Sewer	0-2 Years	Not Funded	$1,404,000	Clark	2	3
SX21067002	Expansion Area Three Sanitary Sewer Infrastructure	0-2 Years	Not Funded	$16,888,634	Fayette	3	1
SX21065002	Wisemantown Sewer Extensions	0-2 Years	Partially Funded	$3,500,000	Estill	4	1
SX21167021	MCSD - Kennedy Bridge Road Sanitary Sewer Improvements Project	0-2 Years	Not Funded	$460,075	Mercer	5	2
SX21067053	West Hickman Subbasin WH-7 WWS Tank	0-2 Years	Not Funded	$19,087,695	Fayette	6	4
SX21151045	Berea Gravity Sewer Rehabilitation	0-2 Years	Not Funded	$1,600,000	Madison	7	1
SX21073029	Phase I Collection System & 0.75 MGD WWTP	0-2 Years	Partially Funded	$9,500,000	Franklin	8	2
SX21097015	HCSD - Northside Sewer Extension and Cedarbrook Replacement Project	0-2 Years	Not Funded	$2,848,250	Harrison	9	1
SX21239010	Versailles Wastewater Treatment Plant Expansion	0-2 Years	Not Funded	$20,911,190	Woodford	10	4
SX21113027	Nicholasville - Orchard Parallel Sanitary Sewer Project	0-2 Years	Not Funded	$340,980	Jessamine	11	3
SX21137015	Stanford - US 27 South Sewer Expansion Project	0-2 Years	Not Funded	$5,326,420	Lincoln	12	3
SX21113026	Wilmore Wastewater Collection System Rehabilitation - Phase 2	0-2 Years	Not Funded	$530,000	Jessamine	13	2
SX21167003	Harrodsburg New Wastewater Treatment Plant	0-2 Years	Not Funded	$21,400,000	Mercer	14	6
SX21137019	Lincoln County Fiscal Court - Rowland Sanitary Sewer Extension	0-2 Years	Not Funded	$130,000	Lincoln	15	5
SX21167019	M C S D - Gwinn Island Road Sanitary Sewer Extension	0-2 Years	Not Funded	$838,625	Boyle	16	3
SX21167013	Harrodsburg - Corning-Industrial Pump Station and Force Main Sys	3-5 Years	Not Funded	$810,000	Mercer	17	4
SX21065008	Kelly Pump Station 6-Inch Force Main Replacement - Imu	0-2 Years	Not Funded	$250,000	Estill	18	2
SX21073062	Frankfort - WWTP Electrical Upgrade, Emergency Generator	0-2 Years	Not Funded	$1,320,000	Franklin	19	5
SX21017004	City of Paris - Claysville Trunk Sewer Replacement Project, Phase II	0-2 Years	Not Funded	$1,825,000	Bourbon	20	2
SX21137020	Crab Orchard UV Replacement	0-2 Years	Not Funded	$275,000	Lincoln	21	1
SX21017010	City of Paris-Southern Hills Sanitary Sewer Collection Project	3-5 Years	Not Funded	$1,820,000	Bourbon	22	5
SX21017013	City of Paris - Bedford Acres Sanitary Sewer Project Phase 2	0-2 Years	Not Funded	$1,850,000	Bourbon	23	4
SX21065007	Covey Road Sewer Extension - Irvine Municipal Utilities	0-2 Years	Not Funded	$201,000	Estill	24	4
SX21017009	Bourbon County Fiscal Court - Centerville Sewer Project	0-2 Years	Partially Funded	$2,500,000	Bourbon	25	6
SX21239003	Midway Brand Street Sewer Rehab Project	0-2 Years	Not Funded	$670,000	Woodford	26	3
SX21151039	NMCSD - Madison Village Collection System Rehab	0-2 Years	Not Funded	$1,275,000	Madison	27	4
SX21065006	Wall Street Sewer Extension - Irvine Municipal Utilities	0-2 Years	Not Funded	$309,000	Estill	28	3
SX21021015	East Danville/Horkey	3-5 Years	Not Funded	$350,000	Boyle	29	2
SX21005006	Lawrenceburg - Alton Vacuum Sewer System Replacement Phase 4	0-2 Years	Not Funded	$1,670,000	Anderson	30	1
SX21073063	Frankfort - Benson CSO Seperation Project	0-2 Years	Partially Funded	$1,058,000	Franklin	31	6
SX21017019	City of Paris - Pump Station Elimination and Rehabilitation	3-5 Years	Not Funded	$6,500,000	Bourbon	32	7
SX21079015	Lancaster Sewer Line Extension to Industrial Park	0-2 Years	Not Funded	$403,550	Garrard	33	6

Project Rankings For Bluegrass Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21167014	Harrodsburg - Cleaning and Rehabilitation of Sanitary Sewer Collector Lines	3-5 Years	Not Funded	$1,420,000	Mercer	34	12
SX21151048	Walnut Street Stormwater Improvement	0-2 Years	Not Funded	$1,800,000	Madison	35	2
SX21021004	Danville Major Sewer System Rehabilitation	3-5 Years	Not Funded	$1,740,000	Boyle	36	4
SX21079016	Lancaster Sewer Line Replacement	0-2 Years	Not Funded	$157,000	Garrard	37	7
SX21017015	City of Paris Rehab Sanitary Sewer Mains	0-2 Years	Not Funded	$250,000	Bourbon	38	3
			Total Cost:	**$136,039,419**			

Barren River Area Development District (BRADD)

- 2010 census population of 284,195 (126,280 households) with 44% serviceable.
- Projected 2020 population of 316,297 (change of 32,102).
- 975.96 miles of existing sewer lines.
- 155.00 miles of line extensions proposed in the next 10 years.
- 31.00 miles of line rehabilitation proposed in the next 10 years.
- 9.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $145,002,844.
- Estimated funding needs for projects from 6 to 10 years: $12,078,000.
- Average age of wastewater treatment plants is 34 years.
- Total number of interconnected systems is 1.
- 213 miles of sewer lines less than 15 years old.
- 265 miles of sewer lines between 15 and 30 years old.
- 430 miles of sewer lines between 31 and 50 years old.
- 60 miles of sewer lines between 51 and 70 years old.
- 8 miles of sewer lines greater than 70 years old.



Barren River Area Development District has a 2010 census population count of 284,195 (126,280 households) with a projected 2020 population count of 316,297 (128,239 households). Public sewer is currently available to approximately 44 percent of the district's households based on 2010 census counts. Over the next ten years approximately 3,061 serviceable households will be added through the construction of 155.00 miles of sewer line extensions and approximately 31,163 instances of improved service through the rehabilitation of 31.00 miles of existing sewer lines and other appurtenances. 9.00 miles of interceptor lines are also proposed within this district.

County Summary for Barren River Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Allen	19,956	9,307	22,366	9,171	2,043	22%	$ 9,400,000
Barren	42,173	19,188	46,361	19,245	8,862	46%	$ 36,551,360
Butler	12,690	5,877	12,544	5,178	1,129	19%	$ 5,611,940
Edmonson	12,161	6,467	12,628	5,283	633	10%	$ 11,158,771
Hart	18,199	8,559	18,690	7,604	2,368	28%	$ 8,442,620
Logan	26,835	12,339	27,382	11,301	4,861	39%	$ 37,857,759
Metcalfe	10,099	4,681	10,329	4,306	810	17%	$ 1,375,000
Monroe	10,963	5,204	10,405	4,423	1,510	29%	$ 3,013,000
Simpson	17,327	7,435	18,342	7,429	4,437	60%	$ 20,866,694
Warren	113,792	47,223	137,250	54,299	29,328	62%	$ 22,803,700
Totals	**284,195**	**126,280**	**316,297**	**128,239**	**55,981**	**44%**	**$ 157,080,844**

Public Sewer Systems in the Barren River Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0024783	Scottsville Municipal Water & Sewer Department	Allen	4,154	2,043
KY0021164	Glasgow Water Company	Barren	15,071	7,238
KY0021024	Morgantown Utilities	Butler	2,442	1,129
KY0023396	Brownsville Municipal Water & Sewer	Edmonson	813	409
KY0091561	Caveland Environmental Authority	Hart	7,130	3,422
KY0031755	Munfordville Municipal Water/Sewer Commission	Hart	1,585	781
KY0020885	Adairville Sewer Department	Logan	895	434
KY0021202	Auburn Sewer Department	Logan	1,413	662
KY0024881	Lewisburg Municipal Water & Sewer Department	Logan	853	458
KY0020877	Russellville Municipal Sewer Department	Logan	6,821	3,307
KY0028100	Edmonton Water Works	Metcalfe	1,597	810
KIA171001	Fountain Run Water District #1	Monroe	228	134
KY0095257	Gamaliel Municipal Water & Wastewater Department	Monroe	457	215
KY0020702	Tompkinsville Sewer Department	Monroe	2,332	1,163
KY0027456	Franklin Sewer Department	Simpson	10,083	4,437
KY0022403	Bowling Green Municipal Utilities	Warren	54,421	23,172
KYP000032	Warren County Water District	Warren	15,078	6,156
		Totals:	125,373	55,970

Barren River Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

The majority of planning units within the BRADD region have identified the repair and replacement of existing infrastructure as the primary need within their respective county. Evidence of this need is reflected by the types of projects currently on record as well as the overall regional priority rankings submitted by each planning unit. Many planning units within the region have identified aging and/or failing existing infrastructure as a major obstacle to improving water service quality and have developed projects to combat this issue. Planning units also indicated that addressing the primary need of repair and replacement will also aid in the pursuit of extending services to unserved areas which, represents the secondary need most identified most frequently within the BRADD region.

Description and Determination of Planning Units:

Planning units within the BRADD region are determined by county and are comprised of all wastewater systems located within county boundaries. In addition, wastewater systems that operate on a regional level within multiple counties are included in each planning unit in which they operate. Wastewater planning units within the BRADD region:

Allen:
- Scottsville Municipal Water & Sewer Department

Barren:
- Glasgow Water Company

Butler:
- Morgantown Utilities

Edmonson:
- Brownsville Municipal Water & Sewer
- Edmonson County Water District

Hart:
- Caveland Environmental Authority
- Munfordville Municipal Water/Sewer Commission

Logan:
- Adairville Sewer Department
- Auburn Sewer Department
- Lewisburg Municipal Water & Sewer Department
- Russellville Municipal Sewer Department

Metcalfe:
- Edmonton Water Works

Monroe:
- Fountain Run Water District #1
- Gamaliel Municipal Water & Wastewater DepartmentTompkinsville Sewer Department.

Simpson:
- Franklin Sewer Department.

Warren:
- Bowling Green Municipal Utilities
- Warren County Water District.

Barren River Area Development District
Project Ranking Methodology

The Barren River Water Management Council utilizes the following criteria for the prioritization of water and wastewater projects on a regional scale. The criteria has been adapted from previous versions used by the BRADD combined with examples from other ADDs resulting in a 5 tiered ranking criteria to determine a numerical point value for each project. This process provides for increased collaboration on a local level to increase awareness on the impacts (locally and regionally) of proposed projects.

County Planning Unit Councils meet at least once locally to discuss and rank potential projects. These meetings are hosted by the County Judge/Executive with each local utility, mayor and other officials invited to attend. All proposed projects are reviewed by the council and given a numerical score based on a five tiered ranking criteria including: (1. Project Type 2.Complicance with Enforcement Action 3. Funding Status 4. Project Status and 5. County Ranking). Due to the diverse composition of each planning unit, a wide variety of interests are represented and therefore collaboration and compromise are key factors throughout the ranking process. This also provides for an increased level of understanding regarding the needs of planning unit as a whole and ensures that projects providing the most benefit (both locally and regionally) receive priority.

After all Planning Unit Council meetings have been completed, a summary tabulation of project scores is created and the Area Water Management Council meets to vote and finalize the regional ranking priorities. The top five scoring projects for each county are selected for ranking, resulting in a total of 50 ranked projects each for both water and wastewater. In addition, the top 10 overall projects are comprised of those projects identified as the #1 overall priority for each county (as indicated by each planning unit during regional ranking meetings). In this way each county is assured to have one project appear in the top 10 regional ranking, thus ensuring equal opportunity throughout the region. After the top 10 the projects are ranked based on overall score. The following criteria are used to score projects:

Clean Water Ranking Criteria

I. Project Type

A. Will this project provide or continue regionalization and/or consolidation of wastewater treatment systems? (Proposed project reduces the number of NPDES discharges by regionalization) = 25 points
B. Elimination of sewage treatment plant through an interconnection = 23 points
C. New Treatment Plant/Expanding Existing Plant = 20 points
D. Replacement and /or rehabilitation of aging infrastructure = 17 points

E. Economic Development
   100+ jobs created or maintained - 20 points
   75-99 jobs created or maintained - 19 points
   50-74 jobs created or maintained - 18 points
   20-49 jobs created or maintained - 15 points
   10-19 jobs created or maintained - 10 points
   less than 10 jobs created or maintained - 5 points

G. Extension of Service to Unserved Households
   9+ households per mile - 20 points
   7-8 households per mile - 19 points
   5-6 households per mile - 18 points
   3-4 households per mile - 15 points
   1-2 households per mile - 10 points

H. Underserved Customers
   80-100+ households per mile - 20 points
   60-80 households per mile - 19 points
   40-60 households per mile - 18 points

20-40 households per mile - 15 points
0-20 households per mile - 10 points

II. Compliance with Enforcement Action (Receive points in either A or B)

A. Does the project address correction of a documented health threat? = 10 Points
B. Is the project necessary to achieve full or partial compliance with a court order, agreed order, or a judicial or administrative consent decree? = 5 Points

III. Funding Status (Receive points in either A, B, or C)

A. Funds committed for 50-99% of total project cost = 10 points
B. Funds committed for 1-49% of total project cost = 5 points
C. No funds committed for project = 0 points

IV. Project Status (Can receive points in multiple categories)

A. All necessary approvals obtained to start construction (including rights-of-way) = 20 points
B. Engineering plans & specs submitted to DOW = 15 points
C. Preliminary engineering report complete = 10 points
D. Estimated engineer's budget complete = 5 points

V. County Ranking (Receive points in either A, B, C, or D)

A. Number one ranked project = 24 points
B. Number two ranked project =18 points
C. Number three ranked project = 14 points
D. Number four ranked project = 10 points
E. Number five ranked project = 8 Points

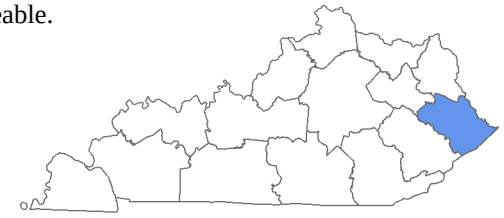
Project Rankings For Barren River Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21009044	Caveland Environmental - Hiseville School Sewer Project	3-5 Years	Not Funded	$1,000,000	Barren	1	1
SX21099023	Horse Cave Regional Water Replacement Facility Expansion Project	0-2 Years	Not Funded	$5,342,000	Hart	2	1
SX21031009	Morgantown - Sewer Main Infrastructure Replacement/Repair to Sewer Main	3-5 Years	Not Funded	$500,000	Butler	3	1
SX21171014	Fountain Run Water District #1 - Sewer System Improvements	3-5 Years	Not Funded	$360,000	Monroe	4	1
SX21141014	City of Auburn - Upgrade of Existing Wastewater Treatment Plant	3-5 Years	Not Funded	$2,000,000	Logan	5	1
SX21213028	City of Franklin - Sewer Upgrades to Ky Downs	3-5 Years	Not Funded	$798,000	Simpson	6	1
SX21227074	BGMU - Industrial Dr Interceptor	3-5 Years	Not Funded	$8,000,000	Warren	7	1
SX21061009	Edmonson County Water District - Collection System Phase III	3-5 Years	Not Funded	$7,843,771	Edmonson	8	1
SX21003022	City of Scottsville - Pump Station Replacement Project	3-5 Years	Not Funded	$1,250,000	Allen	9	1
SX21169007	Edmonton - Cumberland Parkway Area Extension	3-5 Years	Not Funded	$400,000	Metcalfe	10	1
SX21009018	Glasgow Southside Interceptor Project	0-2 Years	Not Funded	$5,500,000	Barren	11	2
SX21141047	Sewer System Extension Project	0-2 Years	Not Funded	$810,000	Logan	12	2
SX21099022	City of Munfordville - Sewer Extensions and Pump Station Rehabilitations	3-5 Years	Not Funded	$1,250,620	Hart	13	2
SX21213032	City of Franklin - Sunset Circle Sewer Project	0-2 Years	Not Funded	$400,000	Simpson	14	2
SX21061007	Edmonson County Water District - KY 259 Wastewater Collection System	3-5 Years	Not Funded	$3,315,000	Edmonson	15	2
SX21227030	WCWD - Hwy 68 West Lift Station Upgrade	0-2 Years	Not Funded	$500,000	Warren	16	2
SX21003036	City of Scottsville - Inflow and Infiltration Project, Phase I	0-2 Years	Not Funded	$400,000	Allen	17	2
SX21031003	Hwy 231/Hwy 79S Area Sewer	3-5 Years	Not Funded	$1,611,500	Butler	18	2
SX21169011	Edmonton - Harvey Hurt Rd. Area Extension	3-5 Years	Not Funded	$350,000	Metcalfe	19	2
SX21171003	City of Tompkinsville - Collection System Extensions to Unserved Areas	3-5 Years	Not Funded	$1,000,000	Monroe	20	2
SX21009045	Caveland Environmental - Cave City Replacement	0-2 Years	Not Funded	$900,000	Barren	21	3
SX21141036	Russellville - Franklin Road Sewer Project	3-5 Years	Not Funded	$1,020,000	Logan	22	3
SX21213024	City of Franklin - Sewer Line Replacement 31W Downtown	3-5 Years	Not Funded	$2,010,000	Simpson	23	3
SX21099021	City of Munfordville - SSES and Stormwater Inflow Removal Project	3-5 Years	Not Funded	$1,450,000	Hart	24	3
SX21003011	City of Scottsville - South Court Street Sewer Rehab	3-5 Years	Not Funded	$750,000	Allen	25	3
SX21031010	Morgantown - Sanitary Sewer Infiltration Project-Phase I	3-5 Years	Not Funded	$300,000	Butler	26	3
SX21171018	Fountain Run Water District #1 - SCADA control system for the sewer system	3-5 Years	Not Funded	$193,000	Monroe	27	3
SX21227079	BGMU - Collet and Fairview Sanitary Sewer Interceptor Rehabilitation	3-5 Years	Not Funded	$1,850,000	Warren	28	3
SX21169012	Edmonton - Old Glasgow Street Area Extension	3-5 Years	Not Funded	$300,000	Metcalfe	29	3
SX21031004	Logansport Area Sewer- Butler County Water System	3-5 Years	Not Funded	$415,800	Butler	30	4
SX21009049	CEA - Cave City WWTP Improvements	3-5 Years	Not Funded	$505,000	Barren	31	4
SX21227059	WCWD - Memphis Junction Lift Station Upgrade	3-5 Years	Not Funded	$1,243,000	Warren	32	4
SX21003018	City of Scottsville - Pump Station Telemetry Project	6-10 Years	Not Funded	$650,000	Allen	33	4
SX21099006	Caveland Environmental - Sewer Service to Rolling Hills Community	3-5 Years	Not Funded	$400,000	Hart	34	4

Project Rankings For Barren River Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21213027	City of Franklin - Manhole Rehabilitation Project	3-5 Years	Not Funded	$258,750	Simpson	35	4
SX21141034	Russellville Greens Sewer Project	3-5 Years	Not Funded	$595,000	Logan	36	4
SX21171008	City of Tompkinsville - Sewer Extension to Joe Harrison Carter School	3-5 Years	Not Funded	$450,000	Monroe	37	4
SX21169008	Edmonton - River Road Project Extension	3-5 Years	Not Funded	$300,000	Metcalfe	38	4
SX21003024	Scottsville - 231 Sewer Extension	0-2 Years	Not Funded	$3,000,000	Allen	39	5
SX21227081	Patton Drive and Lost River Cove Pump Station Renovation	0-2 Years	Not Funded	$250,000	Warren	40	5
SX21213021	City of Franklin - E Cedar St Sewer Line Project	3-5 Years	Not Funded	$475,000	Simpson	41	5
SX21031005	Morgantown - North Taylor Street Sewer Extension	3-5 Years	Not Funded	$72,000	Butler	42	5
SX21169005	Edmonton - Wastewater Facility Plan	0-2 Years	Not Funded	$25,000	Metcalfe	43	5
			Total Cost:	**$60,043,441**			

Big Sandy Area Development District (BSADD)



- 2010 census population of 154,093 (70,217 households) with 23% serviceable.
- Projected 2020 population of 148,051 (change of -6,042).
- 349.28 miles of existing sewer lines.
- 121.00 miles of line extensions proposed in the next 10 years.
- 22.00 miles of line rehabilitation proposed in the next 10 years.
- 8.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $133,759,679.
- Estimated funding needs for projects from 6 to 10 years: $21,015,460.
- Average age of wastewater treatment plants is 20 years.
- Total number of interconnected systems is 1.
- 124 miles of sewer lines less than 15 years old.
- 161 miles of sewer lines between 15 and 30 years old.
- 17 miles of sewer lines between 31 and 50 years old.
- 48 miles of sewer lines between 51 and 70 years old.
- 0 miles of sewer lines greater than 70 years old.

Big Sandy Area Development District has a 2010 census population count of 154,093 (70,217 households) with a projected 2020 population count of 148,051 (61,704 households). Public sewer is currently available to approximately 23 percent of the district's households based on 2010 census counts. Over the next ten years approximately 5,691 serviceable households will be added through the construction of 121.00 miles of sewer line extensions and approximately 13,864 instances of improved service through the rehabilitation of 22.00 miles of existing sewer lines and other appurtenances. 8.00 miles of interceptor lines are also proposed within this district.

County Summary for Big Sandy Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Floyd	39,451	18,175	37,153	15,594	4,878	27%	$ 46,943,477
Johnson	23,356	10,624	23,265	9,647	2,956	28%	$ 30,735,930
Magoffin	13,333	5,950	13,587	5,696	1,329	22%	$ 7,895,700
Martin	12,929	5,164	12,055	4,410	566	11%	$ 2,000,000
Pike	65,024	30,304	61,991	26,357	6,489	21%	$ 67,200,032
Totals	**154,093**	**70,217**	**148,051**	**61,704**	**16,218**	**23%**	**$ 154,775,139**

Public Sewer Systems in the Big Sandy Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0026921	Martin Wastewater Treatment Plant	Floyd	789	442
KY0027413	Prestonsburg City's Utilities	Floyd	7,689	3,571
KY0107051	Southern Water & Sewer District - Eastern STP	Floyd	27	13
KY0105228	Southern Water & Sewer District - Wayland STP	Floyd	148	65
KY0028789	Wheelwright Utility Commission	Floyd	923	373
KY0103578	Paintsville Utilities Commission - Honey Branch	Johnson	2,152	965
KY0020630	Paintsville Utilities Commission - Paintsville STP	Johnson	4,975	2,405
KY0104540	Salyersville Water Works	Magoffin	2,946	1,329
KY0079316	Martin County Sanitation District	Martin	1,193	566
KY0020958	Elkhorn City Water Department	Pike	1,050	521
KY0042811	Mountain Water District - Douglas	Pike	1,722	850
KY0025291	Pikeville Wastewater Treatment Plant	Pike	10,891	5,110
		Totals:	34,505	16,210

Big Sandy Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Extend Services to Unserved Areas**
Secondary Need: **Economic Stimulation**

Discussion of Area Development District Needs:

In the Big Sandy Area wastewater infrastructure is limited outside of corporate boundaries. Current infrastructure does not effectively protect public health, environmental quality or add value to current living conditions and does not accommodate future economic growth. Big Sandy Area infrastructure needs include new developments, expansion of existing community wastewater systems, construction of individual wastewater treatment systems, or the construction of a new community wastewater collection and treatment facilities. Extending current services to residential areas would be beneficial to adequately meet the sewage needs of the current population and eliminate straight pipes and failing septic systems.

Big Sandy's primary clean water need is to extend services to unserved areas. The major projects underway include the Harold Sewer Project located along the US 23 corridor in Floyd County which will result in having public wastewater system availability in this high traffic/high growth area. Project funding for a major wastewater project serving Warfield in Martin County has been secured and is expected to be underway in 2012. Each of these projects will impact hundreds of customers that have never had access to public wastewater systems resulting in a cleaner environment eliminating small package treatment plants and furthering potential for economic development. The secondary need in the Big Sandy Area is for economic simulation.

The systems in the Big Sandy Area lack the capacity to pay for capital improvements and cost associated with operation and maintenance of wastewater system.

Description and Determination of Planning Units:

Big Sandy has five wastewater planning areas, Floyd, Johnson, Magoffin, Martin, and Pike Counties. The planning group is made up of Judge Executives, Mayors, and Utilities within the planning area. The water suppliers in the planning groups are as follows:

- Floyd County Utilities – Prestonsburg City's, Martin Water Works, Wheelwright Utilities, Southern Water and Sewer District
- Johnson County - Paintsville Utilities
- Magoffin County- Magoffin County Water District, Salyersville Water Works
- Martin County- Martin County Water District
- Pike County-Mountain Water District, Pikeville Water Department, and Elkhorn City Water Department.

The planning areas follow the county boundary of the respective planning unit.

Big Sandy Area Development District
Project Ranking Methodology

The annual ranking in the Big Sandy area begins with a series of county-wide meetings comprised of all the water and sewer utilities in the county where the meeting is taking place. Each utility present decides which of their projects is to be ranked and determines the importance of those for themselves. The county ranking process is based on a consensus decision by the members present at the meeting.

While the county rankings are based on a consensus, the regional ranking process uses a quantitative points system to determine the importance of each project ranked at the county level. The points given to each project fall within 7 categories: Project Type, Compliance, Financial, Project Status, County Ranking, Water Loss, and Regional Importance.

Project Type

A.	Will this project provide or continue regionalization and/or consolidation of wastewater treatment systems? Proposed project reduces the number of NPDES discharges by regionalization.	25
B.	Combined Sewer Overflow (CSO) Correction	25
C.	Elimination of sewage treatment plant through an interconnection.	23
D.	Sanitary Sewer Overflow (SSO) Correction	20
E.	Construction of a new wastewater treatment plant for a regional provider.	20
F.	Replacement and/or rehabilitation of aging infrastructure	17
G.	New Treatment Plant/Expanding Existing Plant	15
H.	Extension of Service to Unserved Households	
	a. 9+ households per mile	20
	b. 7-8 households per mile	19
	c. 5-6 households per mile	18
	d. 3-4 households per mile	15
	e. 1-2 households per mile	10

Compliance with Enforcement Action

	Is the project necessary to achieve full or partial compliance with a court order, agreed order, or a judicial or administrative consent decree?	20

Financial

A.	Documented financing plan in Project Profile	10
B.	Utility service area has a MHI less than $32,958	20
C.	Utility service area with a MHI between $41,197 and $32,959	10

Project Status

A.	Estimated engineer's budget complete	5
B.	Estimated bid date and construction start date	5

County Ranking

A.	Number one ranked project	24
B.	Number two ranked project	20
C.	Number three ranked project	16
D.	Number four ranked project	14
E.	Number five ranked project	12

Water Loss

A.	Utility has a water loss percentage less than 15%	20
B.	Utility has a water loss percentage between 15% to 25%	15
C.	Utility has a water loss percentage between 25% to 35%	10

Regional Importance

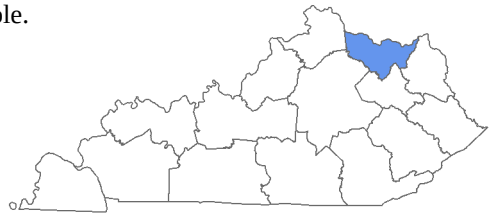
A project can be awarded points at the discretion of the regional water management council.
No more than thirty points can be awarded by the council to water projects in the regional ranking.

Project Rankings For Big Sandy Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21071007	Big Sandy Regional Waste Water Treatment Plant	0-2 Years	Not Funded	$10,770,430	Floyd	1	1
SX21195018	Elkhorn City Wastewater Treatment Plant Project	0-2 Years	Partially Funded	$3,375,000	Pike	2	1
SX21153522	Magoffin County Industrial Park Sewer Extension	3-5 Years	Partially Funded	$2,900,000	Magoffin	3	1
SX21115003	Paintsville WWTP I & I Removal Project Phase II	0-2 Years	Not Funded	$15,122,030	Johnson	4	1
SX21159007	Martin County Sanitation District - Belt Press and Sludge Handling	0-2 Years	Not Funded	$2,000,000	Martin	5	1
SX21195013	Marion Branch Industrial Park - Sewer Infrastructure Project	0-2 Years	Not Funded	$930,000	Pike	6	2
SX21071231	PCUC - US 23 Banner Community Sewer System	3-5 Years	Not Funded	$2,163,000	Floyd	7	2
SX21071235	PCUC - KY 1428 and Stonecrest Sewer Extension Project	0-2 Years	Not Funded	$1,952,900	Floyd	8	3
SX21115510	Paintsville Utilities Powell Addition Sewer Project	3-5 Years	Not Funded	$2,750,000	Johnson	9	2
SX21071210	Stephens Branch & Lower Abbott Creek Sewer Extension Projects	3-5 Years	Not Funded	$2,033,200	Floyd	10	4
SX21071005	Phase III - Harold Sewer Project	3-5 Years	Partially Funded	$2,000,000	Floyd	11	5
SX21195699	Douglas WWTP Expansion	0-2 Years	Partially Funded	$3,300,000	Pike	12	3
SX21195024	City of Pikeville KY Wastewater Treatment Plant Upgrade	0-2 Years	Partially Funded	$21,945,000	Pike	13	4
SX21195692	MWD - Belfry-Pond Sewer Project	0-2 Years	Partially Funded	$8,120,000	Pike	14	5
SX21153004	Magoffin County Garage Lift Station and Line Replacement Project	3-5 Years	Not Funded	$735,000	Magoffin	15	2
SX21115502	Paintsville Utility Commission Van Lear Waste Water Project	11-20 Years	Not Funded	$4,640,000	Johnson	16	3
SX21195004	MWD- Sewer Lift Station Upgrades	0-2 Years	Not Funded	$400,000	Pike	17	9
SX21195011	Thompson Road (Walmart P-13) Lift Station	0-2 Years	Not Funded	$400,000	Pike	18	7
SX21195107	Pikeville #7 Lift Station Replacement	0-2 Years	Not Funded	$475,000	Pike	19	8
SX21071002	Sewer Line Extension From New Plant At Eastern	3-5 Years	Not Funded	$500,000	Floyd	20	7
SX21071722	Southern Water & Sewer District – Solids Handling Facilities At Wayland WWTP	3-5 Years	Not Funded	$515,000	Floyd	21	6
SX21195020	Elkhorn City Upper Branch Sewer Project	3-5 Years	Not Funded	$554,400	Pike	22	6
SX21195696	MWD - Forest Hills Phase III	3-5 Years	Not Funded	$600,000	Pike	23	10
			Total Cost:	**$88,180,960**			

Buffalo Trace Area Development District (BTADD)

- 2010 census population of 56,478 (26,144 households) with 33% serviceable.
- Projected 2020 population of 58,306 (change of 1,828).
- 216.47 miles of existing sewer lines.
- 48.00 miles of line extensions proposed in the next 10 years.
- 1.00 miles of line rehabilitation proposed in the next 10 years.
- 35.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $24,265,000.
- Estimated funding needs for projects from 6 to 10 years: $17,150,000.
- Average age of wastewater treatment plants is 30 years.
- Total number of interconnected systems is 1.
- 71 miles of sewer lines less than 15 years old.
- 25 miles of sewer lines between 15 and 30 years old.
- 78 miles of sewer lines between 31 and 50 years old.
- 39 miles of sewer lines between 51 and 70 years old.
- 0 miles of sewer lines greater than 70 years old.



Buffalo Trace Area Development District has a 2010 census population count of 56,478 (26,144 households) with a projected 2020 population count of 58,306 (24,059 households). Public sewer is currently available to approximately 33 percent of the district's households based on 2010 census counts. Over the next ten years approximately 2,513 serviceable households will be added through the construction of 48.00 miles of sewer line extensions and approximately 2,368 instances of improved service through the rehabilitation of 1.00 miles of existing sewer lines and other appurtenances. 35.00 miles of interceptor lines are also proposed within this district.

County Summary for Buffalo Trace Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Bracken	8,488	3,840	8,744	3,538	925	24%	$ 13,360,000
Fleming	14,348	6,623	14,880	6,231	1,618	24%	$ 13,655,000
Lewis	13,870	6,481	13,899	5,717	1,190	18%	$ 8,700,500
Mason	17,490	8,105	18,419	7,608	4,576	57%	$ 3,040,500
Robertson	2,282	1,095	2,364	965	260	24%	$ 2,659,000
Totals	**56,478**	**26,144**	**58,306**	**24,059**	**8,569**	**33%**	**$ 41,415,000**

Public Sewer Systems in the Buffalo Trace Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0021261	Augusta Sewer	Bracken	1,135	554
KY0025232	Brooksville Sewer	Bracken	653	298
KY0021229	Flemingsburg Sewer	Fleming	3,030	1,552
KY0102601	Lewis County Sanitation District #1	Lewis	803	371
KY0078123	Meadowbrook Subdivision	Lewis	262	105
KY0021512	Vanceburg Sewer	Lewis	1,471	713
KY0020257	Maysville Sewer	Mason	8,568	4,272
KYP000081	Western Mason Sanitation District	Mason	847	377
KY0104299	Mount Olivet Sewer	Robertson	560	258
		Totals:	17,329	8,500

Buffalo Trace Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Sanitary Sewer Overflow Correction**

Discussion of Area Development District Needs:

Buffalo Trace Area Development District (BTADD) is comprised of Bracken, Fleming, Lewis, Mason and Robertson Counties. Nine (9) wastewater systems currently provide sanitary service to the residents of the area. During a Regional Water Management Council meeting, the systems were given the opportunity to meet with the other systems in their respective county to discuss the needs for their system and determine the needs that were most prevalent in the county. The needs identified were used in the determination of the primary and secondary of the Buffalo Trace Area Development District.

The District's primary Clean Water need is to Repair and Replace Existing Infrastructure. This was identified as the primary or secondary need in four of the five planning units. Aging and undersized lines, along with treatment plants being insufficient to handle KY Division of Water limits, were primary reasons cited for determining Repair and Replace Existing Infrastructure as the primary need.

There was a tie to identify the secondary need for the region with Meet Regulatory Requirements and Extend Services to Unserved Areas. Meet Regulatory Requirements is directly related to the primary need. Two planning units have systems that are currently unable to meet regulatory requirements regarding ammonia and phosphorous limits that are required by KY Division of Water. Extend Services to Unserved Areas is also a critical need of the area. Wastewater systems provide service to only about 40% of the households in the Buffalo Trace region.

Additional needs identified as Clean Water needs for the region include Regionalization and Sanitary Sewer Overflow Correction.

Description and Determination of Planning Units:

The Buffalo Trace Area Development covers five planning units, each encompassing a political county boundary. The five planning units are: Bracken County, Fleming County, Lewis County, Mason County and Robertson County.

There are currently three (3) wastewater utilities in the Bracken County Planning Unit: Augusta Sewer, Brooksville Sewer and a portion of Western Mason Sanitation District. Also, the Augusta Regional Sewer Authority has been formed. This Authority will regionalize sewer in Bracken County by eliminating the Augusta and Brooksville WWTPs and will construct a corridor between the systems and provide service along this area.

One (1) wastewater utility, Flemingsburg Utility, provides service in Fleming County Planning Unit.

Lewis County Planning Unit is served by three (3) wastewater systems - Garrison Sewer, Lewis County Sanitation District #1 and Vanceburg Electric Plant Board.

Mason County Planning Unit is served by two (2) wastewater systems. They include: Maysville Utility System and Western Mason Sanitation District.

Mt. Olivet Utilities provides service in the Robertson County Planning Unit.

Buffalo Trace Area Development District
Project Ranking Methodology

Buffalo Trace completes county meetings. Every person who is on the mailing list for the Water Management Council (systems, Judge Executives, Mayors, engineers, Health Departments, DOW, etc.) is notified of the meetings. Each project is discussed and then the individuals present at the meeting rank the projects by what they determine to be most important and beneficial for the county. The rankings are reached by consensus.

After the county meetings, the Water Management Council ranks the projects on a regional basis. Each project that received a #1 ranking at the county meeting is presented. The Council then ranks those projects as to what is determined to be the most important and beneficial for the region. After those five projects are ranked and consensus reached, the projects are ranked on an alternating basis. The county that received the number 1 rank then receives the number 10 rank. The county that received the 2 rank receives the 9 rank. The county that received the 3 rank receives the 8 rank. The county that received the 4 rank receives the 7 rank. The county that received the 5 rank receives the 6 rank.

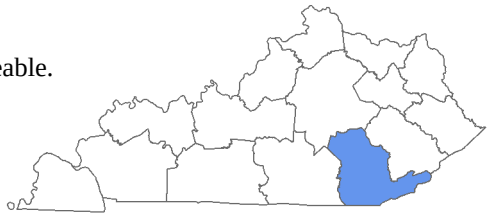
The rankings continue in an alternating fashion.
Basically;
County A receives regional rankings of 1, 10, 11, 20, etc.
County B receives regional rankings of 2, 9, 12, 19, etc.
County C receives regional rankings of 3, 8, 13, 18, etc.
County D receives regional rankings of 4, 7, 14, 17, etc.
County E receives regional rankings of 5, 6, 15, 16, etc.

This process is completed for both water and sewer projects. The order of regional rankings for water and sewer projects are completed independently of each other.

Project Rankings For Buffalo Trace Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21161006	Stonelick Line Extension	3-5 Years	Not Funded	$650,000	Mason	1	1
SX21069020	Phase 2 - Flemingsburg Bypass Sewer Line	3-5 Years	Partially Funded	$525,000	Fleming	2	1
SX21135018	LCSD #1 Sewer Plant Upgrade	3-5 Years	Not Funded	$2,170,000	Lewis	3	1
SX21023005	Augusta/Brooksville Regional Sewer Project	0-2 Years	Partially Funded	$12,370,000	Bracken	4	1
SX21201007	Mt. Olivet Phase 1 - Wastewater Treatment Plant Upgrade	0-2 Years	Fully Funded	$65,000	Robertson	5	1
SX21201008	Mt. Olivet Phase 2 - Wastewater Treatment Plant Upgrade	3-5 Years	Not Funded	$2,000,000	Robertson	6	2
SX21023007	Augusta-2nd Street Sewer Relinement	3-5 Years	Not Funded	$150,000	Bracken	7	2
SX21135010	Vanceburg - Meadowbrook	3-5 Years	Not Funded	$1,386,500	Lewis	8	2
SX21069019	Flemingsburg Circle Drive & Textron Drive Sewer Line Replacement	3-5 Years	Not Funded	$210,000	Fleming	9	2
SX21161004	Maysville Utility Wastewater Dump Station	6-10 Years	Not Funded	$100,000	Mason	10	2
SX21161024	WMSD Barrett Pike-Clarks Run Expansion	6-10 Years	Not Funded	$950,000	Mason	11	3
SX21069017	Ewing Sewer Phase I (Construction)	6-10 Years	Not Funded	$5,870,000	Fleming	12	3
SX21135002	Garrison Sewer Phase II	6-10 Years	Not Funded	$2,000,000	Lewis	13	3
SX21023008	WMSD-Jett Estates Sewer	6-10 Years	Not Funded	$840,000	Bracken	14	3
SX21201005	Mt. Olivet Phase III Sewer Line Extension	3-5 Years	Not Funded	$659,000	Robertson	15	3
SX21201004	Mt. Olivet-Extend Service to Sardis From KY 616	11-20 Years	Not Funded	$2,353,000	Robertson	16	4
SX21135020	LCSD Sewer Extension to Burtonville	3-5 Years	Not Funded	$1,080,000	Lewis	17	4
SX21069005	Ewing Sewer Phase II	11-20 Years	Not Funded	$2,850,000	Fleming	18	4
SX21161021	Western Mason Lift Station Upgrade	3-5 Years	Not Funded	$500,500	Mason	19	4
SX21069006	Ewing Sewer Phase III	11-20 Years	Not Funded	$2,850,000	Fleming	20	5
SX21135007	LCSD-Ribolt Area	3-5 Years	Not Funded	$794,000	Lewis	21	5
SX21135013	3037 Collection	6-10 Years	Not Funded	$1,000,000	Lewis	22	6
SX21069018	Hillsboro Sewer Phase I (Construction)	6-10 Years	Not Funded	$5,550,000	Fleming	23	6
SX21069008	Hillsboro Sewer Phase II	11-20 Years	Not Funded	$1,500,000	Fleming	24	7
SX21135022	Tollesboro Industrial Park (Sewer)	3-5 Years	Not Funded	$270,000	Lewis	25	7
SX21135003	Garrison Sewer Phase III	11-20 Years	Not Funded	$1,500,000	Lewis	26	8
SX21069009	Hillsboro Sewer Phase III	11-20 Years	Not Funded	$1,500,000	Fleming	27	8
			Total Cost:	**$51,693,000**			

Cumberland Valley Area Development District (CVADD)



- 2010 census population of 236,618 (104,865 households) with 33% serviceable.
- Projected 2020 population of 237,501 (change of 883).
- 696.27 miles of existing sewer lines.
- 582.00 miles of line extensions proposed in the next 10 years.
- 73.00 miles of line rehabilitation proposed in the next 10 years.
- 46.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $121,901,681.
- Estimated funding needs for projects from 6 to 10 years: $94,523,049.
- Average age of wastewater treatment plants is 32 years.
- Total number of interconnected systems is 2.
- 165 miles of sewer lines less than 15 years old.
- 115 miles of sewer lines between 15 and 30 years old.
- 235 miles of sewer lines between 31 and 50 years old.
- 140 miles of sewer lines between 51 and 70 years old.
- 38 miles of sewer lines greater than 70 years old.

Cumberland Valley Area Development District has a 2010 census population count of 236,618 (104,865 households) with a projected 2020 population count of 237,501 (97,085 households). Public sewer is currently available to approximately 33 percent of the district's households based on 2010 census counts. Over the next ten years approximately 19,909 serviceable households will be added through the construction of 582.00 miles of sewer line extensions and approximately 22,136 instances of improved service through the rehabilitation of 73.00 miles of existing sewer lines and other appurtenances. 46.00 miles of interceptor lines are also proposed within this district.

County Summary for Cumberland Valley Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Bell	28,691	13,154	27,648	11,714	6,308	48%	$ 18,265,348
Clay	21,730	8,875	20,289	7,421	1,834	21%	$ 17,086,503
Harlan	29,278	13,513	26,099	10,856	5,544	41%	$ 24,664,482
Jackson	13,494	6,523	13,771	5,961	483	7%	$ 1,040,000
Knox	31,883	14,485	32,132	13,362	4,632	32%	$ 9,337,446
Laurel	58,849	25,446	64,713	26,415	9,281	37%	$ 97,768,900
Rockcastle	17,056	7,703	17,593	7,308	2,061	27%	$ 25,151,000
Whitley	35,637	15,166	35,256	14,048	4,917	32%	$ 23,111,051
Totals	**236,618**	**104,865**	**237,501**	**97,085**	**35,060**	**33%**	**$ 216,424,730**

Public Sewer Systems in the Cumberland Valley Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0072885	City of Middlesboro	Bell	10,364	4,971
KY0024058	Pineville Utility Commission	Bell	3,106	1,329
KY0029122	City of Manchester	Clay	4,514	1,814
KY0025755	City of Benham	Harlan	778	406
KY0021571	City of Cumberland	Harlan	2,198	1,047
KY0073091	City of Evarts	Harlan	1,307	483
KY0077615	City of Evarts Turner Trailer Park	Harlan	81	43
KY0026093	City of Harlan	Harlan	5,794	2,683
KY0026115	City of Loyall	Harlan	748	374
KY0024279	City of Lynch	Harlan	839	499
KY0034444	City of McKee	Jackson	879	483
KY0024082	Barbourville Utility Commission	Knox	5,604	2,546
KYP000074	Knox County Utility Commission	Knox	113	60
KY0020133	Corbin Utilities Commission	Laurel	13,022	6,129
KY0021270	London Utility Commission	Laurel	12,410	5,604
KYP000063	Wood Creek Water District	Laurel	4,908	2,227
KY0047431	City of Brodhead	Rockcastle	1,187	535
KY0040703	City of Livingston	Rockcastle	198	105
KY0024694	City of Mount Vernon	Rockcastle	3,009	1,421
KY0028347	City of Williamsburg	Whitley	5,633	2,165
		Totals:	76,692	34,924

Cumberland Valley Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Extend Services to Unserved Areas**
Secondary Need: **Repair and Replace Existing Infrastructure**

Discussion of Area Development District Needs:

The Cumberland Valley ADD wastewater planning needs include extending lines to unserved areas, repairing and replacing existing infrastructure, new collector sewer and appurtenances, sanitary sewer overflow correction, meeting regulatory requirements, ground water protection, regionalization and improving security.
Extending wastewater services to unserved areas, repair and replacing aging infrastructure is a great need in the Cumberland Valley Planning Unit. Each County has identifies wastewater needs and proposed projects to meet those needs. Those projects are listed in the planning unit section.

Lack of wastewater services in rural areas of the Cumberland Valley ADD is a major challenge. A lot of time and effort has been devoted to planning for wastewater services but that has not brought change to many communities in the area. County by county has cluster of communities that could benefit from some on site treatment method, but funding and management issues have held the process. The situation could be improved if more water districts and associations could provide services in their respective service areas. Laurel and Whitley Counties have shown leadership in wastewater planning at the grass root level, but implementation has been held back by lack of funding.

Description and Determination of Planning Units:

The Cumberland Valley Area Development District is divided into eight planning units that are based on the eight counties in the Cumberland Valley Area. The planning units are: Bell County, Clay County, Harlan County, Jackson County, Knox County, Laurel County, Rockcastle County, and Whitley County.

In the Bell County planning unit there are two wastewater utilities (City of Middlesboro and City of Pineville) that serve approximately 6,308 households.

The City of Manchester is the only wastewater utility in the Clay County planning unit and serves approximately 1,834 households.

The Harlan County planning unit is comprised of seven utilities (City of Benham, City of Cumberland, City of Evarts, City of Harlan, City of Loyall, City of Lynch, and Black Mountain Utility District) that serve approximately 5,544 households.

The City of McKee is the only wastewater utility in the Jackson County planning unit and serves approximately 483 households.

The Knox County planning unit has two wastewater utilities (Barbourville Utility Commission and Knox county Utility Commission) that serve approximately 4,632 households.

The Laurel County planning unit has three wastewater utilities (London Utility Commission, Corbin Utilities Commission, and Wood Creek Water District) that serve approximately 9,281 households.

The Rockcastle County planning unit serves approximately 2,061 households with three wastewater utilities (City of Brodhead, City of Livingston, and the City of Mount Vernon).

The City of Williamsburg is the only wastewater utility in the Whitley County planning unit and serves approximately 5,633 households.

Cumberland Valley Area Development District
Project Ranking Methodology

The annual ranking in the Cumberland Valley area begins with a series of county-wide meetings comprised of all the water and sewer utilities in the county where the meeting is taking place. Each utility present decides which of their projects is to be ranked and determines the importance of those for themselves. The county ranking process is based on a consensus decision by the members present at the meeting.

While the county rankings are based on a consensus, the regional ranking process uses a quantitative points system to determine the importance of each project ranked at the county level. The points given to each project fall within 7 categories: Project Type, Compliance, Financial, Project Status, County Ranking, Water Loss, and Regional Importance.

Project Type

A.	Will this project provide or continue regionalization and/or consolidation of wastewater treatment systems? Proposed project reduces the number of NPDES discharges by regionalization.	25
B.	Combined Sewer Overflow (CSO) Correction	25
C.	Elimination of sewage treatment plant through an interconnection.	23
D.	Sanitary Sewer Overflow (SSO) Correction	20
E.	Construction of a new wastewater treatment plant for a regional provider.	20
F.	Replacement and/or rehabilitation of aging infrastructure	17
G.	New Treatment Plant/Expanding Existing Plant	15
H.	Extension of Service to Unserved Households	
a.	9+ households per mile	20
b.	7-8 households per mile	19
c.	5-6 households per mile	18
d.	3-4 households per mile	15
e.	1-2 households per mile	10

Compliance with Enforcement Action

	Is the project necessary to achieve full or partial compliance with a court order, agreed order, or a judicial or administrative consent decree?	20

Financial

A.	Documented financing plan in Project Profile	10
B.	Utility service area has a MHI less than $32,958	20
C.	Utility service area with a MHI between $41,197 and $32,959	10

Project Status

A.	Estimated engineer's budget complete	5
B.	Estimated bid date and construction start date	5

County Ranking

A.	Number one ranked project	24
B.	Number two ranked project	20
C.	Number three ranked project	16
D.	Number four ranked project	14
E.	Number five ranked project	12

Water Loss

A.	Utility has a water loss percentage less than 15%	20
B.	Utility has a water loss percentage between 15% to 25%	15
C.	Utility has a water loss percentage between 25% to 35%	10

Regional Importance

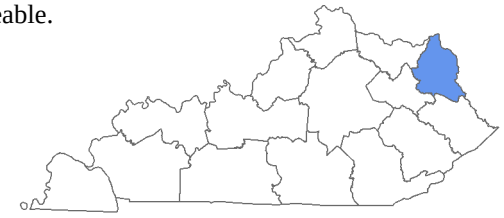
A project can be awarded points at the discretion of the regional water management council.
No more than thirty points can be awarded by the council to water projects in the regional ranking.

Project Rankings For Cumberland Valley Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21013003	Courthouse Square Utility Replacement	0-2 Years	Not Funded	$2,255,948	Bell	1	2
SX21095003	Tri Cities Sewer Interconnect Phase 1	0-2 Years	Not Funded	$3,085,000	Harlan	2	1
SX21203316	City of Brodhead - Sewer Rehabilitation	0-2 Years	Not Funded	$1,275,000	Rockcastle	3	2
SX21235004	Sanitary Sewer Rehabilitation and I&I Removal Project	3-5 Years	Partially Funded	$1,179,835	Whitley	4	1
SX21095004	City of Loyall - wastewater Line Replacement Project Phase 3	3-5 Years	Not Funded	$1,284,500	Harlan	5	2
SX21235005	Ball Park Pump Station/ Force Main - Phase II	0-2 Years	Not Funded	$1,599,411	Whitley	6	2
SX21095050	Harlan: Sanitary Sewer - Combined Sewer Rehabilitation	0-2 Years	Partially Funded	$1,368,490	Harlan	7	3
SX21203153	Wastewater System Improvements Project	3-5 Years	Not Funded	$1,419,000	Rockcastle	8	1
SX21013148	Middlesboro: Noetown Sewer Rehab/Binghamtown PS Rehab	0-2 Years	Partially Funded	$2,550,000	Bell	9	1
SX21051006	Lift Station Rehabilitation and Replacement	3-5 Years	Not Funded	$1,180,000	Clay	10	1
SX21203190	City of Mt. Vernon Wastewater Replacement Along Main Street	3-5 Years	Not Funded	$1,640,000	Rockcastle	11	3
SX21121138	City of Barbourville - Heidrick Sanitary	0-2 Years	Partially Funded	$1,000,000	Knox	12	1
SX21013142	Middlesboro - "y" Road Sewer Extension/Whitmer Industrial Park	3-5 Years	Not Funded	$1,097,000	Bell	13	4
SX21013144	Pineville - PMRIDA Sewer Ext to Industrial Park	0-2 Years	Partially Funded	$4,994,000	Bell	14	3
SX21125151	Wood Creek Wastewater Treatment Facilities	3-5 Years	Not Funded	$4,000,000	Laurel	15	1
SX21051007	Beech Creek Recreational Center Wastewater Package Plant Replacement	3-5 Years	Not Funded	$425,000	Clay	16	2
SX21125318	East Laurel Water District - Wastewater Line Extensions #18	3-5 Years	Not Funded	$1,199,266	Laurel	17	3
SX21051048	Red Bird Mission Wastewater Plant Replacement	3-5 Years	Not Funded	$900,000	Clay	18	3
SX21095055	Evarts Pride Wastewater Sewer Extension	3-5 Years	Not Funded	$600,000	Harlan	19	5
SX21203192	Mount Vernon Wastewater Gravity Force Main and Lift Station Hwy 25 South From Mt. Vernon to Burr Area	3-5 Years	Not Funded	$5,385,000	Rockcastle	20	5
SX21125322	WCWD - Unserved Customers In Lake Watershed	3-5 Years	Not Funded	$10,150,000	Laurel	21	5
SX21095510	City of Benham: Popular Street Sewer Replacement	3-5 Years	Not Funded	$87,000	Harlan	22	4
SX21125516	London Utility Commission - Sunshine Hills Area Phase I	3-5 Years	Not Funded	$605,800	Laurel	23	2
SX21203191	City of Mount Vernon -WWTP and Pump Station off Richmond Street	3-5 Years	Not Funded	$5,500,000	Rockcastle	24	4
SX21125519	London - Phase I to Serve The Area Between Parker Road (KY 3432) and I-75	6-10 Years	Not Funded	$918,450	Laurel	25	4
			Total Cost:	**$55,698,700**			

Five County Area Development District (FIVCO)

- 2010 census population of 137,884 (61,101 households) with 53% serviceable.
- Projected 2020 population of 139,098 (change of 1,214).
- 582.13 miles of existing sewer lines.
- 71.00 miles of line extensions proposed in the next 10 years.
- 22.00 miles of line rehabilitation proposed in the next 10 years.
- 12.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $121,105,145.
- Estimated funding needs for projects from 6 to 10 years: $191,300.
- Average age of wastewater treatment plants is 35 years.
- Total number of interconnected systems is 8.
- 58 miles of sewer lines less than 15 years old.
- 367 miles of sewer lines between 15 and 30 years old.
- 77 miles of sewer lines between 31 and 50 years old.
- 74 miles of sewer lines between 51 and 70 years old.
- 6 miles of sewer lines greater than 70 years old.



Five County Area Development District has a 2010 census population count of 137,884 (61,101 households) with a projected 2020 population count of 139,098 (56,252 households). Public sewer is currently available to approximately 53 percent of the district's households based on 2010 census counts. Over the next ten years approximately 2,714 serviceable households will be added through the construction of 71.00 miles of sewer line extensions and approximately 57,287 instances of improved service through the rehabilitation of 22.00 miles of existing sewer lines and other appurtenances. 12.00 miles of interceptor lines are also proposed within this district.

County Summary for Five County Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Boyd	49,542	21,803	49,446	20,040	17,655	81%	$ 58,566,000
Carter	27,720	12,311	28,459	11,508	2,873	23%	$ 8,284,775
Elliott	7,852	3,371	8,078	3,011	368	11%	-
Greenup	36,910	16,330	36,923	15,046	9,286	57%	$ 26,212,410
Lawrence	15,860	7,286	16,192	6,647	1,934	27%	$ 28,233,260
Totals	**137,884**	**61,101**	**139,098**	**56,252**	**32,116**	**53%**	**$ 121,296,445**

Public Sewer Systems in the Five County Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0022373	Ashland Sewer Department	Boyd	21,646	10,527
KYP000035	Boyd County Sanitation District #2	Boyd	4,149	1,839
KYP000044	Boyd County Sanitation District #4	Boyd	10,723	4,119
KY0035467	Catlettsburg Sewer Department	Boyd	2,427	1,136
KY0020931	Grayson Sewer Department	Carter	4,637	1,957
KY0025925	Olive Hill Sewer Department	Carter	1,837	903
KY0052264	Sandy Hook Sewer Department	Elliott	688	368
KYP000040	Boyd & Greenup County Sanitation District #1	Greenup	3,347	1,399
KYP000039	Flatwoods Sewer Department	Greenup	7,719	3,442
KY0026450	Greenup Sewer Department	Greenup	1,270	542
KYP000038	Raceland Sewer Department	Greenup	2,388	1,109
KYP000037	Russell Sewer Department	Greenup	854	420
KY0026131	South Shore Sewer Department	Greenup	2,282	1,102
KY0022926	Worthington Sewer Department	Greenup	1,611	682
KY0033553	Wurtland Sewer Department	Greenup	1,456	618
KYP000061	Lawrence County Fiscal Court	Lawrence	820	353
KY0027961	Louisa Sewer Department	Lawrence	3,419	1,581
		Totals:	71,273	32,097

Five County Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Meet Regulartory Requirements**

Discussion of Area Development District Needs:

Aging infrastructure is the primary need across all five counties of the ADD: In Worthington, for example, some collection lines were installed during the 1930's and 1940's, while the City of Ashland has many large brick sewers deeply buried and still in use. With all the maintenance needs of our communities, replacement of older parts of a collection system generally occurs when a failure or collapse focuses the repair crew's attention into that area.

Money. There is a limit to the number of rate hikes the customer base can absorb to keep the system working and still allow the utility to replace/upgrade the older sections. Loans work for a time, but the rebuilt section addressed by a loan ages 30 years during the terms of the loan along with all the other sections of the system.

Extensions: Listing "extend services into unserved areas" should not be limited to municipal gravity lines. The "services" may well be mandatory inspection and repair (by the utility) of on-site systems required per County ordinance. Payment for such a program could come from modest utility bills to fund a responsible entity (such as a municipal system) to perform the function on a three year rotation to different of the county. Such an approach to wastewater treatment in the County surrounding any municipal system could only work if proper ordinances were in place and enforced. Gravity lines or low pressure systems should not be ruled out but may be prohibitively expensive. Satellite treatment that rely on gravity collection systems rather than expensive pump stations may also be an option.

Several utilities expressed a desire for the Fiscal Court of each county to invest in backup generators that could be trucked to areas of need during a crisis that disables part of a utility's system.

Description and Determination of Planning Units:

The Planning Units for the FIVCO ADD follow the county boundaries. This was necessary because of the small, unconnected nature of a collection system. Rarely does one utility’s line come within several miles of the neighboring system and the concerns of one county do not carry over into the next county.

Boyd County is effectively covered throughout the county because of a county ordinance making hook-up to collection system mandatory. Though there are uncovered areas, the collection systems are growing.

Carter County has two municipalities separated by more than 10 miles that do not approach their neighboring counties. Elliott County and Lawrence County each have a municipal system with little extension beyond the cities. Without a mandatory hookup ordinance, extension of service outside city limits is difficult if not impossible for all these counties.

Fully half of the wastewater systems in the FIVCO ADD are in Greenup County. The Greenup County Environmental Commission is a regional treatment plant serving three cities and two sanitation districts. The other communities have their own treatment plants with the remainder of the county covered by on-site systems.

Five County Area Development District
Project Ranking Methodology

The annual ranking in the FIVCO ADD area begins with a series of county-wide meetings comprised of all the water and sewer utilities in the county where the meeting is taking place. Each utility present decides which of their projects is to be ranked (typically two or three from their list) and determines the importance of those for themselves.

A point system is not used as the members of the Council feel that the importance of a project exists independent of a score based on its position in the development process. To provide some structure to the ranking, however, priority was given to projects dealing with:

- Immanent public health issues
- Critical system failures (current or threatening) that might bring down a utility lacking a backup plan
- Input from DOW such as a Notice of Violation (NOV) or an Agreed Order
- Regionalization

Projects are considered based on the aforementioned criteria and a ranking is produced following amicable discussion by all those present.

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If a Ranking cannot be agreed upon, FIVCO ADD has a backup plan using the following point system:

Points / Problem Addressed by Project

7 Immanent public health issues or critical system failures that might bring down a utility
6 Agreed Order from DOW
5 Notice of Violation from DOW
4 Regionalization of services
3 Maintenance projects on existing infrastructure
2 Upgrades to the treatment plants, pumps, or the distribution/collection system
1 Extension of new service lines

Add five (5) points if plans have been engineered and submitted to DOW for approval.

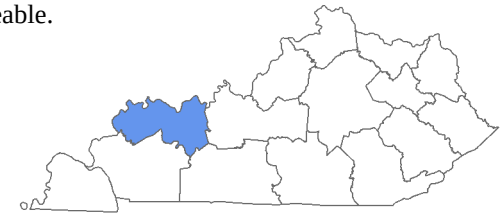
Discussion within the group can override the points attached to each problem addressed by the project.

Project Rankings For Five County Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21043036	Olive Hill: Oxidation Ditch Upgrade and Electrical Repairs	0-2 Years	Not Funded	$65,000	Carter	1	1
SX21089095	South Shore: Upgrade Lift Stations 4, 5, and 6	0-2 Years	Not Funded	$753,000	Greenup	2	2
SX21089091	Russell: Filter Backwash Project	0-2 Years	Not Funded	$970,000	Greenup	3	1
SX21019077	SD4: Rehab Ray Drive Sewer Line	3-5 Years	Not Funded	$312,000	Boyd	4	1
SX21089093	Raceland: Update Systemwide SSES & I&I Study	0-2 Years	Not Funded	$85,000	Greenup	5	3
SX21019065	Ashland: Enlarge Sewer Treatment Plant to Eliminate Overflows	3-5 Years	Not Funded	$25,000,000	Boyd	6	3
SX21089108	Raceland: Rehab the Williams Avenue Lift Station	3-5 Years	Not Funded	$250,000	Greenup	7	4
SX21089096	South Shore: Upgrade Forest Heights Collection Lines	3-5 Years	Not Funded	$889,100	Greenup	8	5
SX21089103	Raceland: Rehab Howard Street Sewer Line to Correct I&I Problem	0-2 Years	Not Funded	$65,000	Greenup	9	7
SX21019062	Sd2: System-Wide Inflow and Infiltration Abatement Project	0-2 Years	Partially Funded	$2,173,000	Boyd	10	2
SX21043030	Grayson: Rolling Hills Subdivision Sewer Extension	0-2 Years	Not Funded	$1,200,000	Carter	11	2
SX21019063	SD2: Ferguson Street Sewer Extension	3-5 Years	Not Funded	$1,100,000	Boyd	12	4
SX21089031	Raceland: Sanitary Sewer Rehab Project	3-5 Years	Not Funded	$50,000	Greenup	13	6
SX21043017	Olive Hill: Rehab of City Lines to Replace Clay Pipe	3-5 Years	Not Funded	$831,775	Carter	14	3
SX21089080	Flatwoods: Federal Way Sewer Line Upgrade and Replacement	0-2 Years	Not Funded	$400,000	Greenup	15	8
SX21043035	Grayson: Plantation Subdivision Sewer Extension Project	0-2 Years	Not Funded	$1,900,000	Carter	16	4
SX21043015	Olive Hill: Sparks Avenue Project	3-5 Years	Not Funded	$68,000	Carter	17	5
			Total Cost:	**$36,111,875**			

Green River Area Development District (GRADD)

- 2010 census population of 213,472 (92,066 households) with 64% serviceable.
- Projected 2020 population of 220,544 (change of 7,072).
- 1,021.02 miles of existing sewer lines.
- 53.00 miles of line extensions proposed in the next 10 years.
- 29.00 miles of line rehabilitation proposed in the next 10 years.
- 8.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $63,410,567.
- Estimated funding needs for projects from 6 to 10 years: $19,843,500.
- Average age of wastewater treatment plants is 38 years.
- Total number of interconnected systems is 7.
- 186 miles of sewer lines less than 15 years old.
- 196 miles of sewer lines between 15 and 30 years old.
- 284 miles of sewer lines between 31 and 50 years old.
- 146 miles of sewer lines between 51 and 70 years old.
- 209 miles of sewer lines greater than 70 years old.



Green River Area Development District has a 2010 census population count of 213,472 (92,066 households) with a projected 2020 population count of 220,544 (89,593 households). Public sewer is currently available to approximately 64 percent of the district's households based on 2010 census counts. Over the next ten years approximately 3,554 serviceable households will be added through the construction of 53.00 miles of sewer line extensions and approximately 54,216 instances of improved service through the rehabilitation of 29.00 miles of existing sewer lines and other appurtenances. 8.00 miles of interceptor lines are also proposed within this district.

County Summary for Green River Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Daviess	96,656	41,452	102,214	41,878	32,213	78%	$ 13,858,000
Hancock	8,565	3,734	8,843	3,502	1,415	38%	$ 6,425,000
Henderson	46,250	20,320	47,600	19,851	13,885	68%	$ 23,420,085
McLean	9,531	4,264	9,271	3,821	1,812	43%	$ 10,572,000
Ohio	23,842	10,219	24,781	9,786	3,290	32%	$ 4,556,570
Union	15,007	6,141	14,436	5,463	3,706	60%	$ 12,230,162
Webster	13,621	5,936	13,399	5,292	2,816	47%	$ 12,192,250
Totals	**213,472**	**92,066**	**220,544**	**89,593**	**59,137**	**64%**	**$ 83,254,067**

Public Sewer Systems in the Green River Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0073377	Regional Water Resource Agency - East	Daviess	31,643	13,293
KY0020095	Regional Water Resource Agency - West	Daviess	40,774	18,585
KY0054941	Whitesville Water Works	Daviess	761	335
KY0020087	Hawesville Water Works	Hancock	1,266	562
KY0025241	Lewisport Municipal Water Works	Hancock	1,828	853
KYP000042	Corydon Wastewater Collection	Henderson	755	306
KY0020711	Henderson Water Utility - North	Henderson	29,780	13,578
KY0020125	Calhoun Water Works	McLean	1,176	561
KY0066605	Island Water Department	McLean	507	229
KY0020613	Livermore Water Works	McLean	1,464	695
KY0091731	Sacramento Water Works	McLean	685	327
KYP000076	Beaver Dam Municipal Water/Sewer	Ohio	3,877	1,629
KYP000078	Centertown Water System	Ohio	538	219
KY0054801	Fordsville Water District	Ohio	554	242
KYP000077	Hartford Municipal Water Works	Ohio	2,635	1,133
KY0105791	Ohio County Regional Wastewater District	Ohio	165	67
KY0021440	Morganfield Water Works	Union	5,755	2,006
KY0025895	Sturgis Water Works	Union	2,098	1,029
KY0025844	Uniontown Water/Sewer Department	Union	1,116	512
KYP000060	Waverly Wastewater Collection	Union	348	159
KY0028096	Clay Water Works	Webster	1,198	520
KY0021296	Providence Water Works	Webster	2,868	1,447
KYP000054	Sebree Collection System	Webster	1,510	572
KYP000055	Webster County Sanitation District	Webster	822	277
		Totals:	134,123	59,136

Green River Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **New Collector and Appurtenances**

Discussion of Area Development District Needs:

The GRADD region covers seven counties and their individual needs vary widely. The counties all know the importance and value of rationalization and regional projects and strive to build them. However, these individual systems have other needs that must be addressed on a daily basis while regional projects can take years to plan and complete.

In the GRADD region, the primary need is the repair and replacement of existing infrastructure. All seven counties in the GRADD region considered repair and replacement of existing infrastructure as their primary need. Under this, the most important aspect is repair/replacement of sewer lines to combat I&I, but also includes repairing/replacing equipment in the distribution system as well as that at sewer plant.

The secondary need of the area is to build new collector sewer and appurtenances. The need for this varies from county to county as well as between systems. The project needs include building new sewer lines that will redesign the systems flow and will help the system run more efficiently, to building out new sewer lines to serving areas that have failing on-site systems or no sewer system at all.

Description and Determination of Planning Units:

The GRADD Water Management Council adopted the GRADD geographical boundary as its services area.

The following wastewater systems serve communities in the Green River Area Development District, and their service areas are included in the Water Management Planning Area:

*Daviess County
1. Regional Water Resource Agency - East Plant
2. Regional Water Resource Agency - West Plant
3. Whitesville Water Works

*Hancock County
1. Hawesville Water Works
2. Lewisport Municipal Water Works

*Henderson County
1. Henderson Water Utility--North
2. Henderson Water Utility--South

*McLean County
1. Calhoun Water Works
2. Island Water Department
3. Livermore Water Works
4. Sacramento Water Works

*Ohio County
1. Beaver Dam Municipal Water
2. Centertown Water System
3. Fordsville Water Works
4. Hartford Municipal Water Works
5. Ohio County Regional Wastewater District

*Union County
1. Morganfield Water Works
2. Sturgis Water Works
3. Uniontown Water Department
4. Waverly Wastewater Collection

*Webster County
1. Clay Water Works
2. Providence Water Works
3. Sebree Water Department
4. Webster County Sanitation District

Green River Area Development District
Project Ranking Methodology

Basic Information

- Project County
- Project Owner
- WRIS Project Number
- Project Description
- Estimated Project Cost

Type of Project

Unserved

• 9 or more per mile	20 pts
• 7-8 per mile	19 pts
• 5-6 per mile	18 pts
• 3-4 per mile	15 pts
• 1-2 per mile	10 pts
• <1 per mile	5 pts

Underserved

• 80-100% total customer base impacted	20 pts
• 60-79% total customer base impacted	19 pts
• 40-59% total customer base impacted	18 pts
• 20-39% total customer base impacted	15 pts
• 10-19% total customer base impacted	10 pts
• less than 10% customer base impacted	5 pts

Economic Development

• 100 or more jobs created or retained	20 pts
• 75-99 jobs created or retained	19 pts
• 50-74 jobs created or retained	18 pts
• 20-49 jobs created or retained	15 pts
• 10-19 jobs created or retained	10 pts
• less than 10 jobs created or retained	5 pts

Other (a project that does not meet above criteria, i.e. a building for chemicals)

- 3 pts

Combination

- If a project is a combination of the above, whichever category the project scored higher in (unserved, underserved, or economic development) the project will get those points, plus 3 additional pts

Maximum of 20 points for this section

Delivery Area

• Regional – Consolidation into single system	30 pts
• Regionalization of a WTP or WWTP	20 pts
• Project benefits multiple systems/communities	15 pts
• Project benefits two systems/communities	10 pts
• Non-regional	5 pts
• Non-regional project that eliminates a lift station/ package treatment plant/pump station	10 pts

Project Status

- Engineering plans and specs submitted to DOW 20 pts
- PER 15 pts
- Engineering procurement completed 10 pts
- Cost estimate by PE 10 pts
- Preliminary planning by system 5 pts

Funding Status

A project costing greater than $100,000

1. Funding committed for 50% or more 20 pts
2. Funding committed for 25-49% 10 pts
3. Funding committed for 1-24% 5 pts
4. Pending applications 3 pts

A project costing less than $100,000

1. 10 pts as long as the project is in one of the above four processes

Environmental Factors

Any project can receive as many (or none) of the points below

- Water loss reduction/I&I reduction 5 pts
- Replacing inefficient pumps/motors with high efficiency ones 5 pts
- Use of some other Green Technology not listed above 5 pts

Tie breaker is cost per connection

County Ranking

The highest scoring project in a county will be the number one ranking project for that county. The number two and subsequently ranked projects will follow in order of next highest scoring. The top five ranked projects in the county will be sent to be ranked regionally; however, all county ranked projects will still be submitted to KIA.

Regional Ranking

The highest scoring projects in the region will be determined from the highest ranked projects in the counties.

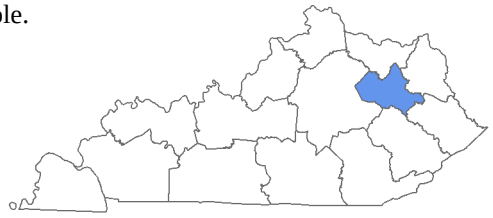
Project Rankings For Green River Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21225024	Morganfield Combined Sewer Separation Project - Phase II	0-2 Years	Partially Funded	$1,954,062	Union	1	1
SX21233026	Providence Wastewater Treatment Plant Expansion	0-2 Years	Not Funded	$1,959,000	Webster	2	1
SX21183016	Centertown Liftstation Rebuild Project	0-2 Years	Not Funded	$150,000	Ohio	3	1
SX21091015	Hawesville Sewer Plant Rebuild Project	0-2 Years	Not Funded	$5,000,000	Hancock	4	1
SX21233025	Providence Sanitary Sewer Upgrades	0-2 Years	Not Funded	$1,693,750	Webster	5	2
SX21233020	Sebree I&I Sewer Rehab Project	3-5 Years	Not Funded	$1,215,000	Webster	6	3
SX21225012	Sturgis Wastewater Treatment Plant Upgrade	6-10 Years	Partially Funded	$2,710,000	Union	7	2
SX21183015	Fordsville Wastewater System Improvement/Rehabilitation Project	0-2 Years	Not Funded	$753,450	Ohio	8	2
SX21059033	Southwest Master Pump Station And Force Main Project	0-2 Years	Not Funded	$7,282,500	Daviess	9	1
SX21059026	Woodlands South Sewer Extension	0-2 Years	Not Funded	$515,000	Daviess	10	2
SX21149023	Sacramento Gravity Sewer Project, Phase II	0-2 Years	Not Funded	$940,000	McLean	11	1
SX21059045	Hayden Road and Pleasant Valley Road Area Subdivisions	0-2 Years	Not Funded	$1,425,000	Daviess	12	3
SX21059039	Pleasant View Estates Sewer Expansion	0-2 Years	Not Funded	$540,000	Daviess	13	4
SX21101015	Happy Acres Sewer Service Extension	11-20 Years	Not Funded	$2,000,000	Henderson	14	1
SX21101018	Graham Hill Sewer Extensions	3-5 Years	Not Funded	$3,150,000	Henderson	15	2
SX21101016	Grantwood Sewer Service Extension	6-10 Years	Not Funded	$1,000,000	Henderson	16	4
SX21059046	Airport/Bittel Road Area Subdivisions	0-2 Years	Not Funded	$572,500	Daviess	17	5
SX21101014	Holloway Hills Sewer Extension	6-10 Years	Not Funded	$600,000	Henderson	18	3
SX21101009	Broadview Sewer Line Extension	11-20 Years	Not Funded	$600,000	Henderson	19	5
SX21149031	Calhoun Wastewater Plant Replacement Project	3-5 Years	Not Funded	$2,480,000	McLean	20	2
SX21149028	Sacramento Phase III Gravity Sewer Project	6-10 Years	Not Funded	$375,000	McLean	21	3
SX21149029	Sacramento Phase IV Gravity Sewer Project	11-20 Years	Not Funded	$1,147,500	McLean	22	4
SX21183002	North 231 Sewer Extension Project	0-2 Years	Not Funded	$700,000	Ohio	23	3
SX21091014	Hawesville Lift Station Rehabilitation	6-10 Years	Not Funded	$100,000	Hancock	24	2
SX21091013	Highway 60 East Economic Development	3-5 Years	Not Funded	$500,000	Hancock	25	3
SX21225015	Uniontown Lift Station Rebuilds	6-10 Years	Not Funded	$1,000,000	Union	26	3
SX21225006	Camp Breckenridge Sewer Rehab	0-2 Years	Not Funded	$3,552,800	Union	27	4
SX21149002	Livermore Sewer Line Extensions	6-10 Years	Not Funded	$1,500,000	McLean	28	5
SX21233001	Webster County Sanitation Expansion Project	6-10 Years	Not Funded	$4,615,000	Webster	29	4
SX21091012	Hawesville Generator Project	6-10 Years	Not Funded	$75,000	Hancock	30	4
SX21233024	Sebree Highway 370 Sewer Line Extension	6-10 Years	Not Funded	$941,500	Webster	31	5
SX21225025	Winn Addition Sewer Expansion	0-2 Years	Not Funded	$1,883,300	Union	32	5
SX21091017	Lewisport Manhole Inspection and Relining Project	11-20 Years	Not Funded	$120,000	Hancock	33	5
SX21183007	Centertown Sewer Clean Out Machine Purchase Project	0-2 Years	Not Funded	$50,000	Ohio	34	5
SX21183013	Beaver Dam Sewer Rehab Debt Payoff	3-5 Years	Not Funded	$580,000	Ohio	35	4

Total Cost:	**$53,680,362**			

Gateway Area Development District (GWADD)

- 2010 census population of 81,652 (36,780 households) with 41% serviceable.
- Projected 2020 population of 87,651 (change of 5,999).
- 355.85 miles of existing sewer lines.
- 23.00 miles of line extensions proposed in the next 10 years.
- 6.00 miles of line rehabilitation proposed in the next 10 years.
- There are no interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $17,741,914.
- Estimated funding needs for projects from 6 to 10 years: $1,695,089.
- Average age of wastewater treatment plants is 23 years.
- Total number of interconnected systems is 0.
- 63 miles of sewer lines less than 15 years old.
- 204 miles of sewer lines between 15 and 30 years old.
- 70 miles of sewer lines between 31 and 50 years old.
- 22 miles of sewer lines between 51 and 70 years old.
- 0 miles of sewer lines greater than 70 years old.



Gateway Area Development District has a 2010 census population count of 81,652 (36,780 households) with a projected 2020 population count of 87,651 (34,583 households). Public sewer is currently available to approximately 41 percent of the district's households based on 2010 census counts. Over the next ten years approximately 388 serviceable households will be added through the construction of 23.00 miles of sewer line extensions and approximately 42,550 instances of improved service through the rehabilitation of 6.00 miles of existing sewer lines and other appurtenances.

County Summary for Gateway Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Bath	11,591	5,405	12,132	5,006	1,758	33%	$ 6,196,164
Menifee	6,306	3,744	6,038	2,422	572	15%	$ 5,265,250
Montgomery	26,499	11,699	30,750	12,483	6,271	54%	$ 3,225,589
Morgan	13,923	5,830	14,023	5,126	850	15%	$ 750,000
Rowan	23,333	10,102	24,708	9,546	5,748	57%	$ 4,000,000
Totals	**81,652**	**36,780**	**87,651**	**34,583**	**15,199**	**41%**	**$ 19,437,003**

Public Sewer Systems in the Gateway Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KIA011001	Bath County Sanitation District	Bath	153	72
KY0024287	Owingsville Water and Sewer	Bath	1,995	992
KY0088421	Sharpsburg Sewer	Bath	392	229
KY0040584	Frenchburg Water and Sewer	Menifee	719	387
KY0100901	Menifee County Sanitation District # 1	Menifee	420	177
KY0069736	Montgomery County Sanitation Dist #2	Montgomery	1,767	791
KY0104400	Mount Sterling Water and Sewer System	Montgomery	11,882	5,480
KY0089567	West Liberty Sewer	Morgan	3,566	850
KY0052752	Morehead Utility Plant Board	Rowan	15,139	6,259
		Totals:	36,033	15,237

Gateway Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

There are nine wastewater systems that serve Gateway Area Development District. Each wastewater utility in the Gateway ADD was provided with the opportunity to identify the needs for the system. The needs of every system were considered in the determination of the Gateway Area Development District's primary and secondary Clean Water needs.

The District's primary Clean Water need is Repair/Replace Existing Infrastructure. This was the primary need of every planning unit in the Gateway ADD with the exception of the Menifee County Planning Unit. The wastewater systems in the region have identified this as a Clean Water need for a variety of reasons. Some areas of the region's sewer infrastructure have been damaged as a result of severe weather events, some portions of the aging infrastructure need to be replaced to prevent pipe bursts, and other portions of the existing infrastructure need to be replaced because the current lines, lift stations, etc. are at/near capacity.

Extend Services to Unserved Areas is the secondary Clean Water need in the Gateway Area Development District. This was identified as the secondary need in three of the planning units and mentioned as an additional need in a forth planning unit. While urbanized areas and the larger communities in the Gateway Area Development District have sewer infrastructure, there are large portions of the region that do not. Over 60% of the region's population is not served by a wastewater system.

Additional needs that were identified for the region are Economic Stimulation for areas that cannot currently support potential industrial development. New Collector Sewer and Appurtenances and Sanitary Sewer Overflow Correction were also identified by some of the planning units and individual systems as Clean Water needs in the District.

Description and Determination of Planning Units:

The Gateway Area Development District is divided into five planning units which are: Bath County, Menifee County, Montgomery County, Morgan County, and Rowan County. These planning units follow the political county boundaries.

There are three wastewater systems in Bath County. Two of the systems in the Bath County Planning Unit are municipalities (City of Owingsville Water and Sewer and City of Sharpsburg Sewer) and the other is a sanitation district (Bath County Sanitation District). The systems in the Bath County Planning Unit have combined connection count of 939 total connections (residential, commercial, industrial, etc.).

The Menifee County Planning Unit has two systems; one municipality (City of Frenchburg Water and Sewer) and one sanitation district (Menifee County Sanitation District #1). The systems in the Menifee County Planning Unit have combined connection count of 368 total connections (residential, commercial, industrial, etc.).

The Montgomery County Planning Unit also has two systems; one municipality (Mt. Sterling Water and Sewer) and one sanitation district (Montgomery County Sanitation District #2). The systems in the Montgomery County Planning Unit have combined connection count of 5,652 total connections (residential, commercial, industrial, etc.).

The Morgan and Rowan County Planning Units each have one municipal wastewater system (Morgan County - City of West Liberty Water and Sewer; Rowan County - Morehead Utility Plant Board). Morgan County's total connection count is 566 (residential, commercial, industrial, etc.). Rowan County's total connection count is 5,181 (residential, commercial, industrial, etc.)

Gateway Area Development District
Project Ranking Methodology

The Gateway Area Water Management Council prioritizes projects based on points. Points are given under the following categories: Project Impact and Project Status.

Project Impact

Under this category, points are awarded based on the regional needs met by the project, the scope of impact, and the delivery of the project. Regional needs are based on the Regional Needs Assessment and projects are warded points based upon which regional need is met. Each regional need has a point value established by the Water Management Council. The scope of impact includes the impact of the project to un-served households, underserved households, and economic stimulation. Un-served households are homes that currently do not have public water/wastewater service available to them. Underserved households are homes that have public water/wastewater service, but the completion of the proposed project will improve service and/or quality to said areas in the utility's system. Points are allocated to the economic stimulation group based on the number of jobs the completed project will create. The more households and jobs that a project affects/creates, the more points the project is given. Projects that have more than one scope can receive an additional 5 points and other unlisted project scopes can receive 5 points - maximum points possible for project scope is 20 points. Project Delivery is allotted 20 points for a regional project and 5 points for a non-regional project. A regional project affects more than one utility.

Project Status

Under this category, points are awarded based on project development, commitment of funds, project timeline, and funding type. For project development, projects are given 5 points for preliminary planning, 10 points for attaining a cost estimate from a project engineer or for procuring an engineer for the project, 15 points if a preliminary engineering report is completed, or 20 points if engineering plans and specs have been completed and submitted to Division of Water. The maximum value of point awarded for commitment of funds is 20 points for projects with more than 50% of the total project cost committed - projects with 25-49% of project funds receive 10 points and projects with less than 25% of project funds committed or with pending applications receive 5 points. Projects with a timeline that is more than 10 years receive 5 points, project scheduled for 6-10 years receive 10 points, and project that will take place in 5 years or less receive 20 points. Finally, projects are awarded points based on the type of anticipated funding - projects that will utilize 100% loan funding receive 20 points, projects that will utilize both loan and grant funding receive 10 points, and projects that will only utilize grant funds receive 5 points.

The category totals are added together for a maximum of 140 points possible. The higher the cumulative total, the higher the project is ranked. For projects with the same overall point total, a cost per connection tie breaker is utilized. The cost per connection tie breaker is calculated using the estimated project cost divided by the total number of households the project will affect. The lower the cost per connection, the higher ranking the project receives.

All profiled projects that are submitted to the Water Management Council are prioritized and receive both a county and regional ranking. The prioritization of the projects is based on the points allocated during the ranking process.

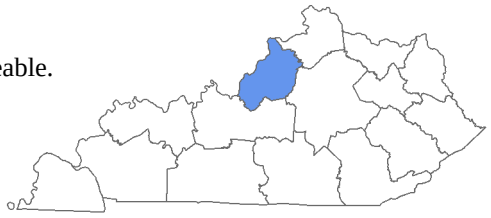
Project Rankings For Gateway Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21175013	City of West Liberty Liberty Road Sewer Extension	3-5 Years	Over Funded	$3,257,940	Morgan	1	1
SX21011022	Industrial Park WWTP Expansion	0-2 Years	Not Funded	$2,605,780	Bath	2	1
SX21205033	Morehead Utility Plant Board Phase 5 Inflow and Infiltration Sew	3-5 Years	Not Funded	$500,000	Rowan	3	1
SX21205029	Sunnybrook Development Sewer Line Extension	3-5 Years	Not Funded	$1,000,000	Rowan	4	2
SX21205035	Morehead Utility Plant Board 519 Sewer Extension	3-5 Years	Not Funded	$500,000	Rowan	5	3
SX21011002	City of Owingsville Lagoon System Cleaning Project	3-5 Years	Not Funded	$700,000	Bath	6	2
SX21165015	City of Frenchburg Bryant Lane/Shotgun Hollow Sewer Line Extension Project	3-5 Years	Not Funded	$650,250	Menifee	7	1
SX21205036	KY 801 and KY 158 Sewer Extension Project	3-5 Years	Not Funded	$1,500,000	Rowan	8	4
SX21011017	City of Owingsville KY 36 North Sewer Extension	3-5 Years	Not Funded	$563,284	Bath	9	3
SX21165007	City of Frenchburg McCausey/Amos Ridge Extension Project	3-5 Years	Not Funded	$4,000,000	Menifee	10	2
SX21205037	Morehead Utility Plant Board Administrative Software Upgrade	3-5 Years	Not Funded	$250,000	Rowan	11	5
SX21165019	City of Frenchburg Tolan Road Sewer Extension Project	11-20 Years	Not Funded	$92,560	Menifee	12	9
SX21011015	City of Owingsville Wyoming Road Sewer Line Extension	3-5 Years	Not Funded	$225,000	Bath	13	8
SX21011007	City of Sharpsburg Oaklawn Line Extension Project	3-5 Years	Not Funded	$882,100	Bath	14	4
SX21165020	City of Frenchburg Miscellaneous Sewer Extension Project	3-5 Years	Not Funded	$455,000	Menifee	15	4
SX21173027	Mount Sterling Water and Sewer SCADA System Replacement Project	3-5 Years	Not Funded	$45,000	Montgomery	16	1
SX21173066	Montgomery County Sanitation Dist #2 Boom and Clarifier Weirs Replacement Project	3-5 Years	Not Funded	$75,000	Montgomery	17	2
SX21173033	Montgomery County Sanitation District No. 2 Head Works Screen Pr	3-5 Years	Not Funded	$200,000	Montgomery	18	3
SX21173034	Montgomery County Sanitation District No. 2 Pump Station Upgrade	3-5 Years	Not Funded	$510,000	Montgomery	19	4
SX21205031	MUPB Residential Grinder Replacement Project	3-5 Years	Not Funded	$250,000	Rowan	20	6
SX21175010	City of West Liberty System Sewer Line Replacement Project	6-10 Years	Not Funded	$750,000	Morgan	21	2
SX21011018	Bath County Sanitation District Preston Sewer Project Phase II	3-5 Years	Not Funded	$470,000	Bath	22	5
SX21173063	Montgomery County Sanitation District No. 2 Sludge Holding Tank	6-10 Years	Not Funded	$170,089	Montgomery	23	5
SX21173024	Montgomery County Sanitation District No. 2 Pump Station No. 5 P	3-5 Years	Not Funded	$267,000	Montgomery	24	6
SX21173010	Montgomery Co. Sanitation Dist.#2 Pump Station and Line Upgrade	3-5 Years	Not Funded	$464,000	Montgomery	25	7
SX21011016	City of Owingsville Slate Avenue Pipe Bursting Project	3-5 Years	Not Funded	$590,000	Bath	26	6
SX21165017	Menifee County Sanitation District No. 1 Equalization Basin	11-20 Years	Not Funded	$750,000	Menifee	27	5
SX21011020	City of Owingsville Sewer Extension to Remaining Unserved In Cit	3-5 Years	Not Funded	$100,000	Bath	28	7
SX21173023	Mt. Sterling Water & Sewer Long Wood Tie In Project	3-5 Years	Not Funded	$275,000	Montgomery	29	8
SX21173014	Mt. Sterling Water & Sewer System Manhole Rehab Project	11-20 Years	Not Funded	$625,000	Montgomery	30	9
SX21173049	Mt. Sterling Water & Sewer Woodford Drive Lift Station Upgrade P	6-10 Years	Not Funded	$100,000	Montgomery	31	10
SX21173051	Mt. Sterling Water & Sewer Doe Run Lift Station Upgrade	3-5 Years	Not Funded	$85,000	Montgomery	33	11

Project Rankings For Gateway Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21173052	Mt. Sterling Water & Sewer Spencer Road Lift Station Upgrade	3-5 Years	Not Funded	$85,000	Montgomery	34	12
SX21173053	Mt. Sterling Water & Sewer Alliance Acres Lift Station Upgrade	3-5 Years	Not Funded	$85,000	Montgomery	35	13
SX21173054	Mt. Sterling Water & Sewer LMS Pump Station Elimination	3-5 Years	Not Funded	$100,000	Montgomery	36	14
SX21173017	Mt. Sterling Water & Sewer Portable Diesel Pump Project	3-5 Years	Not Funded	$75,000	Montgomery	37	15
SX21173046	Montgomery County Sanitation District Upgrade Chlorine Room At W	0-2 Years	Not Funded	$14,500	Montgomery	38	16
SX21173048	Montgomery County Sanitation District No. 2 Phosphate Reduction	3-5 Years	Not Funded	$100,000	Montgomery	39	17
SX21173055	Mt. Sterling Water & Sewer I&I Study and Repair Project	11-20 Years	Not Funded	$1,000,000	Montgomery	40	18
SX21165021	City of Frenchburg I & I Analysis Project	3-5 Years	Not Funded	$60,000	Menifee	41	6
SX21173050	Mt. Sterling Water & Sewer Arlington Avenue Lift Station Upgrade	6-10 Years	Not Funded	$175,000	Montgomery	42	29
SX21173056	Mt. Sterling Water & Sewer System Mapping Project	6-10 Years	Not Funded	$225,000	Montgomery	43	20
SX21173015	Mt. Sterling Water & Sewer Eastland Heights Lift Station Upgrade	6-10 Years	Not Funded	$75,000	Montgomery	44	21
SX21011019	Bath County Sanitation District Valve and Riser Lid Replacement	0-2 Years	Not Funded	$60,000	Bath	45	9
SX21173062	Montgomery County Sanitation District No. 2 Combo Vac Truck Proj	6-10 Years	Not Funded	$100,000	Montgomery	46	22
SX21165014	Menifee County Sanitation District System Improvement Project Phase 2	6-10 Years	Not Funded	$100,000	Menifee	47	7
			Total Cost:	**$25,162,503**			

Kentuckiana Regional Planning and Development Agency (KIPDA)



- 2010 census population of 959,091 (421,502 households) with 88% serviceable.
- Projected 2020 population of 1,058,343 (change of 99,252).
- 7,325.73 miles of existing sewer lines.
- 24.00 miles of line extensions proposed in the next 10 years.
- 11.00 miles of line rehabilitation proposed in the next 10 years.
- 18.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $146,791,437.
- Estimated funding needs for projects from 6 to 10 years: $21,225,601.
- Average age of wastewater treatment plants is 35 years.
- Total number of interconnected systems is 1.
- 592 miles of sewer lines less than 15 years old.
- 1,136 miles of sewer lines between 15 and 30 years old.
- 1,022 miles of sewer lines between 31 and 50 years old.
- 664 miles of sewer lines between 51 and 70 years old.
- 511 miles of sewer lines greater than 70 years old.

Kentuckiana Regional Planning and Development Agency has a 2010 census population count of 959,091 (421,502 households) with a projected 2020 population count of 1,058,343 (437,016 households). Public sewer is currently available to approximately 88 percent of the district's households based on 2010 census counts. Over the next ten years approximately 1,543 serviceable households will be added through the construction of 24.00 miles of sewer line extensions and approximately 6,830 instances of improved service through the rehabilitation of 11.00 miles of existing sewer lines and other appurtenances. 18.00 miles of interceptor lines are also proposed within this district.

County Summary for Kentuckiana Regional Planning and Development Agency

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Bullitt	74,319	29,318	88,508	34,970	15,818	54%	$ 27,299,890
Henry	15,416	6,640	15,915	6,405	2,357	36%	$ 6,229,905
Jefferson	741,096	337,616	793,817	336,744	330,563	98%	$ 54,691,277
Oldham	60,316	20,688	74,990	26,354	10,878	53%	$ 68,297,903
Shelby	42,074	16,606	51,944	19,663	8,598	52%	$ 8,168,063
Spencer	17,061	6,704	23,655	9,025	667	10%	$ 1,650,000
Trimble	8,809	3,930	9,514	3,855	948	24%	$ 1,680,000
Totals	**959,091**	**421,502**	**1,058,343**	**437,016**	**369,829**	**88%**	**$ 168,017,038**

Public Sewer Systems in the Kentuckiana Regional Planning and Development Agency

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0034169	Bullitt County Sanitation District - BCSD Hillview #2	Bullitt	2,444	905
KY0034177	Bullitt County Sanitation District - BCSD Hillview #3	Bullitt	1,210	449
KY0034801	Bullitt County Sanitation District - Bullitt Hills Subdivision	Bullitt	3,482	1,402
KY0034185	Bullitt County Sanitation District - Pioneer Village Sewer Plt #1	Bullitt	2,558	1,015
KY0094307	Bullitt County Sanitation District - Willabrook Sanitation	Bullitt	481	200
KY0104043	Lebanon Junction Wastewater	Bullitt	1,620	705
KY0033804	Mount Washington Water & Sewer Company	Bullitt	14,760	5,904
KY0027359	Shepherdsville Sewer	Bullitt	12,778	5,078
KY0026883	Eminence Wastewater	Henry	2,551	1,103
KY0031828	New Castle Wastewater	Henry	1,101	505
KYP000036	Pleasureville	Henry	966	427
KY0039021	Louisville & Jefferson County MSD - Bancroft	Jefferson	573	229
KY0036501	Louisville & Jefferson County MSD - Berrytown	Jefferson	855	317
KY0098540	Louisville & Jefferson County MSD - Cedar Creek	Jefferson	30,662	12,513
KY0029459	Louisville & Jefferson County MSD - Chenoweth Hills	Jefferson	2,138	741
KY0078956	Louisville & Jefferson County MSD - Derek R Guthrie	Jefferson	203,270	86,282
KY0102784	Louisville & Jefferson County MSD - Floyds Fork	Jefferson	21,771	8,774
KY0044261	Louisville & Jefferson County MSD - Glenview Bluff	Jefferson	37	19
KY0022420	Louisville & Jefferson County MSD - Hite Creek	Jefferson	28,073	11,719
KY0029106	Louisville & Jefferson County MSD - Hunting Creek North	Jefferson	2,501	995
KY0029114	Louisville & Jefferson County MSD - Hunting Creek South	Jefferson	1,589	722
KY0025194	Louisville & Jefferson County MSD - Jeffersontown	Jefferson	20,475	8,639
KY0022497	Louisville & Jefferson County MSD - Ken Carla	Jefferson	86	45
KY0029416	Louisville & Jefferson County MSD - McNeely Lake	Jefferson	1,593	667
KY0022411	Louisville & Jefferson County MSD - Morris Forman	Jefferson	410,354	198,039
KY0031810	Louisville & Jefferson County MSD - Shadow Wood Subdivision	Jefferson	336	217
KY0028801	Louisville & Jefferson County MSD - Silver Heights	Jefferson	2,285	978
KY0031712	Louisville & Jefferson County MSD - Starview	Jefferson	705	374
KY0043087	Louisville & Jefferson County MSD - Timberlake	Jefferson	1,104	503
KY0020001	Lagrange Utilities Commission	Oldham	7,966	3,169
KY0024724	Oldham County Environmental Authority - Ash Avenue	Oldham	1,362	434
KY0103110	Oldham County Environmental Authority - Buckner	Oldham	3,150	668
KY0060577	Oldham County Environmental Authority - Country Village	Oldham	544	207
KY0039870	Oldham County Environmental Authority - Lakewood Valley STP	Oldham	785	278
KY0054674	Oldham County Environmental Authority - Lockwood Estates Subdivision	Oldham	299	112
KY0076813	Oldham County Environmental Authority - Mockingbird Valley	Oldham	140	43
KY0106143	Oldham County Environmental Authority - Ohio River	Oldham	7,924	2,685
KY0033821	Oldham County Environmental Authority - Orchard Grass	Oldham	2,894	977
KY0046264	Oldham County Environmental Authority - Willow Creek	Oldham	749	301
KY0078026	Oldham Woods Subdivision	Oldham	143	52
KY0020427	Shelbyville Municipal Water & Sewer Commission	Shelby	18,714	7,506
KY0065889	Simpsonville Wastewater	Shelby	2,644	1,057
KY0028142	Taylorsville Wastewater	Spencer	1,395	647
KY0069825	Bedford Wastewater	Trimble	983	431
KY0088625	Milton Wastewater	Trimble	1,055	517
		Totals:	823,105	368,550

Kentuckiana Regional Planning and Development Agency
Regional Wastewater Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

The KIPDA Regional Water Council through discussion recognizes that planning needs in the region are constantly changing. What may be viewed as the primary need in the near future could differ from what is viewed as the primary need in the present. All of the listed options are viewed as necessities throughout the region and many are viewed to be intertwined with none being mutually exclusive. With these thoughts in consideration, the KIPDA Regional Water Management Council identified the Repair and Replacement of Existing Infrastructure as its primary planning need. This planning need is tied to Economic Stimulation, meeting Regulatory Requirements, and the consolidation of Package Treatment Plants.

With a few exceptions, utilities upgrade existing infrastructure when it is replaced. The increased capabilities from these upgrades enable systems to meet demands and provide improved services to areas which leads to economic stimulation. These upgrades could be in the form of increased size in line replacements to increased treatment and pumping capacity. The ability to provide service drives economic stimulation and the Council realizes that upgrading existing infrastructure is essential to meeting future needs.

Regulatory requirements are often met through the repair and replacement of existing infrastructure. An example from several priority projects in the region includes the identification of of problematic areas within the system and manhole rehabilitation, these projects will address I/I issues and compliance with regulatory requirements. Further examples include expanding treatment capacities to comply with Agreed Orders and construction of chlorine capacity tanks at WWTPs to meet future compliance.

Consolidation in the form of the elimination of package treatment plants was another factor discussed in relation to the repair and replacement of existing infrastructure; especially in Bullitt and Oldham counties. Oldham County is currently in the process of taking five PTPs offline while failing package treatment plants have presented themselves as an issue in Bullitt County. Their elimination will be an improvement of service to customers and to environmental quality in the area. This also relates to what the Council views as the secondary need within the region.

Extending Service to Unserved Areas is viewed by the Council as the secondary need within the region. The caveat in place was the extension of service be to already developed areas. As with the elimination of failing package treatment plants, the benefits of taking customers off septic systems will be realized in the form of improvement to public health, the environment, and water sources in the area.

Description and Determination of Planning Units:

Further, the Council designated the seven (7) water management areas in the KIPDA region to be defined by county boundaries.

1. Bullitt County Wastewater Management Planning Area
• Bullitt County Sanitation District
• Lebanon Junction, City of
• Mount Washington Water and Sewer Company
• Shepherdsville, City of

2. Henry County Wastewater Management Planning Area
• Eminence, City of
• New Castle, City of
• Pleasureville, City of

3. Jefferson County Water Management Planning Area
• Louisville & Jefferson County MSD

4. Oldham County Water Management Planning Area
• Lagrange Utilities Commission
• Oldham County Environmental Authority

5. Shelby County Water Management Planning Area
• Shelbyville Municipal Water and Sewer Commission
• Simpsonville, City of

6. Spencer County Water Management Planning Area
• Taylorsville, City of

7. Trimble County Water Management Planning Area
  • Bedford, City of
  • Milton, City of

Kentuckiana Regional Planning and Development Agency
Project Ranking Methodology

he KIPDA Regional Water Management Council prioritizes projects using local input and an established priority ranking scoresheet.

Before projects are brought before the KIPDA Regional Water Management Council to be prioritized, they are ranked at the County level. The County Water Management Councils consist of utility representatives and local elected officials. Projects are ranked based on perceived importance within the county.

To bring continuity and fairness throughout the region, the KIPDA Regional Water Management Council requires all projects that are to be considered for Regional Prioritization to complete a Priority Ranking Scoresheet. The methodology for the scoresheet was established in 2007 by a group of Area Development Water Management Coordinators along with KIA staff. This is no longer required for all water and wastewater projects requesting State funding, but the KIPDA Council choice to continue using this method due to past success.

The scoresheet provides for a maximum of 100 points to be assigned to each project depending on how it scores according to the following criteria:

Type of Project (20 point Maximum)

For unserved and underserved projects, households served are the basis for the priority scoring while jobs created are the consideration for economic development projects. Feasibility studies and other projects that don't involve unserved, underserved, commercial, or industrial development are assigned a specified score.

Project Delivery (20 point Maximum)

Projects are scored on whether they are Regional or Non-Regional. For this purpose, regional is defined as projects involving two or more systems that, through shared or consolidated resources, improve services to consumers and achieve economy of scale.

Project Status (20 point Maximum)

Projects are scored based on their status relative to the planning process, the status of the development of engineering plans and specifications, and the detail of the data used to develop the estimated cost of the project. Projects that are further along in the process will receive a higher priority score.

Funding Status (20 point Maximum)

The projects are categorized based on their status relative its size and the funding needed to execute. Projects that are further along in the funding process will receive a higher priority as indicated below.

Local Importance (20 point Maximum)

The projects are assigned priority points based on their importance to the county as determined by consensus during the County Water Management Councils.

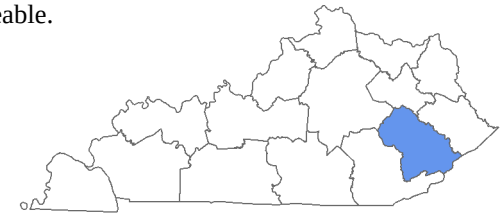
With the intention of each county having equal representation on the priority ranking list, the top projects from each county are ranked against each other according to their priority ranking score. This method is continued for the second, third, fourth, etc projects until all submitted projects receive a ranking.

Project Rankings For Kentuckiana Regional Planning and Development Agency

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21211017	Shelby County Cooperative Extension Office	0-2 Years	Not Funded	$469,263	Shelby	1	1
SX21185010	I-71 Interceptor Sewer Replacement	3-5 Years	Not Funded	$694,000	Oldham	2	1
SX21103011	Pleasureville Wastewater Capacity Upgrade	3-5 Years	Not Funded	$150,000	Henry	3	1
SX21029029	Shepherdsville-Blue Lick Stormwater Project	3-5 Years	Not Funded	$1,996,250	Bullitt	4	1
SX21223008	Pump Station Rehabilitation	3-5 Years	Not Funded	$125,000	Trimble	5	1
SX21111101	Hite Creek WTP Expansion	3-5 Years	Not Funded	$14,389,777	Jefferson	6	1
SX21185011	South Pump Station	3-5 Years	Not Funded	$688,000	Oldham	7	2
SX21211008	Eminence Pike Gravity Sewers	3-5 Years	Not Funded	$2,380,000	Shelby	8	2
SX21223011	City of Milton - I/I Mitigation	3-5 Years	Not Funded	$350,000	Trimble	9	2
SX21103014	I-71 Exit 34 Sewer Extension	0-2 Years	Not Funded	$303,479	Henry	10	2
SX21029002	Shepherdsville Sewer Rehab	3-5 Years	Not Funded	$500,000	Bullitt	11	2
SX21029015	Willabrook Wastewater Treatment Plant Expansion	3-5 Years	Partially Funded	$3,000,000	Bullitt	12	3
SX21185005	Madison Street Lift Station Upgrade	3-5 Years	Not Funded	$306,500	Oldham	13	3
SX21223010	Collection System Improvements & I/I Mitigation	6-10 Years	Not Funded	$370,000	Trimble	14	3
SX21211014	Fast Action Response & Management (Farm) Project	3-5 Years	Not Funded	$336,000	Shelby	15	3
SX21185053	Orchard Grass Regional WWTP Phase 3	3-5 Years	Not Funded	$6,300,000	Oldham	16	4
SX21223012	City of Milton Main Trunk Sewers Cleaning, Televising and Repair	6-10 Years	Not Funded	$625,000	Trimble	17	4
SX21185032	Kentucky State Reformatory - Rehab Phase I	3-5 Years	Not Funded	$2,718,080	Oldham	18	5
SX21185051	OCEA Lift Station Rehab, Renovation, and Replacement	3-5 Years	Not Funded	$2,005,000	Oldham	19	6
			Total Cost:	**$37,706,349**			

Kentucky River Area Development District (KRADD)

- 2010 census population of 114,762 (52,786 households) with 22% serviceable.
- Projected 2020 population of 111,267 (change of -3,495).
- 270.00 miles of existing sewer lines.
- 117.00 miles of line extensions proposed in the next 10 years.
- 8.00 miles of line rehabilitation proposed in the next 10 years.
- There are no interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $60,088,494.
- Estimated funding needs for projects from 6 to 10 years: $7,372,000.
- Average age of wastewater treatment plants is 24 years.
- Total number of interconnected systems is 1.
- 103 miles of sewer lines less than 15 years old.
- 53 miles of sewer lines between 15 and 30 years old.
- 101 miles of sewer lines between 31 and 50 years old.
- 1 miles of sewer lines between 51 and 70 years old.
- 0 miles of sewer lines greater than 70 years old.



Kentucky River Area Development District has a 2010 census population count of 114,762 (52,786 households) with a projected 2020 population count of 111,267 (45,823 households). Public sewer is currently available to approximately 22 percent of the district's households based on 2010 census counts. Over the next ten years approximately 2,296 serviceable households will be added through the construction of 117.00 miles of sewer line extensions and approximately 9,618 instances of improved service through the rehabilitation of 8.00 miles of existing sewer lines and other appurtenances.

County Summary for Kentucky River Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Breathitt	13,878	6,231	12,495	5,046	1,401	23%	$ 5,090,650
Knott	16,346	7,461	15,635	6,332	885	12%	$ 11,909,005
Lee	7,887	3,436	7,820	3,014	973	28%	$ 8,575,000
Leslie	11,310	5,278	10,603	4,377	664	13%	$ 6,535,633
Letcher	24,519	11,601	24,237	10,161	3,303	29%	$ 11,456,800
Owsley	4,755	2,328	4,704	1,971	411	18%	$ 5,271,364
Perry	28,712	12,791	28,137	11,637	3,780	30%	$ 17,395,042
Wolfe	7,355	3,660	7,636	3,285	365	10%	$ 1,227,000
Totals	**114,762**	**52,786**	**111,267**	**45,823**	**11,782**	**22%**	**$ 67,460,494**

Public Sewer Systems in the Kentucky River Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0021288	Jackson Wastewater	Breathitt	2,960	1,401
KY0027685	Hindman Wastewater	Knott	1,301	618
KY0042854	Knott County Water and Sewer District	Knott	548	107
KY0107956	Troublesome Creek Environmental Authority (Ball Creek)	Knott	264	121
KY0021121	Beattyville Wastewater	Lee	2,649	973
KY0021245	Hyden Wastewater Department	Leslie	1,430	664
KY0027405	Fleming-Neon Wastewater	Letcher	2,554	1,275
KY0038571	Jenkins Wastewater	Letcher	1,878	897
KY0103217	Letcher County Water & Sewer District - Millstone	Letcher	92	39
KY0106283	Whitesburg Wastewater	Letcher	2,355	1,092
KY0033774	Booneville Water and Sewer	Owsley	870	411
KY0020079	Hazard Wastewater	Perry	6,840	3,180
KYP000034	Perry County Sanitation District #1	Perry	961	440
KY0060259	Vicco Wastewater	Perry	427	191
KY0104728	Campton Wastewater Department	Wolfe	712	365
		Totals:	25,841	11,774

Kentucky River Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Extend Services to Unserved Areas**
Secondary Need: **Repair and Replace Existing Infrastructure**

Discussion of Area Development District Needs:

The majority of the area is now beginning to turn to wastewater service extensions as the past has mostly been focused on providing reliable and safe potable water to the residents. The majority of our counties are now reaching 80% served with potable water and some have even achieved 95-98% served. Our entities are now looking to improve the water quality and the environment by providing a reliable means of wastewater removal which will improve the streams that empty into the rivers most use for their water source. Many residents in the area rely on failing septic systems or straight pipes for their wastewater removal needs.

Those utilities who have provided wastewater removal services for the area, have done so for many years and are now facing aging infrastructure that is in constant need of repair and/or replacement. Many of the lines are constantly breaking and the lift stations are failing which creates the potential for contamination. Wastewater concerns are focused on replacement of degraded lines, rehabilitation of lift stations and plants and when rehabilitation of the plants is not feasible construction of new ones.

Description and Determination of Planning Units:

The Kentucky River Area Water Management Council reviewed the wastewater systems and their service areas located within the Kentucky River Area Development District. The Council designated the Kentucky River Area Development District boundary as the regional management area. Within the Kentucky River Region, the following wastewater systems and their respective wastewater management planning areas were designated by the Council:

Kentucky River Area Water Management Planning Areas

1. Breathitt County Wastewater Management Planning Area
a) Breathitt County Water District (Planning to provide wastewater service in near future)
b) Jackson Wastewater
c) Troublesome Creek Environmental Authority (stand alone plant)

2. Knott County Wastewater Management Planning Area
a) Hindman Wastewater
b) Knott Co. Water and Sewer District
c) Troublesome Creek Environmental Authority (stand alone plant)

3. Lee County Wastewater Management Planning Area
a) Beattyville Wastewater

4. Leslie County Wastewater Management Planning Area
a) Hyden Wastewater Department

5. Letcher County Wastewater Management Planning Area
a) Fleming-Neon Wastewater
b) Jenkins Wastewater
c) Letcher County Water and Sewer District
d) Whitesburg Wastewater

6. Owsley County Wastewater Management Planning Area
a) Booneville Water and Sewer

7. Perry County Wastewater Management Planning Area
a) Hazard Wastewater
b) Vicco Wastewater
c) Perry County Sanitation District #1
d) Troublesome Creek Environmental Authority

8. Wolfe County Wastewater Management Planning Area
a) Campton Wastewater

Kentucky River Area Development District
Project Ranking Methodology

The KRADD Water Management Council meets once a year to prioritize projects in our area. Our area's utility managers and chief executives begin the ranking by first reviewing the previous year's prioritization and then pair off by county to discuss their current projects. Each county is given a list of the profiles they have in the WRIS and then they rank their basic needs during this portion of the meeting.

Once the counties rank their projects the Council then begins the process of prioritizing the projects that are of the most concern for the region. The council first discusses everyone's top ranked county project. This discussion is based on service population, violations the entity has received, current funding, whether the project is for new or existing customers and the overall community need. Following this discussion the council then begins the process of selecting the top regional projects based on the information presented. The county with the most critical overall need is the first ranked and then the other counties follow suit.

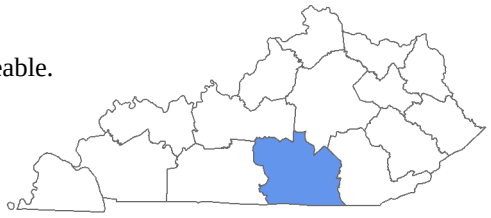
The Kentucky River region's main concerns for water projects are those that address establishing new water service to areas that currently rely on failing or contaminated wells and areas that must haul water. The region is also faced with major rehab as most systems have lines that have been in place for 40+ years as well as rehabilitation of existing plants and in cases where rehab is to expensive then the construction of new plants.

Wastewater concerns are focused on rehabilitation of lift stations and plants and when rehabilitation of the plants is not feasible construction of new ones. The majority of the area is now beginning to turn to wastewater service extensions as the past has mostly been focused on providing reliable and safe potable water to the residents. The majority of our counties are now reaching 80% served and some have even achieved 95-98% served. Our entities are now looking to improve the water quality and the environment by providing a reliable means of wastewater removal which will improve the streams that empty into the rivers most utilize for their water source.

Project Rankings For Kentucky River Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21025007	Wal-Mart Area Sewer Project	3-5 Years	Not Funded	$510,000	Breathitt	1	1
SX21119811	TEA - Ball Creek Wastewater Lines Phase II	0-2 Years	Partially Funded	$2,684,850	Knott	2	1
SX21129003	West Beattyville Sewer Pump Station Project	0-2 Years	Not Funded	$575,000	Lee	3	1
SX21131211	Hyden - Wooton Sewer Plant Project	6-10 Years	Not Funded	$4,200,000	Leslie	4	1
SX21133009	Crafts Colley Sanitary Sewer Project - Phase 1	0-2 Years	Partially Funded	$1,099,800	Letcher	5	1
SX21189005	Booneville I/I Replacement Project	3-5 Years	Not Funded	$1,526,000	Owsley	6	1
SX21193008	PCSD#1 - Chavies Wastewater Collection System - Phase 1	0-2 Years	Not Funded	$678,000	Perry	7	1
SX21237004	Campton Sewer Rehab Project	3-5 Years	Not Funded	$1,227,000	Wolfe	8	1
SX21193009	PCSD#1 - Chavies Wastewater Collection System - Phase 2	0-2 Years	Not Funded	$559,030	Perry	9	2
SX21189002	Booneville Pump Station Rehab	3-5 Years	Not Funded	$273,500	Owsley	10	2
SX21133010	Whitesburg - Sandlick Area Sewer Extensions	6-10 Years	Not Funded	$2,053,000	Letcher	11	2
SX21131003	Hyden - Town Rehab Phase III	0-2 Years	Partially Funded	$565,633	Leslie	12	2
SX21129007	Beattyville - Wastewater Treatment Plant Expansion	3-5 Years	Not Funded	$6,000,000	Lee	13	2
SX21119007	Talcum Wastewater Line Extension	3-5 Years	Not Funded	$3,937,260	Knott	14	2
SX21025030	TEA - Breathitt County WWTP and Collection Lines Phase I	3-5 Years	Partially Funded	$4,580,650	Breathitt	15	2
			Total Cost:	**$30,469,723**			

Lake Cumberland Area Development District (LCADD)



- 2010 census population of 207,256 (101,129 households) with 26% serviceable.
- Projected 2020 population of 221,481 (change of 14,225).
- 539.36 miles of existing sewer lines.
- 148.00 miles of line extensions proposed in the next 10 years.
- 24.00 miles of line rehabilitation proposed in the next 10 years.
- 27.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $81,410,471.
- Estimated funding needs for projects from 6 to 10 years: $7,691,680.
- Average age of wastewater treatment plants is 23 years.
- Total number of interconnected systems is 3.
- 135 miles of sewer lines less than 15 years old.
- 117 miles of sewer lines between 15 and 30 years old.
- 170 miles of sewer lines between 31 and 50 years old.
- 37 miles of sewer lines between 51 and 70 years old.
- 80 miles of sewer lines greater than 70 years old.

Lake Cumberland Area Development District has a 2010 census population count of 207,256 (101,129 households) with a projected 2020 population count of 221,481 (92,378 households). Public sewer is currently available to approximately 26 percent of the district's households based on 2010 census counts. Over the next ten years approximately 3,919 serviceable households will be added through the construction of 148.00 miles of sewer line extensions and approximately 2,048 instances of improved service through the rehabilitation of 24.00 miles of existing sewer lines and other appurtenances. 27.00 miles of interceptor lines are also proposed within this district.

County Summary for Lake Cumberland Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Adair	18,656	8,568	20,052	8,151	1,970	23%	$ 8,966,500
Casey	15,955	7,487	16,433	6,791	1,055	14%	$ 4,709,000
Clinton	10,272	5,311	10,896	4,755	1,297	24%	$ 10,096,000
Cumberland	6,856	3,690	6,649	2,840	820	22%	$ 2,000,000
Green	11,258	5,324	11,112	4,660	1,459	27%	$ 1,290,000
McCreary	18,306	7,507	18,314	6,819	1,730	23%	$ 9,193,985
Pulaski	63,063	31,443	71,036	29,901	7,076	23%	$ 15,411,000
Russell	17,565	9,993	18,782	8,112	2,996	30%	$ 7,146,566
Taylor	24,512	10,864	26,079	10,663	5,189	48%	$ 10,278,100
Wayne	20,813	10,942	22,128	9,686	2,924	27%	$ 20,011,000
Totals	**207,256**	**101,129**	**221,481**	**92,378**	**26,516**	**26%**	**$ 89,102,151**

Public Sewer Systems in the Lake Cumberland Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0024317	Columbia/Adair Utilities District	Adair	4,647	1,970
KY0026352	Liberty Water & Gas	Casey	2,050	1,055
KY0024295	Albany Municipal Water & Sewer	Clinton	2,499	1,297
KY0036854	Burkesville Wastewater	Cumberland	1,490	775
KY0023841	Greensburg Sewer Department	Green	2,359	1,179
KY0096881	Sanitation District #1 of Green County	Green	620	280
KY0097837	McCreary County Water District	McCreary	3,884	1,730
KYP000069	Burnside Municipal Water Works	Pulaski	614	343
KY0094447	Science Hill Sewer	Pulaski	1,140	496
KY0026611	Somerset Utilities	Pulaski	12,914	6,236
KY0062995	Jamestown Utilities	Russell	1,877	908
KYP000057	Russell Springs Sewer & Water Works	Russell	3,753	2,086
KY0054437	Campbellsville Municipal Water & Sewer System	Taylor	11,561	5,189
KY0033847	Monticello Utility Commission	Wayne	6,252	2,924
		Totals:	55,660	26,468

Lake Cumberland Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

The Lake Cumberland Area Development District planning units are in need of repairing and replacing existing infrastructure. The systems in the Lake Cumberland Area need to repair and/or replace lift stations, sewer lines and manholes due to aging infrastructure. The some systems also need to upgrade the existing treatment plants with safer, more efficient methods of treatment.

The Lake Cumberland Area Development District planning units would like to provide service to more customers by extending service to unserved areas. Providing service to unserved areas will eliminate failing septic systems and straight pipe discharges allowing growth without the potential for health problems resulting from human exposure to untreated sewage.

The needs of the Lake Cumberland Regional Water Management Council are a very diverse collection. Other needs of the area include meeting regulatory requirements and sanitary sewer overflow correction.

Description and Determination of Planning Units:

The Lake Cumberland Area Development District is made up of thirteen planning units. The planning units were determined by the Lake Cumberland Regional Water Management Council based on local issues in the area such as location, size of area, number of customers, number of systems, and need and ability of systems to plan together. The planning units are Adair (Columbia/Adair Utilities District), Bronston/Burnside (Bronston Water Association and Burnside Municipal Water Works), Campbellsville (Campbellsville Municipal Water & Sewer System), Casey (Liberty Water & Gas), Clinton (Albany Municipal Water & Sewer), Cumberland (Burkesville Wastewater and Cumberland County Water District), Eubank/Science Hill (City of Eubank Water System and Science Hill Sewer), Greensburg (Greensburg Sewer Department), McCreary (McCreary County Water District), Russell (Jamestown Utilities and Russell Springs Sewer & Water Works), Somerset (Somerset Utilities), Summersville (Sanitation District #1 of Green County), and Wayne (Monticello Utility Commission).

Lake Cumberland Area Development District
Project Ranking Methodology

The current needs in the Lake Cumberland ADD region are quite sizeable. While water service has been provided to most residents some are still in need of service, expanded treatment capacity and replacement of aging or undersized lines are becoming more and more necessary. For wastewater, the needs include system expansion, unserved areas, aging infrastructure, and expanded treatment capacity.

The Lake Cumberland Regional Water Management Council uses a point based rankling system to rank the needs of the area. Each local system was asked to submit their most needed projects to the Council for ranking. Projects were scored on a series of criteria including Type of Project, Regionalism, Shovel Readiness, Funding Status, and Local Need. Additional bonus points were assigned at the discretion of the Council for projects deemed most deserving. In the event of a tie, the project's Cost per Connection was used as the deciding factor.

The following point criterion was approved by the Lake Cumberland Regional Water Management Council on September 4, 2014 and will be used to rank projects on December 4, 2014:

Type of Project (up to 20 points assigned)

Unserved – Points based on number of households served per mile
- AVERAGE 9 OR GREATER HOUSEHOLDS PER MILE - 20
- AVERAGE 5-6 HOUSEHOLDS PER MILE - 18
- AVERAGE 3-4 HOUSEHOLDS PER MILE - 15
- AVERAGE 1-2 HOUSEHOLDS PER MILE - 10
- AVERAGE OF LESS THAN 1 HOUSEHOLDS PER MILE – 5

Underserved – Points based on percentage of total customer base impacted
- 80-100% OF TOTAL CUSTOMER BASE IMPACTED - 20
- 60-79% OF TOTAL CUSTOMER BASE IMPACTED - 19
- 40-59% OF TOTAL CUSTOMER BASE IMPACTED - 18
- 20-39% OF TOTAL CUSTOMER BASE IMPACTED- 15
- 10-19% OF TOTAL CUSTOMER BASE IMPACTED - 10
- LESS THAN 10% OF TOTAL CUSTOMER BASE IMPACTED - 5

Industrial/Commercial – Points based on number of jobs created/retained
- 100 OR MORE NEW JOBS CREATED OR JOBS RETAINED - 20
- 75-99 NEW JOBS CREATED OR JOBS RETAINED - 19
- 50-74 NEW JOBS CREATED OR JOBS RETAINED - 18
- 20-49 NEW JOBS CREATED OR JOBS RETAINED - 15
- 10-19 NEW JOBS CREATED OR JOBS RETAINED - 10
- LESS THAN 10 NEW JOBS CREATED OR JOBS RETAINED – 5

Other – 3 points assigned for projects not meeting the above types

Combination – Most favorable listed category plus an additional 3 points

Project Delivery (up to 20 points assigned)
- Regional - 20 points
- Non-Regional – 5 points

Project Status (up to 20 points assigned)
- Engineering Plans and specs submitted to DOW - 20 points
- Preliminary Engineering Report completed - 15 points
- Engineering procurement completed – 10 points
- Preliminary planning by system - 5 points

Funding Status (up to 20 points assigned)

Projects with estimated costs greater than $100,000
Funding committed for 50% or more - 20 points
Funding committed for 25-49% or more - 15 points
Funding committed for 1-24% - 10 points
Pending applications - 3 points
Projects with estimated costs of $100,000 or less - 10 points

Local Need (up to 20 points assigned)

Points assigned based on the planning unit ranking

1ST – 20 POINTS
2ND – 16 POINTS
3RD – 13 POINTS
4TH – 11 POINTS
5TH – 9 POINTS
6TH – 7 POINTS
7TH – 6 POINTS
8TH – 5 POINTS
9TH – 4 POINTS
10TH – 3 POINTS
11TH – 2 POINTS
12TH – 1 POINTS
13TH OR HIGHER – 0 POINTS

Council Input (up to 10 points assigned)

Council assigns 10 bonus points to 15% of projects
Special consideration is given to any project that addresses an agreed order, tap-on-ban, NOV, or other specific violation from the Kentucky Division of Water.

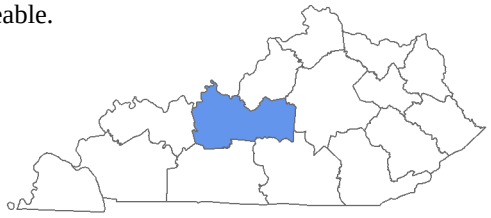
Tie Breaker (no points assigned)

Cost per connection - only used to break point based ties
Lowest cost per connection is ranked highest

Project Rankings For Lake Cumberland Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21147020	Sewer System Extensions – Revelo to Stearns Phase 1	0-2 Years	Fully Funded	$666,667	McCreary	1	1
SX21217004	Taylor County School Water & Sewer System Extension	3-5 Years	Not Funded	$191,100	Taylor	2	1
SX21217008	Campbellsville Sewer System Renovation	3-5 Years	Not Funded	$788,000	Taylor	3	2
			Total Cost:	**$1,645,767**			

Lincoln Trail Area Development District (LTADD)



- 2010 census population of 269,117 (116,687 households) with 29% serviceable.
- Projected 2020 population of 295,040 (change of 25,923).
- 934.15 miles of existing sewer lines.
- 66.00 miles of line extensions proposed in the next 10 years.
- 9.00 miles of line rehabilitation proposed in the next 10 years.
- 36.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $88,615,208.
- Estimated funding needs for projects from 6 to 10 years: $258,970.
- Average age of wastewater treatment plants is 31 years.
- Total number of interconnected systems is 3.
- 138 miles of sewer lines less than 15 years old.
- 148 miles of sewer lines between 15 and 30 years old.
- 103 miles of sewer lines between 31 and 50 years old.
- 332 miles of sewer lines between 51 and 70 years old.
- 6 miles of sewer lines greater than 70 years old.

Lincoln Trail Area Development District has a 2010 census population count of 269,117 (116,687 households) with a projected 2020 population count of 295,040 (117,392 households). Public sewer is currently available to approximately 29 percent of the district's households based on 2010 census counts. Over the next ten years approximately 1,999 serviceable households will be added through the construction of 66.00 miles of sewer line extensions and approximately 8,772 instances of improved service through the rehabilitation of 9.00 miles of existing sewer lines and other appurtenances. 36.00 miles of interceptor lines are also proposed within this district.

County Summary for Lincoln Trail Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Breckinridge	20,059	10,630	21,489	8,788	1,500	14%	$ 10,534,720
Grayson	25,746	13,561	27,048	11,007	3,323	25%	$ 2,415,750
Hardin	105,543	43,261	116,612	46,055	12,333	29%	$ 48,990,943
Larue	14,193	6,172	14,961	6,069	1,535	25%	$ 2,856,465
Marion	19,820	8,182	21,424	8,332	3,238	40%	$ 5,024,300
Meade	28,602	11,762	30,901	11,964	2,562	22%	$ 608,000
Nelson	43,437	18,075	50,119	20,219	8,263	46%	$ 12,126,000
Washington	11,717	5,044	12,486	4,958	1,305	26%	$ 6,318,000
Totals	**269,117**	**116,687**	**295,040**	**117,392**	**34,059**	**29%**	**$ 88,874,178**

Public Sewer Systems in the Lincoln Trail Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0026701	Cloverport Sewer System	Breckinridge	964	470
KY0028363	Hardinsburg Sewer System	Breckinridge	2,169	1,025
KY0072044	Caneyville Sewer System	Grayson	609	301
KY0090590	Clarkson Sewer System	Grayson	868	433
KY0022934	Leitchfield Utilities Commission	Grayson	5,665	2,583
KY0022390	Hardin Co. Water District No. 1 Radcliff Sewer System	Hardin	23,296	10,095
KY0024988	Vine Grove Sewer System	Hardin	4,226	1,780
KY0022152	West Point Sewer System	Hardin	864	458
KY0026379	Hodgenville Sewer System	Larue	3,558	1,534
KY0090719	Bradfordsville Sewer System	Marion	305	148
KY0026549	Lebanon Sewer System	Marion	6,011	2,768
KYP000073	Loretto Wastewater System	Marion	803	322
KY0021474	Brandenburg Sewer System	Meade	2,782	1,210
KY0043478	Doe Valley Association Inc	Meade	1,878	820
KYP000051	Muldraugh Sewer System	Meade	936	532
KY0021237	Bardstown Sewer System	Nelson	17,207	7,447
KYP000086	Bloomfield WWTP	Nelson	907	412
KY0034126	New Haven Sewer System	Nelson	935	405
KY0020907	Springfield Water & Sewer Commission	Washington	2,699	1,305
		Totals:	76,682	34,048

Lincoln Trail Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Sanitary Sewer Overflow Correction**

Discussion of Area Development District Needs:

The Lincoln Trail Area has primary service within municipal boundaries. There are a few pockets of unserved areas within each city (primarily from new annexation or where force-main may be required). Many of the systems are approaching an age where lines and primary mechanical facilities will need replacement and upgrade. Most of the sewer facilities were constructed in the late 1950's, 60's and 70's. Clay tile pipe is still predominate in many communities. Deterioration of these lines, as well as old cast iron lines contribute to high rates of infiltration and inflow.

New development on the fringes of the high density urban areas (Hardin County areas outside of Elizabethtown and Radcliff) have the need for sanitary sewer service extensions. Many of these areas have poor soil quality and higher densities than practical, for on-site systems. The Hardin County Water Districts (primarily HCWD No. 2) have begun developing plans to provide sanitary service to the most densely populated areas of Glendale and Rineyville. In particular, Glendale has a need for service due to potential commercial /industrial development along I-65.

The presence of infiltration and inflow (I & I) in most systems has led to periodic SSO's and less than ideal or inefficient treatment conditions at wastewater treatment plants. Many communities have begun studies to prioritize areas for repair and replacement to reduce I & I conditions where possible. The greatest current need will continue to be repair and upgrade of existing lines / manholes to improve flow conditions and reduce I & I.

Description and Determination of Planning Units:

Planning units in the Lincoln Trail Region are primarily set by county boundaries. They generally compose a large enough geographic area and small enough grouping of utilities to provide reasonable interaction, feedback, and information to be a useful planning unit. The municipal entities within each county are the primary responsible utilities for provision of sewer service due to the density requirements for efficient collection.

With the widespread availability of potable water, there is a need to constantly review the development appropriateness of sanitary service. Most households in unincorporated areas utilize on-site septic systems, which work with varying degrees of success. Poor soil suitability in some areas means less than adequate treatment and potential source water degradation. Unincorporated County areas have the potential to be included in new sanitary districts if formed and examined for improved treatment methodologies.

Lincoln Trail Area Development District
Project Ranking Methodology

The Lincoln Trail Area Water Management Planning Council will be meeting on December 3rd to do our yearly water and wastewater project prioritization. Our prioritization process is adapted from an outline previously developed by KIA and Senate Bill 409. The process is hopefully inclusive and allows for discussion at the local level to improve understanding of a project's intent and impact.

In the past month we've held a County Advisory Committee meeting in each County. Those meetings are hosted by each County Judge/Executive (as the Advisory chairperson) with each local utility, Mayor, and local Health Department invited to participate. All proposed projects are reviewed by the committee and given an initial score based upon how the project meets five criteria (project type, regional connections, design status, funding status, and local need). Most of the discussion by each County committee is centered on how projects address the greatest local needs. Since there can be diverse interests represented, committee members must work together to determine what needs are most important in their community and what projects will meet them. Discussions, while lively in some cases, also serve as a forum to hear about important things affecting local utilities and share information that impacts all of our communities.

After all the County Advisory meetings have taken place, the Area Water Management Council meets to finalize the priorities and adopt the regional list. ADD Staff provides a summary tabulation of profile points based upon the Advisory Committee recommendations. The Council then reviews the list and discusses any changes. In the past two years, the Council has only included the top five projects from each County Advisory group to be ranked in the prioritization list.

Project prioritization is provided to the KY Infrastructure Authority and to LRC. In the past, the prioritization list has been utilized by the General Assembly for KIA line item funding; but given the current budget situation, we are not optimistic for that happening. Although no federal funding pools use our prioritization list, nearly all the funding programs are using portions of the WRIS project profile to feed information for their applications and funding decisions so it is important that we continue the process to help our region produce good infrastructure projects that meet locally expressed needs.

If you would like more information on the process or if you have further questions, please feel free to contact Aaron Hawkins or me at the ADD.

Profile Scoring Criteria for ranked projects:

Project type [20 points max to 5 points min.]: matched to the primary project activities

> Unserved (customers / mile): 7>/mile=20 pts, 5-6/mile=15 pts, 3-4/mile=10 pts, 2</mile=5 pts;
>
> Underserved/Improved Service (% of system improved): 75-100%=20 pts, 50-75%=15 pts, 25-49%=10 pts, <25% / maintenance = 5 pts;
>
> Economic Development (# of jobs assisted) 25+ committed= 20pts, 15-24 committed= 15pts, less than 15 committed= 10pts, no quantified jobs= 5 pts;
>
> Other (technical improvements, feasibility studies, etc.) = 10 points

Regional Connection
Regional [20 points] project that connects or merges 2 or more systems for the sale or production of water or wastewater treatment;
Increased connectivity [10 points]: improved existing connection or emergency connection;
Non-regional [5 points]

Design Status: Division of Water approved plans (20 pts.); Preliminary Engineering Report completed (15 pts.); Engineer procured for final design (10 pts.); Engineer developed profile (5 pts.)

Funding Status: The percentage of cost committed from local sources
50% or more from local sources= 20pts,
25-49% from local sources= 15pts,
less than 25% from local or submitted applications (CDBG, RD, KIA, etc)= 10pts,
other= 5pts.

Local Need:
Most important project within the planning unit (20 pts);
2nd most important project (16 pts);
3rd most important project (13 pts);
4th most important project (11 pts);
5th most important project (9 pts).
Only the top five in each planning unit are generally scored for local need.

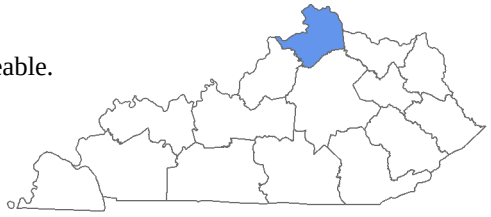
Project Rankings For Lincoln Trail Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21093019	HCWD#2 Northern Hardin Co. Wastewater Project	3-5 Years	Not Funded	$24,000,000	Hardin	1	1
SX21179020	New Haven Phase I Sewer Extension to Gethsemani Monastery	3-5 Years	Not Funded	$791,000	Nelson	2	3
SX21179014	Bardstown Cox	3-5 Years	Not Funded	$1,960,000	Nelson	3	2
SX21093024	West Point Sewer Rehabilitation and Drainage Improvements III	3-5 Years	Not Funded	$507,500	Hardin	4	3
SX21179013	New Haven - WWTP Improvements Projects	3-5 Years	Not Funded	$1,136,000	Nelson	5	1
SX21229008	Springfield Hwy 150/KY55 Business Park Sewer	3-5 Years	Not Funded	$578,000	Washington	6	2
SX21179017	City of New Haven I and I Sewer Rehab. Phase II	0-2 Years	Not Funded	$603,000	Nelson	7	4
SX21085009	Clarkson Sewer / Lift Station Rehabilitation	3-5 Years	Not Funded	$192,500	Grayson	8	1
SX21123006	Hodgenville Walters and W. Forest I & I Rehab	3-5 Years	Not Funded	$150,000	Larue	9	1
SX21229003	Springfield Wastewater Treatment Plant Upgrade	3-5 Years	Not Funded	$1,190,000	Washington	10	1
SX21085011	Clarkson Wastewater Extension	0-2 Years	Not Funded	$328,250	Grayson	11	2
SX21093022	HCWD#1 Boone Trace Sewer Improvements	0-2 Years	Not Funded	$2,000,000	Hardin	12	2
SX21123005	Hodgenville Sanitary and Storm Water Improvements Phase II	3-5 Years	Not Funded	$970,000	Larue	13	2
SX21027020	Irvington Manhole Rehabilitation Project	0-2 Years	Not Funded	$91,390	Breckinridge	14	1
SX21155009	Lebanon Wastewater System Rehabilitation and Improvements	0-2 Years	Not Funded	$995,000	Marion	15	1
SX21163007	Brandenburg Wastewater Treatment Plant Upgrade & Expansion	3-5 Years	Not Funded	$745,000	Meade	16	1
SX21027015	Cloverport Trailer Park Sewer Rehab	0-2 Years	Not Funded	$146,040	Breckinridge	17	3
SX21085008	Leitchfield Fountain View Sewer Extensions Phase II	3-5 Years	Not Funded	$535,000	Grayson	18	3
SX21027018	Cloverport Sewer System Lift Station Rehabilitation	0-2 Years	Not Funded	$122,100	Breckinridge	19	2
SX21155005	Crossroads Industrial Park Sewer Extension	3-5 Years	Not Funded	$390,000	Marion	20	2
SX21163005	Muldraugh Sewer Improvements Phase 3	3-5 Years	Not Funded	$240,000	Meade	21	2
SX21229005	Willisburg Wastewater Project	3-5 Years	Not Funded	$3,400,000	Washington	22	3
SX21229004	Springfield, Jim Town Project	3-5 Years	Not Funded	$1,000,000	Washington	23	4
SX21179022	New Haven Lyons Community Sewer Extension	3-5 Years	Not Funded	$1,221,000	Nelson	24	
SX21027010	Irvington Sanitary Sewer Improvements	3-5 Years	Not Funded	$3,000,000	Breckinridge	25	5
SX21027013	Hardinsburg Sewer System Rehabilitation Phase 2	0-2 Years	Not Funded	$827,240	Breckinridge	26	4
SX21093013	Vine Grove Wastewater Treatment Upgrade & Expansion	3-5 Years	Not Funded	$3,080,000	Hardin	27	4
SX21155007	Lebanon / Marion Industrial Pre-Treatment Facility	3-5 Years	Not Funded	$2,700,000	Marion	28	4
SX21093021	West Point Lift Station Upgrad	3-5 Years	Not Funded	$343,350	Hardin	29	5
SX21179012	Bardstown Plum Run Road Extension	3-5 Years	Not Funded	$600,000	Nelson	30	5
SX21155001	Lebanon Wastewater System Improvements	3-5 Years	Not Funded	$293,000	Marion	31	3
SX21229006	Springfield - Washington County Regional Sewer Study	3-5 Years	Not Funded	$150,000	Washington	32	5
SX21179021	New Haven Phase II Sewer Extension to New Hope	3-5 Years	Not Funded	$925,000	Nelson	33	
SX21179023	New Haven Lyons / Rolling Fork Church Sewer Extension	3-5 Years	Not Funded	$583,000	Nelson	34	
SX21179024	Bardstown SSES	0-2 Years	Not Funded	$150,000	Nelson	35	

Project Rankings For Lincoln Trail Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21179025	New Haven Outfall to Rolling Fork	3-5 Years	Not Funded	$240,000	Nelson	36	
SX21027005	Cloverport Wastewater Improvements	3-5 Years	Not Funded	$936,000	Breckinridge	37	
SX21027006	City of Hardinsburg: Blancett Lake-Airport Road Wastewater System Extension	3-5 Years	Not Funded	$707,670	Breckinridge	38	
SX21093025	West Point WWTP Expansion & Upgrade	3-5 Years	Not Funded	$3,257,000	Hardin	39	
SX21027007	City of Hardinsburg: Breckwood Wastewater System Extension	3-5 Years	Not Funded	$476,300	Breckinridge	40	
			Total Cost:	**$61,560,340**			

Northern Kentucky Area Development District (NKADD)



- 2010 census population of 438,647 (185,049 households) with 81% serviceable.
- Projected 2020 population of 488,377 (change of 49,730).
- 2,093.95 miles of existing sewer lines.
- 41.00 miles of line extensions proposed in the next 10 years.
- 12.00 miles of line rehabilitation proposed in the next 10 years.
- 10.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $46,972,001.
- There are no projects planned from 6 to 10 years.
- Average age of wastewater treatment plants is 21 years.
- Total number of interconnected systems is 3.
- 121 miles of sewer lines less than 15 years old.
- 692 miles of sewer lines between 15 and 30 years old.
- 682 miles of sewer lines between 31 and 50 years old.
- 393 miles of sewer lines between 51 and 70 years old.
- 210 miles of sewer lines greater than 70 years old.

Northern Kentucky Area Development District has a 2010 census population count of 438,647 (185,049 households) with a projected 2020 population count of 488,377 (194,345 households). Public sewer is currently available to approximately 81 percent of the district's households based on 2010 census counts. Over the next ten years approximately 1,482 serviceable households will be added through the construction of 41.00 miles of sewer line extensions and approximately 5,119 instances of improved service through the rehabilitation of 12.00 miles of existing sewer lines and other appurtenances. 10.00 miles of interceptor lines are also proposed within this district.

County Summary for Northern Kentucky Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Boone	118,811	46,154	153,933	59,951	39,806	86%	$ 7,229,050
Campbell	90,336	39,523	91,642	37,713	34,598	88%	-
Carroll	10,811	4,696	11,440	4,408	3,037	65%	$ 8,651,295
Gallatin	8,589	3,786	9,264	3,592	1,204	32%	$ 5,591,673
Grant	24,662	9,942	26,917	9,870	4,168	42%	$ 8,990,470
Kenton	159,720	68,975	168,458	68,111	64,499	94%	$ 5,035,246
Owen	10,841	5,634	11,336	4,713	934	17%	$ 2,817,005
Pendleton	14,877	6,339	15,387	5,987	1,575	25%	$ 8,657,262
Totals	**438,647**	**185,049**	**488,377**	**194,345**	**149,821**	**81%**	**$ 46,972,001**

Public Sewer Systems in the Northern Kentucky Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KYP000015	Florence Water & Sewer Commission	Boone	27,934	12,251
KY0094072	SD1 - Rivershore Farms Subdivision	Boone	660	222
KY0093025	SD1 - Verona Commons Subdivision	Boone	87	27
KY0107239	SD1 - Western Reg Water Reclam Fac	Boone	55,422	20,684
KY0039756	Walton Wastewater System	Boone	3,898	1,540
KY0105031	SD1 - Eastern Regional STP	Campbell	11,899	4,495
KY0092843	Yung Farm Estates Subdivision	Campbell	49	20
KY0104931	Carrollton Utilities	Carroll	8,578	3,843
KY0028118	Warsaw Wastewater System	Gallatin	2,082	987
KY0098027	Corinth Sewer Department	Grant	407	176
KYP000041	Dry Ridge Sewer Department	Grant	2,075	830
KY0091634	Grant County Sanitary Sewer District	Grant	5,266	1,988
KY0109991	Williamstown Regional WRF	Grant	3,233	1,207
KY0075833	Bel Aire Subdivision	Kenton	102	36
KY0021466	SD1 - Dry Creek	Kenton	228,583	99,565
KY0028312	Kentucky-American Water Company - Northern Division	Owen	1,401	700
KY0021041	Butler Water & Sewer Department	Pendleton	741	340
KY0106267	Falmouth STP (New)	Pendleton	2,682	1,227
		Totals:	355,099	150,138

Northern Kentucky Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Extend Services to Unserved Areas**
Secondary Need: **Combined Sewer Overflow Correction**

Discussion of Area Development District Needs:

The Northern Kentucky Area Development District is one of fifteen regional planning agencies created by the Kentucky General Assembly to provide a mechanism for cooperative planning and development between the various local governments within the region. The Northern Kentucky Area Development District region is comprised of Boone, Campbell, Carroll, Gallatin, Grant, Kenton, Owen and Pendleton Counties. Development patterns in the region range from highly developed urbanized areas to rural farmland with sparse development. The entire eight-county region had a population of 438,647 people according to the 2010 Census. The regional population is projected to increase to over 565,200 people (221,400 households) by 2030. Boone, Grant and Gallatin counties are expected to experience the greatest growth over the next 25 years.

Public wastewater systems serve approximately 74% of the regional population, with the remainder being served by private on-site systems. Campbell and Kenton counties have the highest percentage of residents on public sewers at 85% and 90%, respectively; while in Gallatin, Grant and Owen counties less than one-third to one-fifth of all people have access to public sewers.

The rate of population growth will increase the need for public sewer capacity and availability. Plans are currently underway to accommodate the demands of the projected growth both locally and regionally.

A majority of systems in the eight counties are looking to the future with plans to expand to serve the growing population through a regional approach. Sanitation District #1 (SD1) was formed in 1995 when most municipal jurisdictions in Campbell and Kenton counties merged into a regional system. The District has built two new wastewater treatment plants, one in Boone County, to expand service and protect public health in the fastest growing county in the region and one in Campbell County to replace several smaller treatment facilities that have exceeded capacity.

Carrollton Utilities operates a regional network that is responsible for the systems in the neighboring cities of Campbellsburg, Glencoe, Prestonville, Sanders, Sparta, Ghent and Worthville.

In Grant County, the Grant County Sanitary Sewer District serves the City of Crittenden and northern part of the county. The City of Corinth operates a system in the southern part of the county. There is an interconnect between the cities of Williamstown, which operates the plant, and Dry Ridge. Officials in Pendleton County are also considering a similar regional system.

Description and Determination of Planning Units:

The NKADD Water Management Council reviewed the wastewater systems and their service areas located within the Northern Kentucky Area Development District. The Council designated the Northern Kentucky Area Development District boundary as the regional management area. Within NKADD, the following water systems and their respective water management planning areas were designated by the Council:

<u>BOONE COUNTY</u>
Boone County is the fastest growing county in Northern Kentucky, and was the third fastest growing county in the state between 2000 and 2010, during which time its population increased by 38.2 percent. This growth is expected to continue. With such rapid growth, planning for future infrastructure is essential. There are three publicly-owned wastewater systems in Boone County and 16 PTPs. The cities of Florence and Walton operate municipal wastewater systems and the SD1 provides sewer service to a small portion of the County as well as Campbell and Kenton counties. SD1 has constructed the new 20MGD Western Regional Reclamation Facility. Currently 65% of the population relies on public sewers.

CAMPBELL COUNTY

Campbell County is served by one public utility and 31 PTPs. The SD1 is responsible for the management of wastewater and stormwater in Campbell and Kenton counties as well as portions of Boone County. Campbell County is served by the Eastern Regional STP. Overall the district serves over 325,000 people, approximately 80% of the total population of the three counties.

CARROLL COUNTY

Carroll County is located on the Ohio River, approximately halfway between Cincinnati and Louisville. The County is not expected to see considerable growth in the near future. The topography of the County is rugged and much of the terrain is unsuitable for development. The County is served by one public utility and 2 PTPs. Carrolton Utilities serves the cities of Carrollton, Campbellsburg, Ghent, Prestonville, Worthville, and Sanders.

GALLATIN COUNTY

Gallatin County is the smallest county in Kentucky by area but it was the 3rd fastest growing county in the state from 1990 to 2000 when its population increased by nearly 46 percent but only grew by 9.1 percent between 2000 and 2010. Gallatin County has good transportation access via Interstate 71, which connects Louisville and Cincinnati, Ohio; and KY-1039, which connects Kentucky and Indiana, utilizing the Markland Dam to cross the Ohio River southwest of Warsaw. There are 2 public systems and 2 PTPs in Gallatin County. The city of Warsaw operates a municipal wastewater systems and Carrollton Utilities serves Sparta and Glencoe.

GRANT COUNTY

Grant County was the 22nd fastest growing county in the state between 2000 and 2010. That growth rate is expected to continue. The Interstate 75 / US-25 corridor provides convenient transportation and access for future development. Grant County is served by 3 public systems and 10 PTPs. The Grant County Sanitary Sewer District serves the city of Crittenden. The city of Williamstown operates a municipal system and treats the city of Dry Ridge as well. The city of Corinth operates a municipal system.

KENTON COUNTY

Kenton County is the third most populous county in the state. Ninety percent of the population has access to public sanitary sewers. Public sewer service is provided to most of these residents by SD1. The City of Walton, which sits on the border of southern Boone and Kenton Counties, provides service within its city limits. The Grant County Sanitary Sewer District may extend service into a small portion of southern Kenton County in the future. Additionally, there are 10 PTPs in the county.

OWEN COUNTY

Owen County is more sparsely populated than many other surrounding counties. The total population of 10,841 as of the 2010 Census was dispersed throughout the 352 square mile area the County encompasses resulting in an average population density of 30 persons per square mile. Because of the wide population distribution, only 20% of residents have access to public sewers. In addition to service from the city of Owenton, Carrollton Utilities is planning to extend sewer service into northern Owen County to serve communities along Eagle Creek. Additionally, there are 4 PTPs in the county.

PENDLETON COUNTY

Pendleton County has seen moderate growth over the past decade. The terrain is made up of rolling hills and fertile river valleys. The County is bordered by the Ohio River, which flows for 3.5 miles along its northeast border. The Licking River meanders through the County. The South Fork and main branch meet in Falmouth and flow north past Butler, into Campbell County toward the Ohio River. The county is served by 2 public systems and 9 PTPs. The cities of Butler and Falmouth operate municipal systems.

Northern Kentucky Area Development District
Project Ranking Methodology

The Water Management Council created a subcommittee to develop a ranking methodology for NKADD. This was based on the methodology created by KIA along with modifications instituted by other ADDs. A point system was developed that looked at several aspects of the projects based on the following criteria:

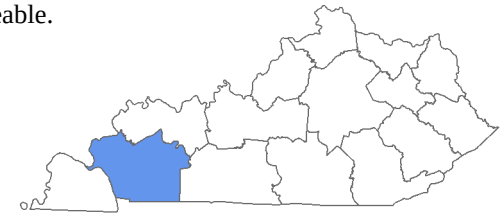
- Consolidation or regionalization of systems
- Local rankings
- Number of unserved/underserved customers affected
- Cost per household
- Amount of planning and development work completed
- Capacity to provide wastewater service (for waterline extensions)
- Local funding

A meeting is held with each Planning Unit to rank their projects. The projects are scored using a matrix developed from the established criteria. At the Water Management Council meeting, these scores are used the rank the projects for the whole ADD. NKADD uses a tiered system so that each Planning Units number one project is in the top 8: the highest number one project is first, the second highest number one project is second, the third highest number one project is third … until all of the projects ranked by the Planning Units are ranked for the whole ADD.

Project Rankings For Northern Kentucky Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21041003	CU - The 3444 Sanitary Sewer Project	0-2 Years	Not Funded	$2,120,926	Carroll	1	1
SX21081001	City of Dry Ridge - US-25 Sewer System Expansion	0-2 Years	Not Funded	$1,640,000	Grant	2	1
SX21015005	Sand Run Rehab Project	0-2 Years	Unknown	$0	Boone	3	1
SX21187101	Carrollton Utilities - Obie Cook Road Sanitary Sewer Project	0-2 Years	Not Funded	$337,804	Owen	4	1
SX21117001	SD1 - Highland Pike Sewer Replacement	0-2 Years	Partially Funded	$3,517,790	Kenton	5	1
SX21077001	Willow Pointe Lift Station and Force Main	0-2 Years	Not Funded	$1,300,000	Gallatin	6	1
SX21191007	City of Butler Sewer System Rehabilitation Project	0-2 Years	Not Funded	$560,000	Pendleton	7	1
SX21015006	Greenview Lift Station Replacement	0-2 Years	Not Funded	$825,000	Boone	8	2
SX21041002	Carrollton Utilities - 2011 Carroll County Sewer Project	0-2 Years	Not Funded	$2,622,435	Carroll	9	2
SX21081503	City of Dry Ridge - 2008 Sewer Line Extension	3-5 Years	Not Funded	$874,000	Grant	10	2
SX21191102	Oak Haven Pump Station and Force Main	0-2 Years	Partially Funded	$701,385	Pendleton	11	2
SX21015301	Boone County - Twin Lakes Sanitary Sewer Project	0-2 Years	Not Funded	$2,093,280	Boone	12	3
			Total Cost:	**$16,592,620**			

Pennyrile Area Development District (PEADD)



- 2010 census population of 219,305 (97,910 households) with 51% serviceable.
- Projected 2020 population of 226,580 (change of 7,275).
- 1,022.90 miles of existing sewer lines.
- 32.00 miles of line extensions proposed in the next 10 years.
- 9.00 miles of line rehabilitation proposed in the next 10 years.
- 38.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $120,877,730.
- Estimated funding needs for projects from 6 to 10 years: $6,043,700.
- Average age of wastewater treatment plants is 37 years.
- Total number of interconnected systems is 7.
- 135 miles of sewer lines less than 15 years old.
- 129 miles of sewer lines between 15 and 30 years old.
- 159 miles of sewer lines between 31 and 50 years old.
- 198 miles of sewer lines between 51 and 70 years old.
- 402 miles of sewer lines greater than 70 years old.

Pennyrile Area Development District has a 2010 census population count of 219,305 (97,910 households) with a projected 2020 population count of 226,580 (89,133 households). Public sewer is currently available to approximately 51 percent of the district's households based on 2010 census counts. Over the next ten years approximately 2,155 serviceable households will be added through the construction of 32.00 miles of sewer line extensions and approximately 30,144 instances of improved service through the rehabilitation of 9.00 miles of existing sewer lines and other appurtenances. 38.00 miles of interceptor lines are also proposed within this district.

County Summary for Pennyrile Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Caldwell	12,984	6,292	12,948	5,518	3,236	51%	$ 2,470,000
Christian	73,955	29,459	77,840	28,340	19,450	66%	$ 66,122,250
Crittenden	9,315	4,569	9,156	3,775	1,565	34%	$ 808,000
Hopkins	46,920	21,180	48,007	19,684	13,785	65%	$ 13,054,380
Livingston	9,519	4,824	9,438	4,074	2,019	42%	$ 7,518,000
Lyon	8,314	4,791	8,523	3,430	1,602	33%	$ 1,984,500
Muhlenberg	31,499	13,699	31,466	12,337	5,278	39%	$ 24,100,000
Todd	12,460	5,286	12,958	4,989	1,700	32%	$ 10,864,300
Trigg	14,339	7,810	16,244	6,986	1,444	19%	-
Totals	**219,305**	**97,910**	**226,580**	**89,133**	**50,079**	**51%**	**$ 126,921,430**

Public Sewer Systems in the Pennyrile Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KYP000048	Fredonia Water Department	Caldwell	417	204
KY0028401	Princeton Water & Wastewater Commission	Caldwell	6,147	3,032
KY0066591	Hopkinsville Water Environment Authority - Crofton	Christian	974	476
KY0066532	Hopkinsville Water Environment Authority - Hammond Wood	Christian	34,626	15,695
KY0094056	Hopkinsville Water Environment Authority - Oak Grove	Christian	7,317	3,273
KY0020061	Marion Water Department	Crittenden	3,175	1,565
KY0023868	Dawson Springs Water & Sewer System	Hopkins	2,692	1,282
KYP000043	Earlington Water & Sewer Department	Hopkins	1,387	705
KYP000047	Hanson Water System	Hopkins	877	359
KY0098043	Madisonville Municipal Utilities	Hopkins	21,419	9,943
KYP000050	Mortons Gap Water Department	Hopkins	915	422
KY0066583	Nortonville Sewer Department	Hopkins	1,628	731
KYP000062	White Plains Sewer Department	Hopkins	796	347
KY0027227	Grand Rivers Water System	Livingston	867	602
KY0100251	Ledbetter Water District	Livingston	1,876	846
KY0066541	Salem Municipal Water System	Livingston	785	382
KY0025836	Smithland Water & Sewer System	Livingston	335	189
KY0027979	Eddyville Water Department	Lyon	2,193	897
KY0020419	Kuttawa Water Department	Lyon	897	591
KYP000079	Lyon County Water District	Lyon	123	114
KY0023540	Central City Municipal Water & Sewer System	Muhlenberg	5,786	2,248
KY0066575	Drakesboro Water & Sewer	Muhlenberg	885	406
KY0020010	Greenville Utilities Commission	Muhlenberg	5,494	2,280
KYP000064	Powderly Sewer System	Muhlenberg	716	344
KY0023442	Elkton Utilities	Todd	2,060	910
KY0063649	Guthrie Water Works	Todd	1,334	603
KY0020982	Trenton Water Works	Todd	386	187
KY0026891	Cadiz Water & Sewer Commission	Trigg	2,979	1,423
		Totals:	109,086	50,056

Pennyrile Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Repair and Replace Existing Infrastructure**
Secondary Need: **Extend Services to Unserved Areas**

Discussion of Area Development District Needs:

The Pennyrile region has lot varied needs but at this time the majority of our needs fall under the heading of repairing and replacing aging infrastructure. This category covers the replacement of individual lines, system wide rehabilitation, to replacing aging or undersized lift stations and finally the replacement of aging or undersized wastewater treatment plants. At this time the majority of the systems in the Pennyrile area are approaching or have passed the designed lifespan of their collection systems and treatment plants. Each system is unique and has different needs but overall problem is the same. Each system has some portion of its collection system that needs to be slip lined, pipe burst, or replaced in its entirety. As the cost of treatment increases it becomes more of a priority for the systems to address the portions of their systems that are allowing I & I (inflow and infiltration). The I & I that is treated by the system is unwanted water that has made it into the collection system. It cost just as much for a system to treat rain or ground water as it does to treat household waste. The addition of I & I drives up the treatment costs for the system which in turn drives up the customer rates.

The secondary need in the Pennyrile region is the extension of services to unserved areas. These projects have a twofold effect. First they provide sewer service to an unserved area which removes septic tanks and straight pipes and improved ground water quality. The second effect is that it increases the systems customer base which in turn increases system revenues. These increased revenues can be used to address system upgrades and maintenance.

Description and Determination of Planning Units:

The planning units in the Pennyrile region are based on the existing county boundaries. By keeping the planning units based on the county boundaries the systems are familiar with the political structure and the current relationship between them and their neighbors. Currently the Pennyrile region has nine planning units (Caldwell County, Christian County, Crittenden County, Hopkins County, Livingston County, Lyon County, Muhlenberg County, Todd County, and Trigg County). These planning units vary in number of systems from as little as one to as many as 8. In each of these instances the county based planning units seem to work well for the Pennyrile region. Many of the counties systems have grown interconnected and interdependent over the last several years. These relationships help foster cooperation and county/regional planning.

Pennyrile Area Development District
Project Ranking Methodology

Each year, the Water Management Council of the Pennyrile Area Development District (PADD) completes a ranking process of water and wastewater projects in the region. This is a "grassroots" process as it begins at the local (system) level and ends with all projects being ranked on a regional basis.

We begin the process with county-wide ranking meetings during which all water/wastewater systems meet with the PADD Water Management Coordinator and their respective County Judge Executive. We discuss the individual projects from each system and rank them according to the priorities within the county. These rankings are then used in the overall regional ranking process.

The PADD Water Management Council has elected to use a point system to determine the overall regional ranking of each project. Projects are ranked based on five categories; Project Type (Unserved Customers, Underserved Customers, and Aging Infrastructure), Regionalization, Level of Engineering/Project Status, Funding Status, and Local Importance. Projects may receive up 20 points in each category except for regionalization. The Water Management Council recognizes the increasing importance of regionalization and has weighted this category heavier. Overall, a project can achieve 110 points. In the instances where two project score the same numerical value the Water Council has elected to use a simple cost analysis to break the tie. The system that is serving the most people with the least amount of money receives the higher ranking (cost of the project/number of customers served).

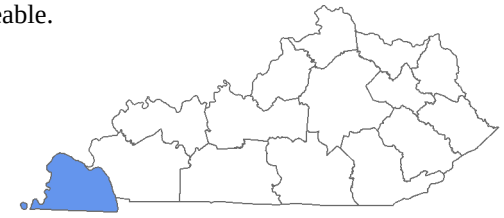
Project Rankings For Pennyrile Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21177010	Central City - WWTP Expansion	0-2 Years	Not Funded	$7,500,000	Muhlenberg	1	1
SX21107021	Madisonville - WWTP Expansion and Improvements	3-5 Years	Partially Funded	$5,955,366	Hopkins	2	3
SX21221002	Cadiz Sewer Main Replacement	3-5 Years	Partially Funded	$900,000	Trigg	3	1
SX21139003	Smithland WWTP Improvements	3-5 Years	Partially Funded	$300,000	Livingston	4	1
SX21139006	Salem - Lift Station Upgrade	3-5 Years	Partially Funded	$618,000	Livingston	5	2
SX21219007	Trenton - Sewer System Improvements	0-2 Years	Partially Funded	$535,000	Todd	6	2
SX21143008	City of Kuttawa - Wastewater System Rehabilitation	3-5 Years	Partially Funded	$200,000	Lyon	7	1
SX21055005	Marion - WWTP Wet Weather Improvements Project	0-2 Years	Not Funded	$808,000	Crittenden	8	1
SX21107022	Madisonville - Hanson Relief Interceptor	3-5 Years	Not Funded	$5,433,001	Hopkins	9	1
SX21047009	HWEA - Oak Grove Spring Meadows Sewer	3-5 Years	Not Funded	$2,875,000	Christian	10	1
SX21033007	Princeton Sewer Rehabilitation Phase II Basins 7 & 8	3-5 Years	Partially Funded	$1,450,000	Caldwell	11	3
SX21047011	HWEA - Oak Grove Wastewater Treatment Plant Expansion - Construction	3-5 Years	Not Funded	$3,500,000	Christian	12	2
SX21139012	City of Smithland - Ledbetter Interceptor	6-10 Years	Not Funded	$3,551,000	Livingston	13	6
SX21033006	Fredonia - Lift Station Improvements	3-5 Years	Not Funded	$150,000	Caldwell	14	1
SX21107014	St. Charles Sanitary Sewer System - Construction	3-5 Years	Not Funded	$3,400,000	Hopkins	15	5
SX21033009	Princeton-Wastewater Treatment Plant Phosphorus Upgrade	3-5 Years	Not Funded	$870,000	Caldwell	16	2
SX21219021	Elkton - Sewer Plant Improvement Project	3-5 Years	Not Funded	$1,620,000	Todd	17	1
SX21047028	HWEA SRF Phase VIII - Expand Hammond-Wood WWTP & Interceptor	0-2 Years	Not Funded	$39,324,000	Christian	18	5
SX21047023	HWEA Oak Grove Village Sewer Project	0-2 Years	Not Funded	$7,500,000	Christian	19	3
SX21143009	City of Kuttawa - Old Kuttawa Pump Station and System Rehab.	3-5 Years	Not Funded	$300,000	Lyon	20	2
SX21219013	Todd County Fiscal Court - Lake Malone Sewer Study	3-5 Years	Not Funded	$100,000	Todd	21	9
SX21219014	Elkton - Sewer Collection System Rehabilitation	3-5 Years	Not Funded	$500,000	Todd	22	3
SX21139010	Smithland Sewer Rehabilitation	3-5 Years	Not Funded	$1,517,000	Livingston	23	3
SX21107009	Madisonville South Main Sewer Interceptor Phase 2	3-5 Years	Not Funded	$1,443,200	Hopkins	24	4
SX21139011	Grand Rivers - Wastewater System Rehabilitation	0-2 Years	Not Funded	$1,000,000	Livingston	25	4
SX21219012	Elkton - Hwy 181 North Sewer Main Extension	6-10 Years	Not Funded	$750,000	Todd	26	7
SX21177021	Greenville - Foxborro Sewer Extension	3-5 Years	Unknown	$0	Muhlenberg	27	2
SX21219018	Elkton - Winding Oaks Sewer Project	3-5 Years	Not Funded	$360,000	Todd	28	4
SX21047030	HWEA - Crofton Division Gordon Park Sewer Main Extension	0-2 Years	Not Funded	$104,700	Christian	29	7
SX21219011	Trenton - Wastewater Treatment Plant Expansion	3-5 Years	Not Funded	$1,500,000	Todd	30	5
SX21219009	Guthrie - WWTP Expansion	3-5 Years	Not Funded	$7,000,000	Todd	31	6
SX21047029	HWEA SRF Phase VIII - Rockbridge Interceptor	0-2 Years	Not Funded	$12,328,550	Christian	32	6
SX21139009	Grand Rivers - Sewer Line Extension	3-5 Years	Not Funded	$1,450,000	Livingston	33	5
SX21107019	Mortons Gap - Sewer Pump Replacement Project	3-5 Years	Not Funded	$220,000	Hopkins	34	2

Project Rankings For Pennyrile Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21107010	Madisonville South Main Sewer Interceptor Phase 3	6-10 Years	Not Funded	$1,742,700	Hopkins	35	7
SX21047006	HWEA Oak Grove Industrial Park Sewer Line Extension	3-5 Years	Not Funded	$490,000	Christian	36	4
SX21219019	Elkton - WWTP energy efficiency upgrade	0-2 Years	Not Funded	$82,800	Todd	37	8
			Total Cost:	**$117,378,317**			

Purchase Area Development District (PUADD)



- 2010 census population of 196,393 (93,709 households) with 49% serviceable.
- Projected 2020 population of 201,697 (change of 5,304).
- 940.62 miles of existing sewer lines.
- 126.00 miles of line extensions proposed in the next 10 years.
- 121.00 miles of line rehabilitation proposed in the next 10 years.
- 28.00 miles of interceptor lines proposed in the next 10 years.
- Estimated funding needs for projects from 0 to 5 years: $91,215,740.
- Estimated funding needs for projects from 6 to 10 years: $26,093,690.
- Average age of wastewater treatment plants is 30 years.
- Total number of interconnected systems is 2.
- 102 miles of sewer lines less than 15 years old.
- 33 miles of sewer lines between 15 and 30 years old.
- 198 miles of sewer lines between 31 and 50 years old.
- 363 miles of sewer lines between 51 and 70 years old.
- 244 miles of sewer lines greater than 70 years old.

Purchase Area Development District has a 2010 census population count of 196,393 (93,709 households) with a projected 2020 population count of 201,697 (86,121 households). Public sewer is currently available to approximately 49 percent of the district's households based on 2010 census counts. Over the next ten years approximately 38,606 serviceable households will be added through the construction of 126.00 miles of sewer line extensions and approximately 17,079 instances of improved service through the rehabilitation of 121.00 miles of existing sewer lines and other appurtenances. 28.00 miles of interceptor lines are also proposed within this district.

County Summary for Purchase Area Development District

County Name	2010 Population	2010 Households	2020 Population	2020 Households	Serviceable Households	Percent Serviceable	Planned Cost 0 to 10 Years
Ballard	8,249	3,885	8,217	3,484	1,553	40%	$ 15,126,257
Calloway	37,191	18,065	40,411	17,019	9,208	51%	$ 4,605,000
Carlisle	5,104	2,441	4,947	2,093	604	25%	$ 9,787,095
Fulton	6,813	3,372	6,223	2,728	2,384	71%	$ 6,876,635
Graves	37,121	16,777	37,630	15,459	5,884	35%	$ 35,973,309
Hickman	4,902	2,342	4,625	1,938	627	27%	$ 850,000
McCracken	65,565	31,079	66,621	29,278	21,651	70%	$ 32,673,659
Marshall	31,448	15,748	33,023	14,122	3,881	25%	$ 11,417,475
Totals	**196,393**	**93,709**	**201,697**	**86,121**	**45,792**	**49%**	**$ 117,309,430**

Public Sewer Systems in the Purchase Area Development District

Note: Serviceable counts include households outside the area development district.

KPDES	System Name	Primary County	Serviceable Counts	
			Population	Households
KY0025747	Barlow Sewer System	Ballard	700	368
KY0033791	Kevil Water & Sewer System	Ballard	705	342
KY0020893	LaCenter Water System	Ballard	1,043	487
KY0025933	Wickliffe Sewer System	Ballard	772	364
KY0072761	Murray Water & Wastewater System	Calloway	19,390	8,983
KY0028371	South 641 Water District	Calloway	417	225
KYP000065	Arlington Water and Sewer Department	Carlisle	359	183
KYP000066	Bardwell City Utilities	Carlisle	795	421
KY0026913	Fulton Municipal Water System	Fulton	2,448	1,330
KY0028436	Hickman Municipal Sewer System	Fulton	2,404	1,054
KY0053562	Graves County Water District (Fancy Farm)	Graves	573	259
KY0021211	Mayfield Electric & Water System	Graves	10,472	4,909
KY0055221	Mayfield Electric & Water Systems (Highland Club)	Graves	27	12
KY0053520	Mayfield Electric & Water Systems (Thomas Country)	Graves	328	132
KY0055271	Symsonia Water District	Graves	583	307
KY0025852	Wingo Water & Sewer System	Graves	595	265
KY0025275	Clinton Sewer	Hickman	1,274	626
KY0021172	Benton Water & Sewer System	Marshall	4,765	2,211
KY0021130	Calvert City Municipal Water & Sewer	Marshall	2,424	1,100
KY0021016	Hardin Sewer System	Marshall	681	317
KY0044164	Marshall County Environmental Services (Golden Acres)	Marshall	69	34
KY0024546	Marshall County Sanitation District #1	Marshall	97	71
KY0044181	Marshall County Sanitation District #2	Marshall	284	130
KY0080845	Marshall County Environmental Services (Great Oaks)	McCracken	522	178
KY0022799	Paducah McCracken County Joint Sewer Agency (Paducah)	McCracken	34,452	17,326
KY0025810	Paducah McCracken County Joint Sewer Agency (Reidland)	McCracken	4,635	2,048
KY0025828	Paducah McCracken County Joint Sewer Agency (Woodlawn)	McCracken	4,467	2,091
		Totals:	95,281	45,773

Purchase Area Development District
Regional Wastewater Needs Assessment

Primary Need: **Develop Long-term Planning That Allows for Sustainability**
Secondary Need: **Repair and Replace Existing Infrastructure**

Discussion of Area Development District Needs:

The majority of systems within the Purchase Area are smaller and have different needs than the larger, more self-sustaining systems. Long-term planning needs to be a major focus within these systems, in order for them to be sustainable. The fallacy some systems fall into is being too focused on the short-term (day-to-day operations) and fail to acknowledge their Long-term needs and goals. The Purchase Area as a whole has a need to replace or repair existing infrastructure that are reaching and in a lot of cases exceeding past their useful life expectancy.

Based on the project profiles developed for the region the secondary priority for the region is to repair or replacement of existing infrastructure. The majority of the utilities in the Purchase Area are operating systems that are more than 30 years old and standards have evolved to become more stringent during this period. Many of the collection lines, manholes, and lift stations are beyond their useful life which results in wastewater systems that do not operate on a high efficiency level. Additionally, inflow and infiltration are a major issue in the region. This problem is caused by breaks in the collection system that allow surface or groundwater to penetrate the lines and forces the system to treat an increased volume resulting from major rain events.

Description and Determination of Planning Units:

The Purchase Area Development District is divided into eight separate planning units, which are based on the eight counties in the Purchase Area. The planning units are: Ballard County planning unit, Calloway County planning unit, Carlisle County planning unit, Fulton County planning unit, Graves County planning unit, Hickman County planning unit, Marshall County planning unit, and McCracken County planning unit.

In the Ballard County planning unit there are four wastewater utilities (City of Barlow, City of Kevil, City of Lacenter, and City of Wickliffe) that serve approximately 1,553 serviceable households in Ballard County.

The City of Murray and the South 641 Water District make up the two wastewater utilities in the Calloway County planning unit and serve approximately 9,208 serviceable households in.

The Carlisle County planning unit is comprised of two utilities (City of Arlington and City of Bardwell) that collect wastewater but send the wastewater to another utility to be treated. The Carlisle County Sanitation District is the utility that receives wastewater from these two municipalities and also the Carlisle County High School. The City of Arlington and the City of Bardwell serve approximately 604 serviceable households in.

The Fulton County planning unit has two wastewater utilities (City of Fulton and City of Hickman) that serve approximately 2,384 serviceable households in.

The Graves County planning unit also has four wastewater utilities (Graves County Water District, Mayfield Electric & Water System, Symsonia Water District, and the City of Wingo) that serve approximately 5,884 serviceable households in Graves County.

The City of Clinton is the lone wastewater utility in the Hickman County planning unit and serves approximately 627 serviceable households in.

The Marshall County planning unit has the largest amount of wastewater utilities, which has six wastewater utilities. With those utilities being the City of Benton, Calvert City, City of Hardin, Marshall County Sanitation District #1, Marshall County Sanitation District #2, and the Purchase Public Service Corporation plant at the Golden Acres Subdivision. Together these utilities serve approximately 3,881 serviceable households in.

Paducah-McCracken Joint Sewer Agency along with two Purchase Public Service Corporation plants at the Blandville-West Subdivision and Great Oaks Subdivision make up the McCracken County planning unit. These three utilities serve approximately 21,651 serviceable households in McCracken County.

Purchase Area Development District
Project Ranking Methodology

The Purchase Area Water Management Council uses a clean water ranking criteria to establish a regional priority list for water projects in the Purchase Area.

The clean water ranking criteria consists of five separate categories.

Project Type:

1. Regionalizing- projects receive 25 points if there is a merger of utilities and elimination of permitted discharges.
2. Elimination of sewage treatment plant through interconnection- projects receive 23 points if there is an utility that is eliminating a sewage treatment plant and sending the wastewater to another utility to be treated.
3. New treatment plant/expansion- projects receive 20 points if the utility is building a new sewage treatment plant or expanded the existing capacity of the existing sewage treatment plant.
4. Replacement or rehabilitation of aging infrastructure- project will receive 17 points if the utility is rehabbing out-dated collection lines or out-dated equipment.
5. Extension of sewer service to unserved households- project will receive 20 points if the proposed project will add an average of 9 or more new customers per mile, 19 points for an average of 7-8 new customers per mile, 18 points for an average of 5-6 new customers per mile, 15 points for an average of 3-4 new customers per mile, and 10 points for an average of 1-2 new customers per mile.

Compliance and Enforcement:

A project will receive 5 points if the utility is using this project to achieve full or partial compliance with a court or agreed order.

Funding Status

Projects that are 50%-99% funded and they receive 10 points, the second section is for projects that are 1%-49% funded and they receive 5 points. Any projects that are not funded receive zero points for this category.

Project Status

This category has three sections and a project can receive points in all sections if the utility has completed them. The first section is Engineering plans and specs submitted to DOW, a project will receive 15 points if this step has been completed. The second section is Preliminary engineering report complete, a project will receive 10 points if this step is completed. The third section is Estimated engineer's budget complete, a project will receive 5 points if this step is complete.

County Ranking

In this category, projects will receive points based on their county ranking. A number one ranked project in the county will receive 24 points, a number two ranked project in the county will receive 20 points, a number three ranked project in the county will receive 16 points, a number four ranked project in the county will receive 14 points, and a number five ranked project in the county will receive 12 points. Only the top 5 projects in each county will be ranked regionally. In the event of a tie-breaker between projects, the cost per household will be used to break the tie.

In the event of a tie-breaker between projects, the cost per household will be used to break the tie.

Project Rankings For Purchase Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21145015	Reidland Collection System Above Ground Storage Tank	3-5 Years	Not Funded	$2,385,000	McCracken	1	1
SX21157035	Marshall Co. Sanitation District #2 - Ext. to Marshall Co. High	3-5 Years	Not Funded	$3,312,000	Marshall	2	2
SX21035001	City of Murray-Bee Creek WWTP Improvements & Collection System	0-2 Years	Fully Funded	$46,000,000	Calloway	3	1
SX21157030	Marshall SD 1-Liftstation Repair/Replacement & WWTP Upgrades	0-2 Years	Partially Funded	$550,000	Marshall	4	1
SX21007016	LaCenter - Sanitary Sewer Improvements Phase III	3-5 Years	Not Funded	$4,000,000	Ballard	5	1
SX21145020	Sludge Press Building	3-5 Years	Not Funded	$2,361,000	McCracken	6	2
SX21075001	Fulton Mun Water System - Rehab Phase II	3-5 Years	Not Funded	$523,635	Fulton	7	1
SX21145171	Paducah-Mccracken JSA-Woodlawn Collection System Improvements	0-2 Years	Over Funded	$3,590,000	McCracken	8	3
SX21145176	Blandville West Estates Collection System Rehab	3-5 Years	Not Funded	$390,000	McCracken	9	4
SX21083031	Symsonia-KY 534 Extension	3-5 Years	Not Funded	$135,000	Graves	10	1
SX21039001	Carlisle SD #1-WWTP Surge Basin	0-2 Years	Partially Funded	$1,580,322	Carlisle	11	1
SX21007012	City of Wickliffe Sewer Rehabilitation Project Phase I	3-5 Years	Partially Funded	$1,589,920	Ballard	12	2
SX21105005	City of Clinton- Hwy 58 Line Replacement	3-5 Years	Not Funded	$250,000	Hickman	13	1
SX21083004	Mayfield Electric & Water-KY 303, Cuba	3-5 Years	Not Funded	$5,873,200	Graves	14	3
SX21083018	Mayfield-WWTP Upgrade	0-2 Years	Partially Funded	$2,050,000	Graves	15	4
SX21007014	LaCenter - WWTP Creek Flow Monitoring	3-5 Years	Not Funded	$546,800	Ballard	16	5
SX21035004	City of Murray- Sewer Extension to North Elementary	3-5 Years	Not Funded	$350,000	Calloway	17	4
SX21039002	Carlisle SD #1-Phase III- Milburn Force Main/Collector System	6-10 Years	Not Funded	$2,964,030	Carlisle	18	4
SX21075003	Fulton Municipal Sewer-Wetlands Addition to Lagoon	3-5 Years	Not Funded	$1,139,000	Fulton	19	4
SX21039018	City of Arlington- Collection System Rehab Phase III	3-5 Years	Not Funded	$582,660	Carlisle	20	3
SX21083027	Mayfield Electric & Water - Telemetry for WWTP & North Industrial	3-5 Years	Not Funded	$125,000	Graves	21	2
SX21105006	City of Clinton- Replace Force Main to Lagoon	3-5 Years	Not Funded	$600,000	Hickman	22	2
SX21035023	South 641 - System Rehab Phase II	3-5 Years	Not Funded	$500,000	Calloway	23	2
SX21075004	Hickman Mun Sewer System - Sewer Rehab	3-5 Years	Not Funded	$3,714,000	Fulton	24	2
SX21039004	Carlisle County Sanitation District #1 - Cunningham Force Main and WWTP Upgrades	3-5 Years	Not Funded	$5,500,000	Carlisle	25	5
SX21039017	Bardwell City Utilities- Phase III I&I Reduction	3-5 Years	Not Funded	$300,000	Carlisle	26	2
SX21157034	Hardin - Wastewater Rehabilitation Phase II	3-5 Years	Not Funded	$1,001,000	Marshall	27	4
SX21157001	City of Calvert City-Phase II Colorado Street Sewers	3-5 Years	Not Funded	$195,000	Marshall	28	3
SX21075005	City of Hickman- CSO Removal Project	3-5 Years	Not Funded	$1,000,000	Fulton	29	3
SX21007006	City of Barlow- Demolition of Old WWTP	3-5 Years	Not Funded	$250,000	Ballard	30	3
SX21157027	City of Calvert City-Phase I Ext. With Low Pressure Grinder Pump	3-5 Years	Not Funded	$100,000	Marshall	31	5
SX21007010	City of Wickliffe- Lagoon Levee Repair	3-5 Years	Not Funded	$200,000	Ballard	32	4
SX21035018	Murray - Industrial Park Lift Station Upgrade	3-5 Years	Not Funded	$500,000	Calloway	33	5
SX21075008	Fulton Municipal Sewer-Interceptor Project	3-5 Years	Not Funded	$500,000	Fulton	34	5

Project Rankings For Purchase Area Development District

PNUM	Project Title	Schedule	Funding Status	Project Cost	Primary County	Regional Ranking	Local Ranking
SX21083016	Mayfield-10th Street Lift Station and Sewer Line Rehab	3-5 Years	Not Funded	$515,000	Graves	35	5
SX21035003	City of Murray- Melvin Henley Dr. Extension	3-5 Years	Not Funded	$160,000	Calloway	36	3
			Total Cost:	**$95,332,567**			

Appendix A - Counties by Area Development District

County	ADD
Adair	LCADD
Allen	BRADD
Anderson	BGADD
Ballard	PUADD
Barren	BRADD
Bath	GWADD
Bell	CVADD
Boone	NKADD
Bourbon	BGADD
Boyd	FIVCO
Boyle	BGADD
Bracken	BTADD
Breathitt	KRADD
Breckinridge	LTADD
Bullitt	KIPDA
Butler	BRADD
Caldwell	PEADD
Calloway	PUADD
Campbell	NKADD
Carlisle	PUADD
Carroll	NKADD
Carter	FIVCO
Casey	LCADD
Christian	PEADD
Clark	BGADD
Clay	CVADD
Clinton	LCADD
Crittenden	PEADD
Cumberland	LCADD
Daviess	GRADD
Edmonson	BRADD
Elliott	FIVCO
Estill	BGADD
Fayette	BGADD
Fleming	BTADD
Floyd	BSADD
Franklin	BGADD
Fulton	PUADD
Gallatin	NKADD
Garrard	BGADD

County	ADD
Grant	NKADD
Graves	PUADD
Grayson	LTADD
Green	LCADD
Greenup	FIVCO
Hancock	GRADD
Hardin	LTADD
Harlan	CVADD
Harrison	BGADD
Hart	BRADD
Henderson	GRADD
Henry	KIPDA
Hickman	PUADD
Hopkins	PEADD
Jackson	CVADD
Jefferson	KIPDA
Jessamine	BGADD
Johnson	BSADD
Kenton	NKADD
Knott	KRADD
Knox	CVADD
Larue	LTADD
Laurel	CVADD
Lawrence	FIVCO
Lee	KRADD
Leslie	KRADD
Letcher	KRADD
Lewis	BTADD
Lincoln	BGADD
Livingston	PEADD
Logan	BRADD
Lyon	PEADD
McCracken	PUADD
McCreary	LCADD
McLean	GRADD
Madison	BGADD
Magoffin	BSADD
Marion	LTADD
Marshall	PUADD
Martin	BSADD

County	ADD
Mason	BTADD
Meade	LTADD
Menifee	GWADD
Mercer	BGADD
Metcalfe	BRADD
Monroe	BRADD
Montgomery	GWADD
Morgan	GWADD
Muhlenberg	PEADD
Nelson	LTADD
Nicholas	BGADD
Ohio	GRADD
Oldham	KIPDA
Owen	NKADD
Owsley	KRADD
Pendleton	NKADD
Perry	KRADD
Pike	BSADD
Powell	BGADD
Pulaski	LCADD
Robertson	BTADD
Rockcastle	CVADD
Rowan	GWADD
Russell	LCADD
Scott	BGADD
Shelby	KIPDA
Simpson	BRADD
Spencer	KIPDA
Taylor	LCADD
Todd	PEADD
Trigg	PEADD
Trimble	KIPDA
Union	GRADD
Warren	BRADD
Washington	LTADD
Wayne	LCADD
Webster	GRADD
Whitley	CVADD
Wolfe	KRADD
Woodford	BGADD