

SECTION 8: EVALUATION OF ALTERNATIVES

Introduction

The City of Hawesville is currently the only provider of municipally owned wastewater treatment in the planning area. There are two KPDES permitted facilities within the boundaries of the Hawesville Planning Area: Roll Coater, Inc. (KY0092118) and Jackson Mobile Home Park (KY0023981). The city desires to construct a new treatment facility to meet the existing and potential future discharge limits that the current facility cannot meet due to the effectiveness of the plant.

The City of Hawesville has a well established collection system that is primarily gravity with lift stations and force mains transporting wastewater across area sewer sheds that are within the planning area. The city has seen that their collection system is influenced by I/I due to the spike of flow following a precipitation event. The city has had one project that addressed the issue of I/I where the main sewer mains within the downtown area of Hawesville were slip-lined.

The focus of the 0-10 year planning area will be to construct a WWTP, improvements to the existing collection system and replacement of lift stations. For the 0-10 year planning area only the WWTP will be reviewed for alternatives. The improvements to the collection system and lift stations really have no alternative other than to ignore the issues and continue to operate until failure of the system.

The collection system expansion will not be expected until the 11-20 year planning area and as requested and deemed feasible on the city's behalf. The three (3) areas have the potential for the greatest density of housing, thus the greatest benefit for the least amount of cost. Each area will be examined based upon four (4) alternatives.

With the construction of a new WWTP at the existing WWTP site, the city would not be required to reroute flow but continue to allow the flow of the collection system to continue in the existing routing.

Wastewater Treatment Plant

No-action Alternative

The No-action Alternative is not a valid option. The city must improve their treatment and collection systems, so that efficient, effective and environmentally responsible operation is obtainable. This alternative would not be in the best interest of the City of Hawesville, Hancock County or the citizens in which they serve.

Optimization of Existing Facilities

The existing treatment plant has reached the end of the design life of the facility but until the point that a new WWTP is constructed the city will continue to make improvements that lead to optimization of the facility where feasible. Currently the city is exploring the options to

improve the treatment process to address Notice of Violations (NOV) for ammonia and E. coli. These improvements will allow the existing facility to meet the current discharge limits.

The city is currently looking at the addition of super-chlorination to oxidize ammonia out of the effluent produced at the existing facility. This would abandon the existing UV system and introduce the use of chlorine as a method for disinfection.

A more economical option for WWTP expansion would be to construct a new WWTP at the existing site. This alternative would have a minimum effect upon day-to-day operation of the WWTP and collection system during construction. It would present the city a solid foundation to have a modern, efficient, effective and environmental treatment plant to serve the community for decades to come. A new WWTP would have the ability to treat projected flows for the time frame examined within this report with the ability to be expanded to handle additional flows if necessary in the future.

Regionalization

The City of Hawesville operates one of two publicly owned wastewater treatment plants in Hancock County. The closest municipality owned wastewater treatment plant is located in Lewisport, Kentucky. The existing Lewisport WWTP is permitted for 400,000 gallons and is a fairly new facility. This is the only feasible possibility for regionalization with an existing facility and the existing facility does not have the capacity to handle the wastewater generated from the existing Hawesville collection system.

Another opportunity for regionalization would be to construct a sewer main across the Ohio River to Cannelton/Tell City, Indiana for treatment. This option for regionalization is deemed to be financially unfeasible due to the cost and environmental risks associated with a crossing of a major river with that length and depth.

The only possibility for regionalization would be to construct a new WWTP and have both Lewisport and Hawesville transport their wastewater to the new facility. This would lead to multiple issues dealing with ownership of new facility, cost sharing of capital cost and operation of the new facility.

Regionalization is not a feasible alternative at this time for the City of Hawesville.

Cost Analysis of WWTP Alternatives

Alternative 1 – Facultative Lagoon WWTP

Alternative 1 includes construction of two facultative lagoons located at the existing site with a new discharge point at the Ohio River. Typically a facultative lagoon requires about one (1) acre per every 50 homes or every 200 people served, which would require approximately 10 ½ acres. Due to the relatively small existing site (less than 9 acres) a facultative lagoon WWTP would require that adjacent land be purchased and/or a new site selected for a facultative lagoon WWTP to be constructed. The current site is restricted to east and southeast by CSX railway and to the north by Lead Creek, making the options for the addition of land problematic.

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If a new location is required, additional work would be required to the collection system to reroute the force mains to the new site, as well as lift station(s) upgrades might be required due to differing operating conditions.

This alternative would require new headworks including mechanical screen and influent flow meter, new blowers and building, new UV system for disinfection, effluent flow meter, effluent lift station and force main to the discharge point along the Ohio River.

Exhibit 8.1 at the end of this section shows the conceptual layout for this Alternative and Table 8.1 displays the projected project cost for this Alternative.

TABLE 8.1 - ALTERNATIVE #1 - FACULTATIVE LAGOON WWTP				
DESCRIPTION	QUANTITIES	UNIT	UNIT COST	ESTIMATED COST
Additional Property	20	ACRES	\$15,000	\$ 300,000
Pretreatment - Screening, Flow Meter, etc.	1	LS	\$375,000	\$ 375,000
Primary Treatment - Equipment, Installation, etc.	1	LS	\$1,650,000	\$ 1,650,000
Post Treatment - Disinfection, Flow Meter, etc.	1	LS	\$350,000	\$ 350,000
Operation Building	1	LS	\$200,000	\$ 200,000
Collection System Rerouting	1	LS	\$750,000	\$ 750,000
SUBTOTAL - CONSTRUCTION COST				\$ 3,625,000
Construction Contingencies (10%)				\$ 362,500
Legal, Administration, Engineering & Specialty Services (25%)				\$ 906,250
TOTAL - PROJECT COST				\$ 4,893,750
ANNUAL - OPERATION, MAINTENANCE & REPLACEMENT COST ¹				\$ 43,700
TOTAL - O, M, & R PRESENT WORTH COSTS ²				\$ 463,000
SALVAGE VALUE ³				\$ (1,108,000)
PRESENT WORTH COSTS ⁴				\$ 4,248,750

Notes:

¹ Annual operation, maintenance & replacement costs includes semi-annual solids removal, replacement costs and operation & maintenance costs for Force Main.

² Total O, M & R costs are calculated for 20 years at 7% interest rate.

³ No marketable salvage value is available for the units after its service life.

⁴ Present worth costs are based upon 20 years at 7% interest rate

Alternative 2 – Aerated Lagoon WWTP

Alternative 2 includes construction of two aerated lagoons located at the existing site with a new discharge point at the Ohio River. The new WWTP would be adequately sized to treat flow from the proposed wastewater collection system extensions and existing customers. The largest benefit to the aerated lagoon is the reduced footprint due to the existing site conditions.

This alternative would require new headworks including mechanical screen and influent flow meter, new blowers and building, new UV system for disinfection, effluent flow meter, effluent lift station and force main to the discharge point along the Ohio River.

Exhibit 8.2 at the end of this section shows the conceptual layout for this Alternative and Table 8.2 displays the projected project cost for this Alternative.

TABLE 8.2 – ALTERNATIVE #2 - AERATED LAGOON WWTP				
DESCRIPTION	QUANTITIES	UNIT	UNIT COST	ESTIMATED COST
Pretreatment - Screening, Flow Meter, etc.	1	LS	\$375,000	\$ 375,000
Primary Treatment - Equipment, Installation, etc.	1	LS	\$1,650,000	\$ 1,650,000
Post Treatment - Disinfection, Flow Meter, etc.	1	LS	\$350,000	\$ 350,000
Operation Building	1	LS	\$200,000	\$ 200,000
SUBTOTAL – CONSTRUCTION COST				\$ 2,575,000
Construction Contingencies (10%)				\$ 257,500
Legal, Administration, Engineering & Specialty Services (25%)				\$ 643,750
TOTAL – PROJECT COST				\$ 3,476,250
ANNUAL – OPERATION, MAINTENANCE & REPLACEMENT COST ¹				\$ 54,500
TOTAL – O, M, & R PRESENT WORTH COSTS ²				\$ 577,000
SALVAGE VALUE ³				\$ (858,000)
PRESENT WORTH COSTS ⁴				\$ 3,195,250

Notes:

¹ Annual operation, maintenance & replacement costs includes semi-annual solids removal, replacement costs and operation & maintenance costs for Force Main.

² Total O, M & R costs are calculated for 20 years at 7% interest rate.

³ No marketable salvage value is available for the units after its service life.

⁴ Present worth costs are based upon 20 years at 7% interest rate

Alternative 3 – Contact Stabilization WWTP

Alternative 3 includes a new Contact Stabilization WWTP located at the existing WWTP site with a new discharge point at the Ohio River. This alternative would design a WWTP with similar operating conditions as the existing WWTP, which would help reduce the learning curve and improve the level of confidence of the operators. This plant would be constructed with concrete structures instead of a steel package plant, as the city’s existing plant.

This alternative would require new headworks, including mechanical screen and influent flow meter, new blowers and building, new UV system for disinfection, effluent flow meter, effluent lift station and force main to the discharge point along the Ohio River.

Exhibit 8.3 at the end of this section shows the conceptual layout for this Alternative and Table 8.3 displays the projected project cost for this Alternative.

TABLE 8.3 – ALTERNATIVE #3 - CONTACT STABILIZATION WWTP				
DESCRIPTION	QUANTITIES	UNIT	UNIT COST	ESTIMATED COST
Pretreatment - Screening, Flow Meter, etc.	1	LS	\$375,000	\$ 375,000
Primary Treatment - Equipment, Installation, etc.	1	LS	\$1,800,000	\$ 1,800,000
Post Treatment - Disinfection, Flow Meter, etc.	1	LS	\$350,000	\$ 350,000
Operation Building	1	LS	\$200,000	\$ 200,000
SUBTOTAL – CONSTRUCTION COST				\$ 2,725,000
Construction Contingencies (10%)				\$ 272,500
Legal, Administration, Engineering & Specialty Services (25%)				\$ 681,250
TOTAL – PROJECT COST				\$ 3,678,750
ANNUAL – OPERATION, MAINTENANCE & REPLACEMENT COST ¹				\$ 58,000
TOTAL – O, M, & R PRESENT WORTH COSTS ²				\$ 614,000
SALVAGE VALUE ³				\$ (908,000)
PRESENT WORTH COSTS ⁴				\$ 3,384,750

Notes:

¹ Annual operation, maintenance & replacement costs includes semi-annual solids removal, replacement costs and operation & maintenance costs for Force Main.

² Total O, M & R costs are calculated for 20 years at 7% interest rate.

³ No marketable salvage value is available for the units after its service life.

⁴ Present worth costs are based upon 20 years at 7% interest rate

Alternative 4 – Oxidation Ditch WWTP

Alternative 4 includes a new Oxidation Ditch WWTP located at the existing WWTP site with a new discharge point at the Ohio River. The new WWTP would be adequately sized to treat flow from the proposed wastewater collection system extensions and existing customers.

This alternative would require new headworks, including mechanical screen and influent flow meter, new blowers and building, new UV system for disinfection, effluent flow meter, effluent lift station and force main to the discharge point along the Ohio River.

Exhibit 8.4 at the end of this section shows the conceptual layout for this Alternative and Table 8.4 displays the projected project cost for this Alternative.

TABLE 8.4 – ALTERNATIVE #4 - OXIDATION DITCH WWTP				
DESCRIPTION	QUANTITIES	UNIT	UNIT COST	ESTIMATED COST
Pretreatment - Screening, Flow Meter, etc.	1	LS	\$375,000	\$ 375,000
Primary Treatment - Equipment, Installation, etc.	1	LS	\$1,950,000	\$ 1,950,000
Post Treatment - Disinfection, Flow Meter, etc.	1	LS	\$350,000	\$ 350,000
Operation Building	1	LS	\$200,000	\$ 200,000
SUBTOTAL – CONSTRUCTION COST				\$ 2,875,000
Construction Contingencies (10%)				\$ 287,500
Legal, Administration, Engineering & Specialty Services (25%)				\$ 718,750
TOTAL – PROJECT COST				\$ 3,881,250
ANNUAL – OPERATION, MAINTENANCE & REPLACEMENT COST ¹				\$ 85,800
TOTAL – O, M, & R PRESENT WORTH COSTS ²				\$ 909,000
SALVAGE VALUE ³				\$ (958,000)
PRESENT WORTH COSTS ⁴				\$ 3,832,250

Notes:

¹ Annual operation, maintenance & replacement costs includes semi-annual solids removal, replacement costs and operation & maintenance costs for Force Main.

² Total O, M & R costs are calculated for 20 years at 7% interest rate.

³ No marketable salvage value is available for the units after its service life.

⁴ Present worth costs are based upon 20 years at 7% interest rate

Alternative 5 – Sequencing Batch Reactor (SBR) WWTP

Alternative 4 includes a new SBR WWTP located at the existing site with a new discharge point at the Ohio River. The new WWTP would be adequately sized to treat flow from the proposed wastewater collection system extensions and existing customers.

This alternative would require new headworks including mechanical screen and influent flow meter, new blowers and building, new UV system for disinfection, effluent flow meter, effluent lift station and force main to the discharge point along the Ohio River.

Exhibit 8.5 at the end of this section shows the conceptual layout for this Alternative and Table 8.5 displays the projected project cost for this Alternative.

TABLE 8.5 – ALTERNATIVE #5 - SEQUENCING BATCH REACTOR (SBR) WWTP				
DESCRIPTION	QUANTITIES	UNIT	UNIT COST	ESTIMATED COST
Pretreatment - Screening, Flow Meter, etc.	1	LS	\$375,000	\$ 375,000
Primary Treatment - Equipment, Installation, etc.	1	LS	\$1,725,000	\$ 1,725,000
Post Treatment - Disinfection, Flow Meter, etc.	1	LS	\$350,000	\$ 350,000
Operation Building	1	LS	\$275,000	\$ 275,000
SUBTOTAL – CONSTRUCTION COST				\$ 2,725,000
Construction Contingencies (10%)				\$ 272,500
Legal, Administration, Engineering & Specialty Services (25%)				\$ 681,250
TOTAL – PROJECT COST				\$ 3,678,750
ANNUAL – OPERATION, MAINTENANCE & REPLACEMENT COST ¹				\$ 89,100
TOTAL – O, M, & R PRESENT WORTH COSTS ²				\$ 944,000
SALVAGE VALUE ³				\$ (908,000)
PRESENT WORTH COSTS ⁴				\$ 3,714,750

Notes:

¹ Annual operation, maintenance & replacement costs includes semi-annual solids removal, replacement costs and operation & maintenance costs for Force Main.

² Total O, M & R costs are calculated for 20 years at 7% interest rate.

³ No marketable salvage value is available for the units after its service life.

⁴ Present worth costs are based upon 20 years at 7% interest rate

Summary and Comparison of Costs

Based upon the monetary comparison the Alternative 2 – Aerated Lagoon WWTP is the selected alternative based upon project construction costs and present worth costs. Each alternative has the same operational and maintenance costs. For each alternate there will be a savings of

differing levels that will be realized in some combination of the following: chemical, electrical, and/or manpower, but all savings costs are deemed to be negligible as one will offset the other savings. Table 8.6 presents a summary and compares the project, annual O&M, and present worth costs for each alternative.

TABLE 8.6 – MONETARY COST COMPARASION OF ALTERNATIVES			
ALTERNATIVE	PROJECT COSTS	ANNUAL O, M & R COSTS	PRESENT WORTH COSTS
#1 - Flacultative Lagoon WWTP	\$ 4,893,750	\$ 43,700	\$ 4,248,750
#2 - Aerated Lagoon WWTP	\$ 3,476,250	\$ 54,500	\$ 3,195,250
#3 - Contact Stablization WWTP	\$ 3,678,750	\$ 58,000	\$ 3,384,750
#4 - Oxidation Ditch WWTP	\$ 3,881,250	\$ 85,800	\$ 3,832,250
#5 - SBR WWTP	\$ 3,678,750	\$ 89,100	\$ 3,714,750

Nonmonetary Analysis of WWTP Alternatives

Nonmonetary analysis is utilized quantify and evaluate each alternative to the goals of the entities involved. The following are recommendations for such analysis:

- *Environmental Impacts* – Impact of each alternative on the environment.
- *Operation Evaluation* – A judgment of reliability, maintenance and operation issues of each treatment process.
- *Constructability* – the ease to obtain necessary permits and regulatory approval, construction difficulty and design constraints.
- *Public Acceptance* – A measure of public acceptance of the project.
- *Energy Use* – Energy efficiency of the treatment process.
- *Infrastructure Compatibility* – Treatment process’ ability to adapt to changes in influent characteristics.

The above characteristics will be the basis for establishing a quantitative score for each of the alternatives. A numerical ranking of 1 to 5 was given to each alternative in the order of least favorable (1) to the most favorable (5). The alternative with the highest point score is considered the most favorable alternative.

Each criterion is assigned a weight factor to rank the relative importance of the criterion to the City of Hawesville. A total weight factor of 100 points was distributed to the criteria. The score of each alternative is calculated by multiplying the criteria ranking by the weight factor and adding the total score for each alternative. Table 8.7 displays the scoring matrix.

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TABLE 8.12 - NONMONETARY COMPARASION OF WWTP ALTERNATIVES							
Evaluation Criteria	Weight Factor	Alternative #1 "No Action"		Alternative #2 Gravity Sewer		Alternative #3 Grinders & Force Main	
		Ranking	Weighted Points	Ranking	Weighted Points	Ranking	Weighted Points
Environmental Impacts	20	1	20	2	40	3	60
Operation Evaluation	20	1	20	3	60	2	40
Constructability	20	1	20	2	40	3	60
Pulic Acceptance	10	1	10	3	30	2	20
Energy Use	10	1	10	2	20	3	30
Infrastructure Compatibility	20	2	40	3	60	1	20
Total Weighted Score			120		250		230

TABLE 8.7 (CONTD) - NONMONETARY COMPARASION OF WWTP ALTERNATIVES					
Evaluation Criteria	Weight Factor	Alternative #4 Oxidation Ditch		Alternative #5 SBR	
		Ranking	Weighted Points	Ranking	Weighted Points
Environmental Impacts	20	3	60	5	100
Operation Evaluation	20	3	60	2	40
Constructability	20	2	40	3	60
Pulic Acceptance	10	3	30	4	40
Energy Use	10	2	20	1	10
Infrastructure Compatibility	20	2	40	5	100
Total Weighted Score			250		350

Alternative 3 – Contact Stabilization WWTP is the most favorable alternative based upon the nonmonetary analysis. The basis for the Non-Economic Factors scoring is discussed in the following sections.

Environmental Impacts

Alternative 5 – SBR WWTP will have the greatest ability to meet the most stringent effluent limits without a large change in treatment process. The SBR WWTP would also have the smallest footprint of all of the alternatives and have the ability to adjust the timing of process to allow for BNR if required in the future.

Operation Evaluation

Alternative 3 – Contact Stabilization WWTP is seen as the most favorable from an operations and maintenance standpoint, due to operator familiarity with the treatment process.

Constructability

Alternative 2 – Aerated Lagoon WWTP would be the easiest to build due to limited concrete work and limited footprint.

Public Acceptance

All alternatives were viewed as being acceptable to the public. But the lagoons were viewed as the least favorable due to the greater potential for odor issues.

Energy Use

Alternative 1 – Flacultative Lagoon WWTP is believed to have the lowest energy cost associated with the treatment process. This alternative should have the smallest energy profile of any of the alternatives associated due to the treatment process.

Infrastructure Compatibility

As stated above, Alternative 5 – SBR WWTP has the ability to treat varying conditions easily once known parameters are established with the particular treatment process and influent conditions.

Cost Analysis of Collection System Alternatives

Alternative 1 – “No-Action”

If the "no action" alternative is taken, the problems with failing septic tanks will only increase. When septic systems fail, the homeowners are faced with the expense of repairing or replacing their septic tank. The cost of replacing the septic system is one that many of the residents cannot afford and/or have planned for financially. If a "no action" approach is taken, the general public's health and welfare maybe subject to compromise.

This alternative will not be examined any further due to it is a no cost alternative is deemed to be not in the public's best interest.

Alternative 2 – Conventional Gravity Sewers

Gravity sewers are the traditional method used for the collection of wastewater from residential, commercial, industrial, and institutional sources. The sewer lines must be laid on grade and the topography of the area must be considered during the design process. Some lift stations would have to be installed to transport wastewater from lower laying areas to the next sewer shed. Gravity sewers are generally more expensive to construct than other alternative, but cheaper to maintain and operate.

Exhibit 8.6 at the end of this section shows the conceptual layout for this Alternative and Table 8.8 displays the projected project cost for this Alternative.

TABLE 8.8 – ALTERNATIVE #2 - CONVENTIONAL GRAVITY SEWER				
DESCRIPTION	QUANTITIES	UNIT	UNIT COST	ESTIMATED COST
Connection to Existing Manhole	5	EA	\$ 4,000	\$ 20,000
8" Gravity Sewer Main	9,200	LF	\$ 90	\$ 828,000
4" Lateral Line	5,200	LF	\$ 40	\$ 208,000
4' Concrete Manhole	46	EA	\$ 5,500	\$ 253,000
Highway Crossing, Bore & Jack	500	LF	\$ 250	\$ 125,000
Site Restoration	1	LS	\$ 80,000	\$ 80,000
SUBTOTAL – CONSTRUCTION COST				\$ 1,514,000
Construction Contingencies (10%)				\$ 151,400
Legal, Administration, Engineering & Specialty Services (25%)				\$ 378,500
TOTAL – PROJECT COST				\$ 2,043,900
ANNUAL – OPERATION, MAINTENANCE & REPLACEMENT COST ¹				\$ 15,637
TOTAL – O, M, & R PRESENT WORTH COSTS ²				\$ 166,000
SALVAGE VALUE ³				\$ (430,000)
PRESENT WORTH COSTS ⁴				\$ 1,779,900
Notes:				
¹ Annual operation, maintenance & replacement costs includes semi-annual solids removal, replacement costs and operation & maintenance costs for Force Main.				
² Total O, M & R costs are calculated for 20 years at 7% interest rate.				
³ No marketable salvage value is available for the units after its service life.				
⁴ Present worth costs are based upon 20 years at 7% interest rate				

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Alternative 3 – Individual Grinders & Force Mains

Individual grinders and force mains are an alternative to gravity sewers, where the initial capital costs can be excessive. The force mains can be smaller in size due to the grinder pump grinding all solids into small particles. Grinders and force mains are generally less expensive to construct than gravity sewers, but more expensive to maintain and operate.

Exhibit 8.7 at the end of this section shows the conceptual layout for this Alternative and Table 8.9 displays the projected project cost for this Alternative.

TABLE 8.9 – ALTERNATIVE #3 - INDIVIDUAL GRINDERS & FORCE MAINS				
DESCRIPTION	QUANTITIES	UNIT	UNIT COST	ESTIMATED COST
Connection to Existing Manhole	2	EA	\$ 4,000	\$ 8,000
3" Force Main	2,300	LF	\$ 20	\$ 46,000
2" Force Main	4,500	LF	\$ 15	\$ 67,500
1 1/2" Lateral Force Main	7,800	LF	\$ 10	\$ 78,000
Individual Grinder Station	52	EA	\$ 7,500	\$ 390,000
Highway Crossing, Bore & Jack	200	LF	\$ 250	\$ 50,000
Site Restoration	1	LS	\$ 30,000	\$ 30,000
SUBTOTAL – CONSTRUCTION COST				\$ 669,500
Construction Contingencies (10%)				\$ 66,950
Legal, Administration, Engineering & Specialty Services (25%)				\$ 167,375
TOTAL – PROJECT COST				\$ 903,825
ANNUAL – OPERATION, MAINTENANCE & REPLACEMENT COST ¹				\$ 25,330
TOTAL – O, M, & R PRESENT WORTH COSTS ²				\$ 268,000
SALVAGE VALUE ³				\$ (181,000)
PRESENT WORTH COSTS ⁴				\$ 990,825
Notes:				
¹ Annual operation, maintenance & replacement costs includes semi-annual solids removal, replacement costs and operation & maintenance costs for Force Main.				
² Total O, M & R costs are calculated for 20 years at 7% interest rate.				
³ No marketable salvage value is available for the units after its service life.				
⁴ Present worth costs are based upon 20 years at 7% interest rate				

Summary and Comparison of Costs

Based upon the monetary comparison the Alternative 3 – Individual Grinders & Force Mains is the selected alternative based upon project construction costs and present worth costs. Table 8-10 presents a summary and compares the project, annual O&M, and present worth costs for each alternative.

TABLE 8.10 – MONETARY COST COMPARASION OF ALTERNATIVES			
ALTERNATIVE	PROJECT COSTS	ANNUAL O, M & R COSTS	PRESENT WORTH COSTS
#1 - "No Action"	\$ -	\$ -	\$ -
#2 - Conventional Gravity Sewer	\$ 2,043,900	\$ 15,637	\$ 1,779,900
#3 - Individual Grinders & Force Mains	\$ 903,825	\$ 25,330	\$ 990,825

Nonmonetary Analysis of Collection System Alternatives

Nonmonetary analysis is utilized quantify and evaluate each alternative to the goals of the entities involved. The following are recommendations for such analysis:

- *Environmental Impacts* – Impact of each alternative on the environment.
- *Operation Evaluation* – A judgment of reliability, maintenance and operation issues of each treatment process.
- *Constructability* – the ease to obtain necessary permits and regulatory approval, construction difficulty and design constraints.
- *Public Acceptance* – A measure of public acceptance of the project.
- *Energy Use* – Energy efficiency of the treatment process.
- *Infrastructure Compatibility* – Treatment process' ability to adapt to changes in influent characteristics.

The above characteristics will be the basis for establishing a quantitative score for each of the alternatives. A numerical ranking of 1 to 3 was given to each alternative in the order of least favorable (1) to the most favorable (3). The alternative with the highest point score is considered the most favorable alternative.

Each criterion is assigned a weight factor to rank the relative importance of the criterion to the City of Hawesville. A total weight factor of 100 points was distributed to the criteria. The score of each alternative is calculated by multiplying the criteria ranking by the weight factor and adding the total score for each alternative. Table 8-11 displays the scoring matrix.

TABLE 8.11 - NONMONETARY COMPARASION OF SEWER ALTERNATIVES							
Evaluation Criteria	Weight Factor	Alternative #1 "No Action"		Alternative #2 Gravity Sewer		Alternative #3 Grinders & Force Main	
		Ranking	Weighted Points	Ranking	Weighted Points	Ranking	Weighted Points
Environmental Impacts	20	1	20	2	40	3	60
Operation Evaluation	20	1	20	3	60	2	40
Constructability	20	1	20	2	40	3	60
Pulic Acceptance	10	1	10	3	30	2	20
Energy Use	10	1	10	3	30	2	20
Infrastructure Compatibility	20	2	40	3	60	1	20
Total Weighted Score			120		260		220

Alternative 2 - Conventional Gravity Sewer is the most favorable alternative based upon the nonmonetary analysis. The basis for the Non-Economic Factors scoring is discussed in the following sections.

Environmental Impacts

Alternative 3 - Individual Grinder & Force Mains will have the least environmental impact during construction, with the force mains being able to be installed just below the frost line (36") versus gravity sewers that would be deeper creating a large surface impact.

Operation Evaluation

Alternative 2 - Conventional Gravity Sewer is seen as the most favorable from an operations and maintenance standpoint. The existing collection system is already constructed in conventional gravity sewers.

Constructability

Alternative 3 - Individual Grinder & Force Mains would have the least initial capital cost and is the easiest alternative to construct.

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Public Acceptance

All alternatives were viewed as being acceptable to the public except the “No Action” alternative.

Energy Use

Alternative 2 – Conventional Gravity would have the least amount of energy use for the City of Hawesville with the only electric consumption taking place at the existing lift station(s).

Infrastructure Compatibility

Alternative 2 – Conventional Gravity would be the most compatible to the existing collection system. The City of Hawesville’s collection system is comprised exclusively of gravity sewer mains and lift stations with no grinders currently in operation.

IV. Recommended Alternative

Based on the monetary and nonmonetary evaluations, Alternative 3 – Contact Stabilization WWTP is the recommended WWTP alternative and Alternative 2 – Conventional Gravity Sewers are the recommended Collection System alternative.

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 Hancock County, Kentucky

REGIONAL FACILITY PLAN
 SECTION 8
 WWTP ALTERNATIVE # 1
 FACULTATIVE LAGOON WWTP

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SHEET NO. 8.1

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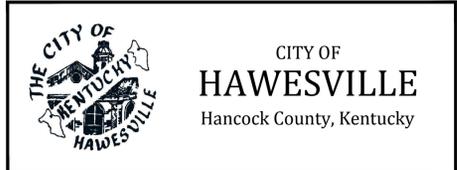


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REGIONAL FACILITY PLAN
SECTION 8

WWTP ALTERNATIVE # 2
AERATED LAGOON WWTP

PROJECT NO.	15017
SHEET NO.	8.2

PROJECT NO.	15017
SHEET NO.	8.2

PA\PROJECTS\Hawesville\15017 - WWTP\Notes\RFPP\DWG\SECTION 8\EXHIBIT 8-3 ALTERNATIVE No. 1\WWTP.dwg KEG 6/12/15

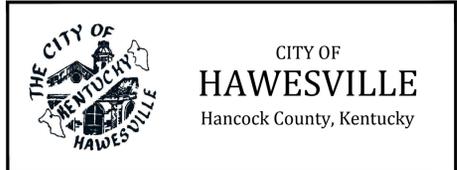


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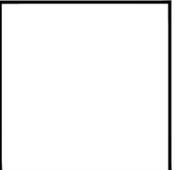
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REGIONAL FACILITY PLAN
SECTION 8

WWTP ALTERNATIVE # 3
CONTACT STABILIZATION WWTP



PROJECT NO.	15017
SHEET NO.	8.3

PA\PROJECTS\Hawesville\15017 - WWTP\Notes\RFPP\DWG\SECTION 8\EXHIBIT 8.4 ALTERNATIVE No. 4 WWTP.dwg KEG 6/12/15

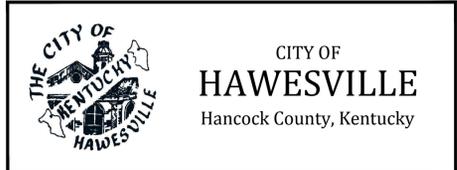


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REGIONAL FACILITY PLAN
SECTION 8

WWTP ALTERNATIVE # 4
CONTACT STABILIZATION WWTP

PROJECT NO.	15017
SHEET NO.	8.4

PROJECT NO.	15017
SHEET NO.	8.4

PA\PROJECTS\Hawesville\15017 - WWTP\Notes\RP\DWG\SECTION 8\EXHIBIT 8-5 ALTERNATIVE NO 5 WWTP.dwg KEG 6/12/15

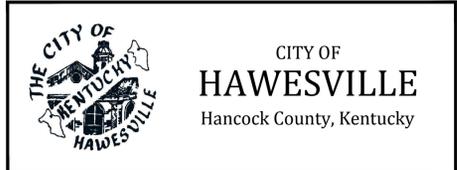


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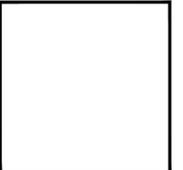
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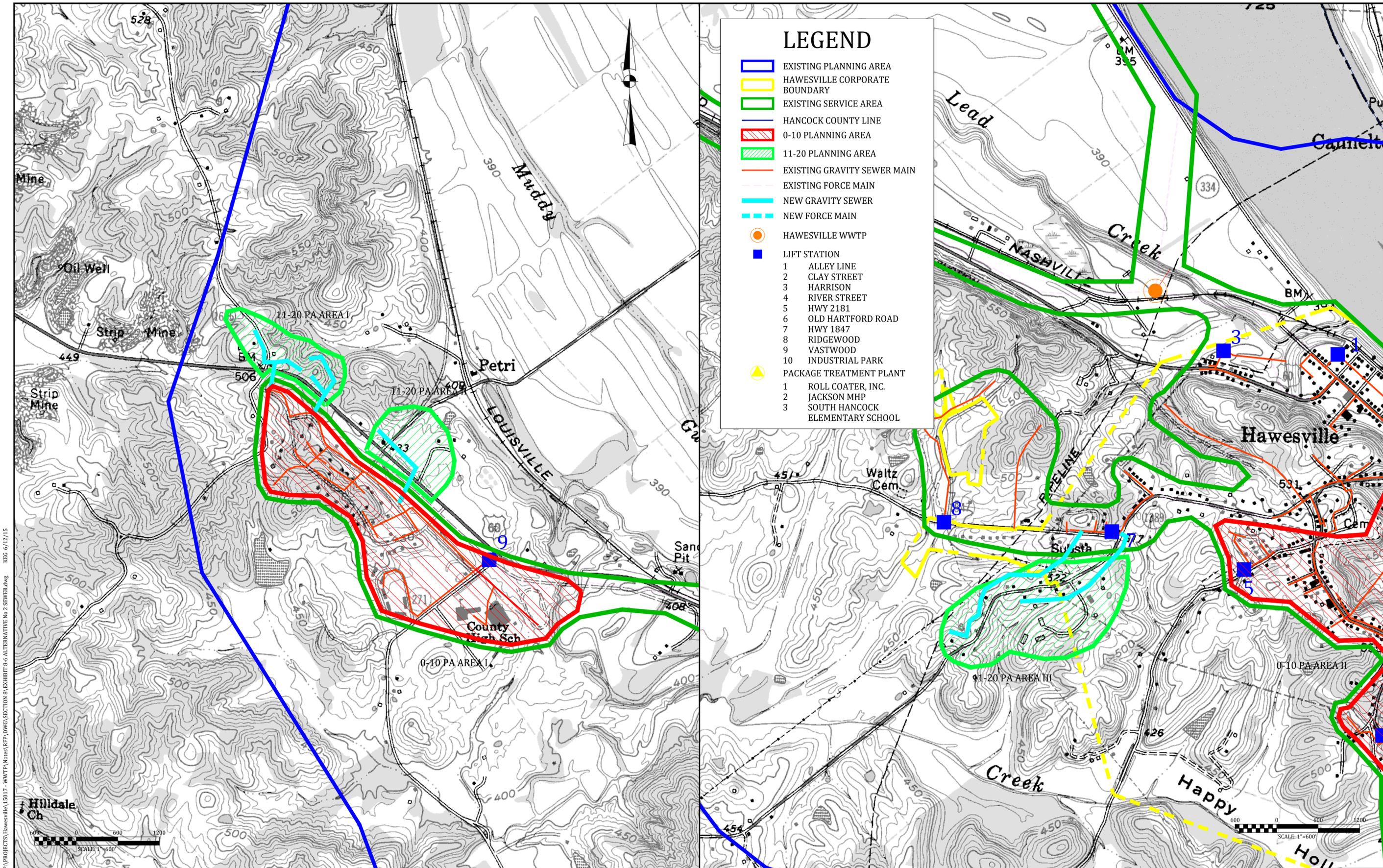
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REGIONAL FACILITY PLAN
SECTION 8
WWTP ALTERNATIVE # 5
SBR WWTP



PROJECT NO.	15017
SHEET NO.	8.5



LEGEND

- EXISTING PLANNING AREA
- HAWESVILLE CORPORATE BOUNDARY
- EXISTING SERVICE AREA
- HANCOCK COUNTY LINE
- 0-10 PLANNING AREA
- 11-20 PLANNING AREA
- EXISTING GRAVITY SEWER MAIN
- EXISTING FORCE MAIN
- NEW GRAVITY SEWER
- NEW FORCE MAIN
- HAWESVILLE WWTP
- LIFT STATION
- 1 ALLEY LINE
- 2 CLAY STREET
- 3 HARRISON
- 4 RIVER STREET
- 5 HWY 2181
- 6 OLD HARTFORD ROAD
- 7 HWY 1847
- 8 RIDGEWOOD
- 9 VASTWOOD
- 10 INDUSTRIAL PARK
- PACKAGE TREATMENT PLANT
- 1 ROLL COATER, INC.
- 2 JACKSON MHP
- 3 SOUTH HANCOCK ELEMENTARY SCHOOL

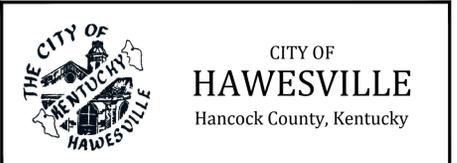
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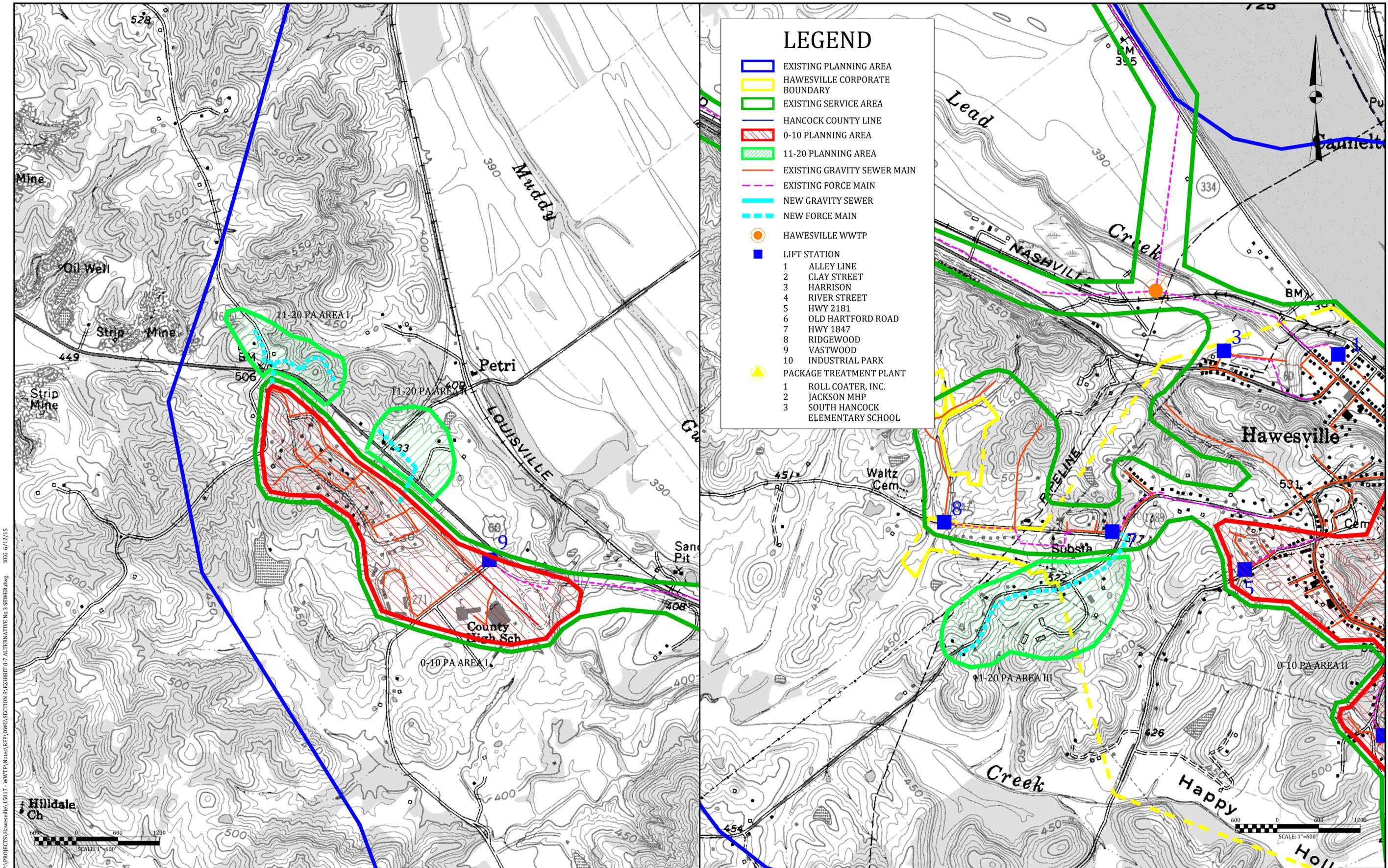
DATE: JUNE 2015
 PROJECT MGR: MRC
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CITY OF HAWESVILLE
 Hancock County, Kentucky

REGIONAL FACILITY PLAN
 SECTION 8
 ALTERNATIVE # 2 - CONVENTIONAL GRAVITY SEWERS

PROJECT NO. 15017
SHEET NO. 8.6



LEGEND

- EXISTING PLANNING AREA
- HAWESVILLE CORPORATE BOUNDARY
- EXISTING SERVICE AREA
- HANCOCK COUNTY LINE
- 0-10 PLANNING AREA
- 11-20 PLANNING AREA
- EXISTING GRAVITY SEWER MAIN
- EXISTING FORCE MAIN
- NEW GRAVITY SEWER
- NEW FORCE MAIN
- HAWESVILLE WWTP
- LIFT STATION
- 1 ALLEY LINE
- 2 CLAY STREET
- 3 HARRISON
- 4 RIVER STREET
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- 2 JACKSON MHP
- 3 SOUTH HANCOCK ELEMENTARY SCHOOL

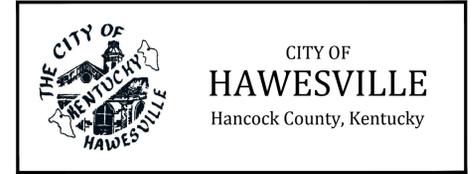
PA PROJECTS\Hawesville\15017 - WWTP\Notes\REF\DWG\SECTION 8\EXHIBIT 8.7 ALTERNATIVE #3 SEWER.dwg REC 6/12/15

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REGIONAL FACILITY PLAN
 SECTION 8
 ALTERNATIVE # 3 - INDIVIDUAL
 GRINDERS & FORCE MAINS

PROJECT NO. 15017
SHEET NO. 8.7

SECTION 9: CROSS-CUTTER CORRESPONDENCE & MITIGATION

During the preparation of the Regional Facility Plan a letter and planning area map were sent to United States Fish and Wildlife Service, Kentucky Department of Fish and Wildlife Resource, Kentucky Heritage Council, United States Army Corps of Engineers and USDA Owensboro Service Center that requested a review of concerns for their respective agency for the proposed planning areas. An original letter, at the end of this section, was submitted to each agency for their review and comment. The individual agencies response follows the original letter. Below are the summaries of their responses.

United States Fish and Wildlife Service

The USFWS reviewed the planning area and the anticipated areas to be affected by future projects that are discussed in this Regional Facility Plan. Their response indicated the possible presence of ten (10) federally listed species and one proposed listed species: Indiana bat (*Myotis sodalists*), Northern long-eared bat (*Myotis septentrionalis*) **proposed**, orangefoot pimpleback (*Plethobasus cooperianus*), pink mucket (*Lampsilis abrupt*), ring pink (*Obovaria retusa*), sheepnose (*Plethobasus cyphus*), clubshell (*Pleurobema clava*), rough pigtoe (*Pleurobema plenum*), fat pocketbook (*Potamilus capax*), fanshell (*Cyprogenia stegaria*) and interior least tern (*Sterna antillarum athalassos*). They also advised that strict erosion control measures during and after construction in order to protect aquatic habitats.

Kentucky Department of Fish and Wildlife Resource

The KYDFWR reviewed the planning area and the anticipated areas to be affected by future projects that are discussed in the Regional Facility Plan. Their response indicated the possible presence of one (1) state listed species, Pocketbook (*Podilymbus podiceps*). They also advised that strict erosion control measures during and after construction in order to protect aquatic habitats.

The State Historic Preservation Office

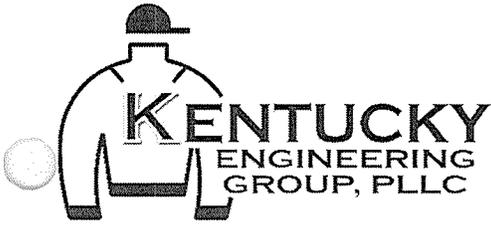
The State Historic Preservation Office of the Kentucky Heritage Council stated that the proposed projects have the potential to impact historic properties eligible for or listed on the National Register of Historic Places. They directed that as such each project was prepared for construction, it will need to be submitted individually for re their review.

USDA Natural Resources Conservation Service

The USDA – NRCS reviewed the planning area and stated that the lands for the proposed project will not impact the Farmland Protection Policy Act of 1981.

US Army Corps of Engineers

Awaiting response.



May 13, 2015

Mr. Virgil Lee Andrews, Jr., Field Office Supervisor
U.S. Department of the Interior
Fish and Wildlife Service
J.C. Watts Federal Building
330 West Broadway, Suite 265
Frankfort, KY 40601

RE: City of Hawesville
Regional Facilities Plan Update

Dear Mr. Andrews:

The City of Hawesville is in the process of completing an update to its wastewater Regional Facilities Plan. Within this Plan Update are proposed projects that may be undertaken by the City over the next twenty years. The proposed projects are anticipated to be completed during the zero to five year time frame; the remaining projects will be completed either during the six to ten year period or eleven to twenty year period.

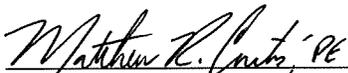
Enclosed is a map that shows the location of the proposed projects. The proposed projects within the zero to five year time frame include constructing a new wastewater treatment plant and various sewer extensions.

Please advise us of any present concerns your office may have related to possible effects of the abovementioned projects on threatened or endangered species or critical wildlife habitat.

We would appreciate a response within 30 days, if possible. If you need any further information or wish to discuss the project, please contact me at 502-370-6551.

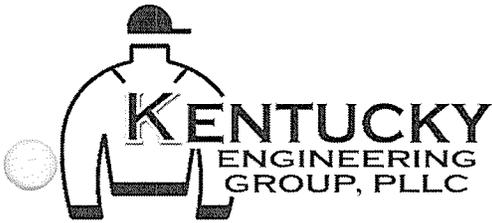
Sincerely,

KENTUCKY ENGINEERING GROUP, PLLC


Matthew R. Curtis, PE

Enclosure- Map

P.O. Box 1034
Versailles, Kentucky 40383
Phone: (859) 251.4127
Fax: (859) 251.4137
Email: info@kyengr.com
www.kyengr.com



May 13, 2015

Ms. Lindy Casebier
State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort KY 40601

RE: City of Hawesville
Regional Facilities Plan Update

Dear Ms. Casebier:

The City of Hawesville is in the process of completing an update to its wastewater Regional Facilities Plan. Within this Plan Update are proposed projects that may be undertaken by the City over the next twenty years. The proposed projects are anticipated to be completed during the zero to five year time frame; the remaining projects will be completed either during the six to ten year period or eleven to twenty year period.

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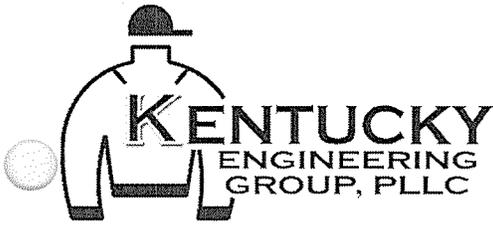
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Matthew R. Curtis, PE

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Email: info@kyengr.com
www.kyengr.com



May 13, 2015

Mr. Greg Johnson, Commissioner
Kentucky Department of Fish and Wildlife Resources
#1 Sportsman's Lane
Frankfort KY 40601

RE: City of Hawesville
Regional Facilities Plan Update

Dear Mr. Johnson:

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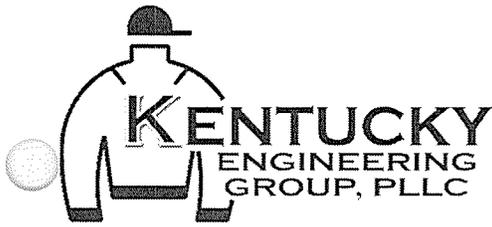
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KENTUCKY ENGINEERING GROUP, PLLC


Matthew R. Curtis, PE

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Versailles, Kentucky 40383
Phone: (859) 251.4127
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www.kyengr.com



May 13, 2015

Mr. Dan Porter, Manager
Owensboro Service Center
3100 Alvery Park Drive West
Owensboro, KY 42303

RE: City of Hawesville
Regional Facilities Plan Update

Dear Mr. Porter:

The City of Hawesville is in the process of completing an update to its wastewater Regional Facilities Plan. Within this Plan Update are proposed projects that may be undertaken by the City over the next twenty years. The proposed projects are anticipated to be completed during the zero to five year time frame; the remaining projects will be completed either during the six to ten year period or eleven to twenty year period.

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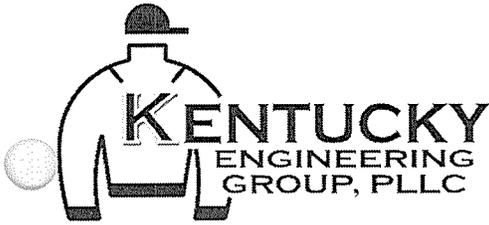
Sincerely,

KENTUCKY ENGINEERING GROUP, PLLC


Matthew R. Curtis, PE

Enclosure- Map

P.O. Box 1034
Versailles, Kentucky 40383
Phone: (859) 251.4127
Fax: (859) 251.4137
Email: info@kyengr.com
www.kyengr.com



May 13, 2015

U.S. Army Engineer District, Louisville Corps of Engineers
Regulatory Branch
PO Box 59
Louisville, KY 40201-0059

RE: City of Hawesville
Regional Facilities Plan Update

To whom it may concern:

The City of Hawesville is in the process of completing an update to its wastewater Regional Facilities Plan. Within this Plan Update are proposed projects that may be undertaken by the City over the next twenty years. The proposed projects are anticipated to be completed during the zero to five year time frame; the remaining projects will be completed either during the six to ten year period or eleven to twenty year period.

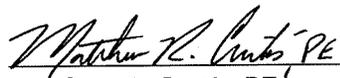
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Sincerely,

KENTUCKY ENGINEERING GROUP, PLLC


Matthew R. Curtis, PE

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kentucky Ecological Services Field Office
330 West Broadway, Suite 265
Frankfort, Kentucky 40601
(502) 695-0468

May 26, 2015

Mr. Mathew R. Curtis
Kentucky Engineering Group, PLLC
P.O Box 1034
Versailles, Kentucky 40383

Re: FWS 2015-B-0479; City of Hawesville Wastewater Regional Facilities Plan Update,
Hancock County, Kentucky

Dear Mr. Curtis:

Thank you for the opportunity to provide comments on the above-referenced project. The U.S. Fish and Wildlife Service (Service) has reviewed this proposed project and offers the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*). This is not a concurrence letter. Please read carefully, as further consultation with the Service may be required.

In accordance with the provisions of the Fish and Wildlife Coordination Act, the Service has reviewed the project with regards to the effects the proposed actions may have on wetlands and/or other jurisdictional waters. We recommend that project plans be developed to avoid impacting wetland areas and/or streams, and reserve the right to review any required federal or state permits at the time of public notice issuance. The U.S. Army Corps of Engineers should be contacted to assist you in determining if wetlands or other jurisdictional waters are present or if a permit is required.

In accordance to section 7 of the ESA, the Service must also consider the effects of actions interrelated and interdependent to the proposed project. "Interrelated actions" are those that are part of a larger action and depend on the larger action for their justification and "interdependent actions" are those that have no independent utility apart from the action under consideration. Please inform us of any future actions and/or projects (*i.e.*; additional development, roads, structures, utilities, pump stations, etc.) that would reasonably occur as a result of the proposed project so that we may adequately analyze those effects.

In order to assist you in determining if the proposed project has the potential to impact protected species we have searched our records for occurrences of listed species within the vicinity of the proposed project. Based upon the information provided to us and according to our databases, we believe that the following federally listed species have the potential to occur within the project vicinity. The listed species are:

Group	Species	Common name	Legal* Status
Mammals	<i>Myotis sodalis</i>	Indiana bat	E
	<i>Myotis septentrionalis</i>	Northern long-eared bat	P
Mussels	<i>Plethobasus cooperianus</i>	orangefoot pimpleback	E
	<i>Lampsilis abrupta</i>	pink mucket	E
	<i>Obovaria retusa</i>	ring pink	E
	<i>Plethobasus cyphus</i>	sheepnose	E
	<i>Pleurobema clava</i>	clubshell	E
	<i>Pleurobema plenum</i>	rough pigtoe	E
	<i>Potamilus capax</i>	fat pocketbook	E
	<i>Cyprogenia stegaria</i>	fanshell	E
Birds	<i>Sterna antillarum athalassos</i>	interior least tern	E

* Key to notations: E = Endangered, T = Threatened, P = Proposed, C = Candidate, CH = Critical Habitat

We must advise you that collection records available to the Service may not be all-inclusive. Our database is a compilation of collection records made available by various individuals and resource agencies. This information is seldom based on comprehensive surveys of all potential habitats and thus does not necessarily provide conclusive evidence that protected species are present or absent at a specific locality.

Indiana bat

Northern long-eared bat

The proposed project is located in "potential habitat" for the Indiana bat and the northern long-eared bat. These two bat species winter in caves, rockshelters, abandoned underground mines, and other structures. During the summer they roost in trees and forage in and around forested habitat. In order to address the concerns and be in compliance with the ESA, we have the following recommendations relative to potential direct and/or indirect effects as a result of impacts to the habitats listed above:

- (1) Based on the presence of numerous caves, rock shelters, and underground mines in Kentucky, we believe that it is reasonable to assume that other caves, rock shelters, and/or abandoned underground mines may occur within the project area, and, if they occur, they could provide winter habitat for Indiana bats. Therefore, we recommend that the project proponent survey the project area for caves, rock shelters, and underground mines, identify any such habitats that may exist on-site, and avoid impacts to those sites pending an analysis of their suitability as Indiana bat habitat and/or northern long-eared bat by this office.
- (2) Both bat species utilize a wide array of forested habitats, including riparian forests, bottomlands, and uplands for both summer foraging and roosting habitat. Suitable roost trees are greater than 3 inches diameter at breast height (DBH), can be living or dead, and

exhibit any of the following characteristics: exfoliating bark, cavities of dead and live trees, broken limbs, broken tops, cracks, and crevices.

To address potential impacts to Indiana bat or the northern long-eared bat summer roosting and foraging habitat, the following options are available:

- The project proponent can modify the proposed project to eliminate or reduce impacts to suitable habitat, thus avoiding impacts. A habitat assessment may be useful in determining if suitable summer roosting or foraging habitat is present in the action area of the proposed project.
- The project proponent can survey portions of the project area to determine the presence or likely absence of the species within the project area in an effort to determine if potential effects are likely. A qualified biologist who holds the appropriate collection permits must undertake such surveys in accordance with our most current survey guidance, which is available at the following link:

https://www.fws.gov/frankfort/indiana_bat_procedures.html

If any Indiana bats or northern long-eared bats are captured, we request written notification of such occurrence(s) and further coordination and consultation. Survey results cannot be used to support probable absence of a bat species that has already been identified as “known” habitat for that species.

- The project proponent can request formal section 7 consultation through the lead federal action agency associated with the proposed project. To request formal consultation, the project proponent would need to submit a Biological Assessment that describes the action and evaluates the effects of the action on the listed species in the project area. After formal consultation is initiated, the Service has 135 days to prepare a Biological Opinion that analyzes the effects of the action on the listed species and identifies actions to minimize those effects.
- The project proponent may provide the Service with additional information through the informal consultation process, prepared by a qualified biologist, that includes site-specific habitat information and a thorough effects analysis (direct, indirect, and cumulative) to support a “not likely to adversely affect” determination. The Service will review this and decide if there is enough supporting information to concur with the determination.
- The project proponent may choose to assume presence of the species in the project area and enter into a Conservation Memorandum of Agreement (MOA) with the Service to account for the incidental take of Indiana bats and/or northern long-eared bats. By entering into a Conservation MOA with the Service, Cooperators gain flexibility with regard to the removal of suitable. In exchange for this flexibility, the Cooperator provides recovery-focused conservation

benefits to the species through the implementation of minimization and mitigation measures that are described in the Conservation Strategy for Forest-Dwelling Bats in the Commonwealth of Kentucky. For additional information about this option, please contact our office.

Federally listed mussels

Freshwater mussels are one of the most imperiled groups of animals in North America. Reservoir construction, siltation, channelization, and water pollution are all factors that have contributed to the decline of our native mussel populations. The runoff from urban areas has degraded the quality of water and the substrate of many streams. As filter feeders, mussels are sensitive to contaminants and function as indicators of problems with water quality. Several species of federally listed mussels are known to exist in Hancock County. Orangefoot pimpleback, pink mucket, ring pink, sheepsnose, clubshell, rough pigtoe, fat pocketbook, and fanshell are known to occur, or may occur within the Ohio River and its watershed in Hancock County. The potential of the proposed project to impact federally listed mussel species, either directly or indirectly as a result of siltation/sedimentation and contamination, should be addressed when evaluating the effects the proposed project

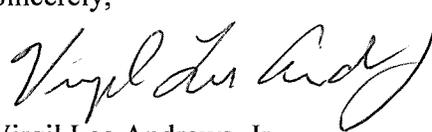
Interior least tern

Interior least terns breed in or near the major river systems of the Great Plains and the Midwest. In Kentucky they spend the spring and summer months around the lower Ohio River and Mississippi River, nesting in loose colonies beginning in late April to early June. Their nests are shallow depressions on sparsely vegetated sand and gravel substrates. Colonies often use habitat on bars and islands within a wide unobstructed river channel but also commonly use manmade areas, such as sand and gravel pits. Reproductive success is decreased by human disturbance.

We recommend that the project proponent assess the action area of the proposed project to determine its suitability of interior least tern nesting habitat. If suitable habitat is present, the project proponent should evaluate potential impacts of the proposed project to the species. Surveys may be necessary to determine if the species is present in the action area of the proposed project.

Thank you again for your request. Your concern for the protection of endangered and threatened species is greatly appreciated. If you have any questions regarding the information that we have provided, please contact Jonathan Baxter at (502) 695-0468 extension 111.

Sincerely,



Virgil Lee Andrews, Jr.
Field Supervisor



STEVEN L. BESHEAR
GOVERNOR

**TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY HERITAGE COUNCIL**

BOB STEWART
SECRETARY

THE STATE HISTORIC PRESERVATION OFFICE
300 WASHINGTON STREET
FRANKFORT, KENTUCKY 40601
PHONE (502) 564-7005
FAX (502) 564-5820
www.heritage.ky.gov

CRAIG A. POTTS
EXECUTIVE DIRECTOR AND
STATE HISTORIC PRESERVATION OFFICER

May 20, 2015

Mr. Matthew R. Curtis, PE
Kentucky Engineering Group, PLLC
P.O. Box 1034
Versailles, KY 40383

**Re: City of Hawesville
Regional Facilities Plan Update**

Dear Mr. Curtis:

Thank you for your letter concerning the above-referenced proposed project. A review of our files indicates that the proposed project areas have not been surveyed for archaeological resources. Investigations of projects in similar environmental contexts have resulted in the identification of a large number of sites, some of which have been determined eligible for listing in the National Register.

Therefore, I recommend that the proposed project areas *that extend outside previously disturbed* road right of ways be surveyed by a professional archaeologist and that the resulting report of these investigations be submitted to our office for review and comment. Where a given project area or portions thereof have been disturbed by prior construction, the applicant may file documentation of that disturbance with the State Historic Preservation Officer and may request an opinion concerning the need of an archaeological survey. Note that agricultural activity, such as plowing, is not sufficient disturbance to preclude the need for an archaeological survey. The State Historic Preservation Officer must review and approve the survey reports generated from these surveys.

If any of the above ground elements of the proposed projects are adjacent or within view of structures 50 years of age or older at the time the project is being completed, please submit photos of the structure to our office to determine if further consultation is needed.

Should you have any questions, feel free to contact Nick Laracuate of my staff at 502.564.7005, extension 122.

Sincerely,

Craig A. Potts,
Executive Director and
State Historic Preservation Officer

CP:nrl KHC # 44154



**TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES**

Steven L. Beshear
Governor

#1 Sportsman's Lane
Frankfort, Kentucky 40601
Phone (502) 564-3400
1-800-858-1549
Fax (502) 564-0506
fw.ky.gov

Bob Stewart
Secretary

Gregory K. Johnson
Commissioner

2 June 2015

Kentucky Engineering Group, PLLC
Attn: Matthew R. Curtis, P.E.
P.O. Box 1034
Versailles, Kentucky 40383

RE: City of Hawesville
Regional Facilities Plan Update

Dear Mr. Curtis:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) has received your request for information pertaining to the subject project. The Kentucky Fish and Wildlife Information System indicates that the federally-listed Rabbitsfoot (*Quadrula cylindrica cylindrica*), Orangefoot Pimpleback (*Plethobasus cooperianus*), and Sheepnose (*Phethobasus cyphus*) are known to occur within close proximity of the project area. The Pocketbook (*Lampsilis ovata*) and Pied-billed Grebe (*Podilymbus podiceps*) are additional state-listed species known to occur near the project area. Please be aware that our database system is a dynamic one that only represents our current knowledge of various species distributions.

This project does not occur within known bat habitat according to the U.S. Fish and Wildlife Service Kentucky Field Office (USFWS). If any tree clearing is required for the projects (trees above 3" dbh) or tree-roosting bat species are encountered during the project, please contact the USFWS to discuss ways to minimize impacts to these species.

To minimize impacts to the aquatic environment, the KDFWR recommends that erosion control measures be developed and implemented prior to construction to reduce siltation into waterways located within the project area. Such erosion control measures may include, but are not limited to silt fences, staked straw bales, brush barriers, sediment basins, and diversion ditches. Erosion control measures will need to be installed prior to construction and should be inspected and repaired regularly as needed.

I hope this information is helpful to you, and if you have questions or require additional information, please call me at (502) 564-7109 extension 4453.



Sincerely,

A handwritten signature in black ink, appearing to read "Daniel Stoelb". The signature is written in a cursive style with a large initial 'D'.

Dan Stoelb
Environmental Scientist

Cc: Environmental Section File



United States Department of Agriculture

Natural Resources
Conservation Service

June 1, 2015

Owensboro Service Center
3100 Alvey Park Drive West
Owensboro, KY 42303
Voice 270.685.1707
Fax 855.635.4608

Matthew R. Curtis, P.E.
Kentucky Engineering Group, PLLC
P.O. Box 1034
Versailles, KY 40383

Mr. Curtis:

This letter is in response for your request for information about the new wastewater treatment plant and sewer line upgrade near Hawesville, KY. As per our discussion on the telephone on May 26, 2015, since the sewer plant is going on the same property as the existing plant and the sewer line upgrades are going where existing sewer lines are, the Farmland Protection Policy Act of 1981 (FPPA) will not apply to this project as this ground is considered as "previously converted" ground for urban usage.

As for threatened or endangered species or critical wildlife habitat, Hancock County does have the Orange-Foot Pimpleback Mussels (Endangered species) in the Ohio River main channel, the Indiana Bat (Endangered species) throughout the county, and the Copperbelly Water Snake (species covered by State Conservation Agreement) throughout the county.

If this office may be of additional assistance, please do not hesitate to contact our office in Owensboro, KY by calling the District Conservationist, Dwayne Sandefur at 270-685-1707 ext. 3, or myself at 270-685-1707 ext. 131.

A handwritten signature in black ink that reads "David Gehring". The signature is written in a cursive, flowing style.

DAVID GEHRING
Resource Soil Scientist, Owensboro, KY

Cc:
Dwayne Sandefur, District Conservationist, Owensboro, KY

SECTION 10: EVALUATION OF RECOMMENDED REGIONAL FACILITY PLAN

Recommended Plan

The recommended alternative is to construct a new Contact Stabilization WWTP at the existing site. All future expansion of the collection system shall be constructed with Conventional Gravity Sewers. The WWTP will be sized to handle the existing wastewater flows as well as the collection system expansions outlined in the 0-10 year planning area, but will be designed so that expansion of the WWTP can occur with minimal interruption of daily operation. It is the recommendation of this plan to continue to address I/I throughout the schedule of projects. By reducing I/I within the existing system, Hawesville can limit the amount of treatment capacity that will be required when expanding the collection system. The recommended plan will be constructed in multiple phases as funding is secured or as development within the planning area demands it. Discussion of the possible phasing are discussed below. Exhibit 10.1 shows the selected plan. Table 10-1 displays the costs of both Phase I and Phase II.

Phase I – New WWTP

The first phase would be to construct a new 0.300 MGD Contact Stabilization WWTP located at the existing site, decommissioning of existing WWTP, and collection system rehabilitation in the 0-10 Planning Areas.

The new 0.300 MGD WWTP will be constructed in such a manner to be easily upgraded to a 0.500 MGD. The collection system rehabilitation will be a continued effort of the City of Hawesville. Projects will replace failing collection system components and removing I/I focusing in the Vastwood and Clay Street Sewer Sheds.

Phase II – Collection System Expansion

The second phase of the recommended plan is the continuation of the expansion of the existing collection system. Expansion within the planning areas (0-10 & 11-20) would be constructed in Phase II. Phase II will be an ongoing process during the 20 year planning period of this document. Projects within these planning areas are not necessarily constrained by their planning area but as the desire/need is recognized, a project will move forward.

TABLE 10-1 – SUMMARY OF RECOMMENDED ALTERNATIVES			
Planning Area	QUANTITIES	Type	ESTIMATED COST ¹
0-10	New 0.300 MGD Contact Stabilization WWTP	New	\$ 3,700,000
	Vastwood Sewer Shed System Improvements	Rehabilitation	\$ 1,200,000
0-10 Planning Area Total			\$ 4,900,000
11-20	Clay Street Sewer Shed Improvements	Rehabilitation	\$ 1,300,000
	Area I Collection System Extension	New	\$ 1,000,000
	Area II Collection System Extension	New	\$ 650,000
	Area II Collection System Extension	New	\$ 400,000
11-20 Planning Area Total			\$ 3,350,000
TOTAL – PROJECT COST			\$ 8,250,000

Notes:

¹ All Estimated Costs are based upon 2015 dollars.

I. Environmental Impacts

All phases of the recommended plan will require environmental reviews and be reviewed by appropriate regulatory agencies. The new WWTP and collection system expansion will be constructed to minimize any adverse environmental impacts, with guidance from the regulatory authorities.

Construction of a new WWTP will provide a more environmentally friendly treatment process by having a more reliable operations, energy efficient profile and higher effluent limit capabilities. The proposed collection system expansion would also eliminate point discharges into the waterways of the Commonwealth and transporting the flow to a centralized treatment facility. Removing I/I from the existing collection system would help minimize peak flows, allowing for a more reliable treatment process and eliminate surcharging events.

II. Institutional Structure

The City of Hawesville has the legal authority to implement the recommendations made within the RFP within their planning area, approval of RFP is located in Appendix D.

III. Funding Plan

In order to implement the recommendations made in the RFP, funding will need to be secured from a variety of local, state and federal funding agencies. The City of Hawesville will seek funding from at least the following agencies Community Development Block Grant, USDA Rural Development, KIA SRF and Coal Severance Funds.

City of Hawesville Regional Facility Plan



Based upon recent discussions with funding agencies, the City of Hawesville will look to Community Development Block Grant and Kentucky Infrastructure Authority (KIA) State Revolving Fund to fund the construction and design of the new WWTP. Currently, the City of Hawesville is working to submit the CDBG Application and the city is already listed on the 2016 Intended Use Plan Fund A.

Due to the scope of the recommended projects, both loan and grant moneys will be utilized to implement the recommended project. The current rate schedules are listed below:

Current Rate Schedule

Usage Bracket	Rate per 1,000 gallons
1,000 g or less	\$8.00
Above 1,000 g for each 1,000 g after	\$4.75
Bill for 4,000 gallon of usage	\$22.25

Proposed Rate Schedule

The proposed rate structure is based upon proposed projects in 0-10 year planning period, including rehabilitation work within the existing system and construction of the new WWTP.

The proposed rate schedules are based upon possible funding sources, with no committed sources of funding. The total funding package will ultimately determine the rates required for debt service, short lived assets and operation and maintenance.

Proposed Rate Schedule with New WWTP

Usage Bracket	Residential Inside City	Industrial
1,000 g or less	\$11.00	\$16.00
1,000 g to 5,000 g for each 1,000 g	\$6.00	\$8.50
Above 5,000 g for each 1,000 g after	\$9.00	\$9.00
Bill for 4,000 gallon of usage	\$29.00	\$41.50

IV. Implementation Schedule

The implementation schedule for the recommended plan will be constructed in a phased approach that will allow the City of Hawesville to improve the existing facilities, construct a new WWTP and expand the collection system to serve citizens outside of their current service area, if deemed feasible.

- 2015 - 2025 - Phase I - Construction of new WWTP and rehabilitation of the Clay Street and Vastwood Sewer Sheds of the Hawesville Collection System.
- 2025- 2035 - Phase II - Expansion of collection system and continued rehabilitation of existing collection system.

PA\PROJECTS\Hawesville\15017 - WWTP\Notes\RP\DWG\SECTION 10\EXHIBIT 10-1 ALTERNATIVE No 3 WWTP.dwg KEG 6/15/15

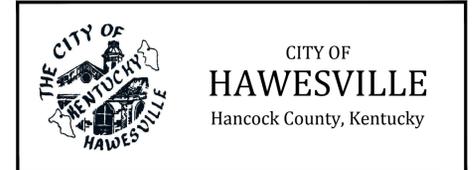


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NO.	DATE	REVISIONS	BY

DATE:	JUNE 2015
PROJECT MGR:	MRC
DRAWN BY:	MRC
CHECKED BY:	MRC
SCALE:	AS NOTED
2015 © Kentucky Engineering Group, PLLC	

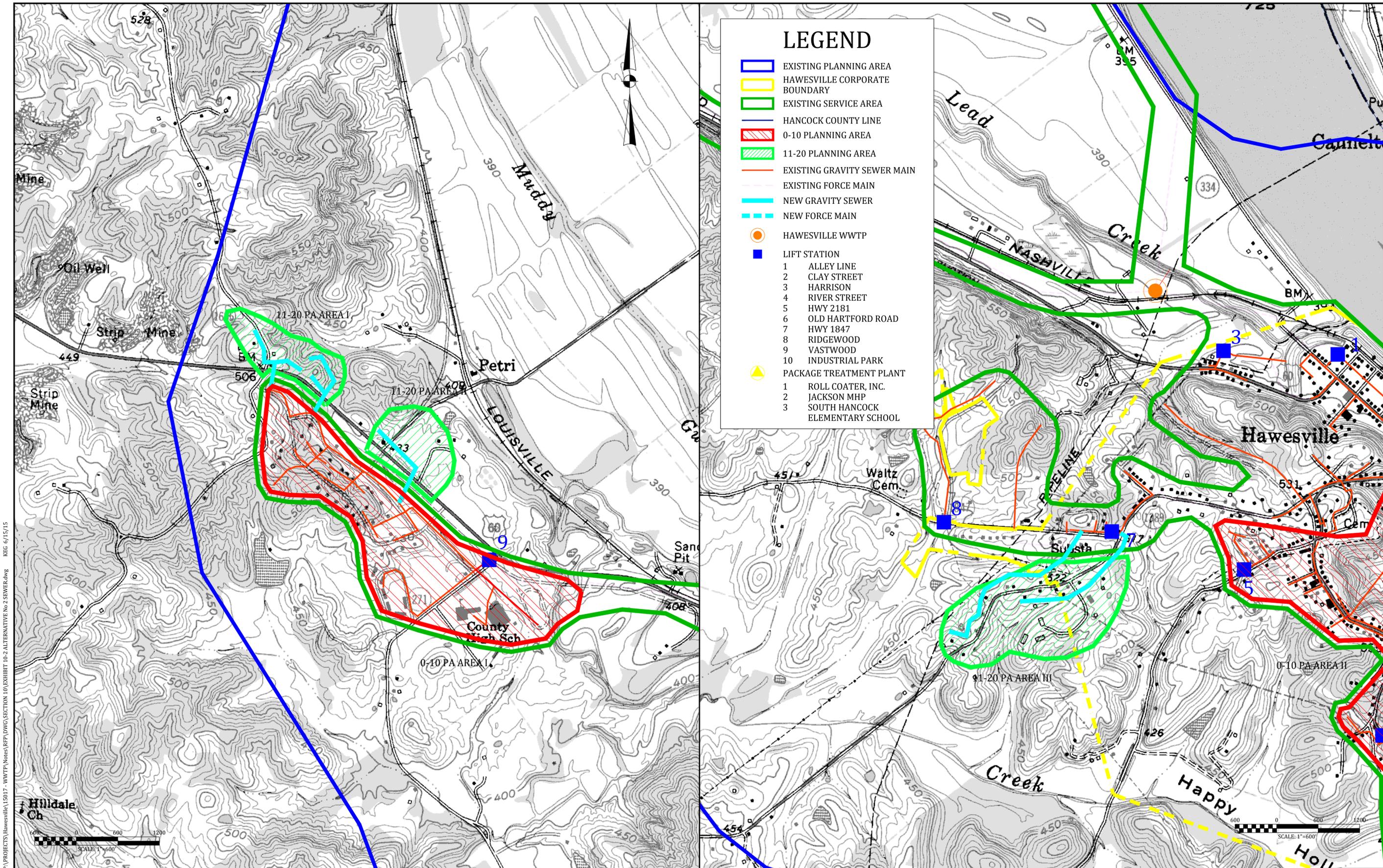


REGIONAL FACILITY PLAN
SECTION 10

WWTP ALTERNATIVE # 3
CONTACT STABILIZATION WWTP

--

PROJECT NO. 15017
SHEET NO. 10.1



LEGEND

- EXISTING PLANNING AREA
- HAWESVILLE CORPORATE BOUNDARY
- EXISTING SERVICE AREA
- HANCOCK COUNTY LINE
- 0-10 PLANNING AREA
- 11-20 PLANNING AREA
- EXISTING GRAVITY SEWER MAIN
- EXISTING FORCE MAIN
- NEW GRAVITY SEWER
- NEW FORCE MAIN
- HAWESVILLE WWTP
- LIFT STATION
- 1 ALLEY LINE
- 2 CLAY STREET
- 3 HARRISON
- 4 RIVER STREET
- 5 HWY 2181
- 6 OLD HARTFORD ROAD
- 7 HWY 1847
- 8 RIDGEWOOD
- 9 VASTWOOD
- 10 INDUSTRIAL PARK
- ▲ PACKAGE TREATMENT PLANT
- 1 ROLL COATER, INC.
- 2 JACKSON MHP
- 3 SOUTH HANCOCK ELEMENTARY SCHOOL

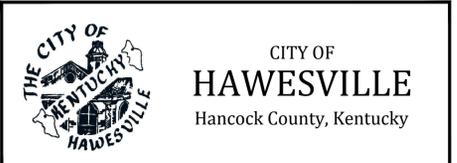
PA PROJECTS\Hawesville\15017 - WWTP\Notes\REF\DWG\SECTION 10\EXHIBIT 10-2 ALTERNATIVE No 2 SEWER.dwg KEG 6/15/15

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NO.	DATE	REVISIONS	BY

DATE: JUNE 2015
 PROJECT MGR: MRC
 DRAWN BY: MRC
 CHECKED BY: MRC
 SCALE: AS NOTED
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REGIONAL FACILITY PLAN
 SECTION 10
 ALTERNATIVE # 2 - CONVENTIONAL GRAVITY SEWERS

PROJECT NO.
15017

SHEET NO.
10.2

City of Hawesville Regional Facility Plan



SECTION 11: DOCUMENTATION OF PUBLIC PARTICIPATION

I. Newspaper Advertisement

II. Solicitation of Public Participation

III. Summary of Presentation

IV. Public Meeting Attendance Sheet

V. Public Comments

NOTICE OF PUBLIC HEARING
(Pursuant to 401KAR5:006 Section 4 & 5; KRS-424, and 40 CFR 25, 5 & 6)

The City of Hawesville, Kentucky, PO Box 157, 395 Main Street, Hawesville, KY 42348 have drafted a 20-year Regional Facilities Plan Update (RFP) containing wastewater requirements for collection and treatment and its cost, within the planning area, as described therein, to be served. Interested citizens may obtain further information including copies of the draft RFP by visiting the City of Hawesville office at the above given address between the hours of 9 AM and 4 PM, Monday through Friday or by calling Matthew Curtis, Kentucky Engineering Group, PLLC 502-370-6551 between the hours of 8 AM and 5 PM, Monday through Friday.

A public hearing will be held on _____, **2015 at 5:00 PM** (local time) at the City Hall (address above). The purpose of the hearing is to discuss the draft plan and its contents, specifically the alternatives, project cost, financing sources, user charges and hook up/tap fees. This project may affect sewer rates in the future. The public is encouraged to attend this meeting and shall have a right to comment on the plan for a period of 30 days from the date of publication of this notice by writing to the above address or before the termination of the hearing whichever is later. A longer comment period may be requested in writing. All persons who believe any condition of the draft plan is inappropriate, inaccurate, incomplete, or otherwise not in the best interest of the public and the environment must raise all reasonable issues and submit all reasonable arguments, facts, and comments with supporting documents to the above given contact person.

City of Hawesville Regional Facility Plan



SECTION 12: REGIONAL FACILITY PLAN COMPLETENESS CHECKLIST

Section 12: Regional Facility Plan Completeness Checklist and Forms

Requirements: Two (2) hard copies, one certified by a professional engineer licensed in Kentucky and one (1) non-certified digital copy of the regional facility plan and the planning area shapefile on a Compact Disc (CD) shall be submitted to the Cabinet. This completeness checklist should be completed and submitted with each regional facility plan.

Regional Planning Agency Name: _____

Date: _____

		<u>PAGE #</u>
SECTION 1		
REGIONAL FACILITY PLAN SUMMARY- This section shall provide a brief summary of the information provided in the facility plan, including the following:		
1.	Purpose of the plan and major problems evaluated in the plan.	
2.	Recommended alternative chosen to remediate or correct the problems and/or serve the area of need identified in the plan. Also, include any institutional arrangements necessary to implement the recommended alternative(s).	
3.	Estimated cost of implementing the proposed plan (including user fees) and the proposed funding method to be used.	
4.	Planning agency commitments necessary to implement the plan.	
5.	Schedule of implementation for projects.	
SECTION 2		
STATEMENT OF PURPOSE AND NEED- This section shall contain a brief description of the purpose and need for a submitting the facility plan.		
SECTION 3		
PHYSICAL CHARACTERISTICS OF THE PLANNING AREA- This section shall delineate the planning area boundaries and describe key topographic, geographic and pertinent natural or man-made features of the area. Digital or electronic submission of the planning area boundary shapefile in a standard GIS format shall also be included. This section shall also include the following maps:		
1.	One (1) up-to-date map, suitable for photocopying, indicate the planning area boundary, service area boundary, watershed boundaries, county lines, populated places, cities and/or towns and project areas or proposed planning period phases.	
2.	One (1) up-to-date map, suitable for photocopying, include locations of wastewater treatment facilities (including package treatment plants), discharge location(s), collection lines (gravity, force main, interceptors), pump stations, public drinking water intake points and groundwater supply areas [Source Water Area Protection Plans (SWAPP) and/or Wellhead Protection Areas (WHPA)].	
3.	One (1) seven and one-half (7 ½) minute USGS topographic map including the location of wetlands, delineation of the 100-year floodplain, surface water(s), and topography.	

4.	If available, a local planning and zoning land use map.	
SECTION 4		
SOCIOECONOMIC CHARACTERISTICS OF THE PLANNING AREA- The following characteristics of the planning area shall be discussed:		
1.	Historical, current, and projected population in the planning area including wastewater contributions from industrial and commercial sources.	
2.	Current and projected population in the existing service area and unsewered parts of the planning area	
3.	Economic or social benefit to the affected community	
SECTION 5		
EXISTING ENVIRONMENT IN THE PLANNING AREA- Describe existing physical, biological, cultural, and other resource features within the planning area with an emphasis on those that may be impacted by the proposed plan or projects, including the following:		
1.	Physical features such as surface and groundwater quality, water sources and supply, wetlands, lakes, streams, air pollution, floodplains, soils, geology, and topography	
2.	Biological: Identify plant and animal communities in the planning area with an emphasis upon endangered and threatened species likely to be impacted	
3.	Cultural: Describe archaeological and historical resources that may be affected by the proposed project	
4.	Other Resource Features such as national and state parks, recreational areas, USDA Designated Important Farmland, and any other applicable environmentally sensitive areas	
SECTION 6		
EXISTING WASTEWATER SYSTEM- This section shall be prepared by a Professional Engineer licensed in Kentucky. A description of the existing facilities within the planning area shall include the following:		
1.	On-site systems in the planning area	
2.	Physical condition of the existing wastewater treatment plant(s) including the type, age, design capacity, process units, peak and average wastewater flows, current discharge permit limits, schematic layout of treatment plant. Include a narrative description of the capacity of the treatment plant to meet reliability and redundancy requirements as outlined in regulation 401 KAR 5:005, Section 13.	
3.	Existing collection and conveyance system and its condition	
4.	Existing biosolids disposal method	
5.	Existing operation, maintenance and compliance issues	
SECTION 7		
FORECASTS OF FLOWS AND WASTE LOADS IN THE PLANNING AREA- This section shall be prepared by a professional engineer licensed in Kentucky and shall include:		
1.	Current and projected commercial, industrial and residential growth for the proposed planning period	
2.	A copy of the waste load allocation (WLA) issued by the DOW for new or expanded treatment plant projects	

SECTION 8	
EVALUATION OF ALTERNATIVES- This section shall be prepared by a professional engineer licensed in Kentucky and include an assessment of alternatives to determine the appropriate facilities that will meet the wastewater needs of the planning area and provide benefits that are cost-effective and environmentally sound. The section shall include:	
1.	No-action alternative
2.	Optimization of existing facilities
3.	Regionalization
4.	Other alternatives
5.	Detailed cost analysis along with 20 year present worth analysis for each alternative
6.	Recommended alternative
SECTION 9	
CROSS-CUTTER CORRESPONDENCE AND MITIGATION- Each facility plan shall include cross-cutter correspondences to and from each agency related to the following four environmental and cultural concerns:	
1.	Threatened and Endangered Species: The U.S. Fish and Wildlife Service- Kentucky Ecological Services Field Station and the Kentucky Department of Fish and Wildlife Resources
2.	Historical Resources: The Kentucky Heritage Council State Historic Preservation Office
3.	Aquatic Resources: The US. Army Corps of Engineers (Louisville, Nashville, or Huntington Districts).
4.	Agricultural Resources: The local office of the Natural Resources Conservation Service (NRCS) or USDA Service Center
SECTION 10	
EVALUATION OF RECOMMENDED REGIONAL FACILITY PLAN- This section of the facility plan shall summarize the critical components of the recommended plan.	
1.	Environmental impacts
2.	Institutional structure
3.	Funding plan
4.	Current and projected residential user charge rate based on 4,000 gallon usage per month
5.	Implementation schedule
SECTION 11	
DOCUMENTATION OF PUBLIC PARTICIPATION- The section shall include a copy of the newspaper advertisement/proof of publication, attendance sheet, and public comments.	

Unit Process Design Criteria Form

Unit Process	Number of Units ¹	Flow per Unit (MGD)	Design Criteria ²
Influent Pumping			
Screening			
Grit Removal			
Primary Clarification			
Biological Process			
Chemical Phosphorus Removal			
Final Clarification			
Disinfection			
RAS/WAS Pumping			
Sludge Treatment			
Sludge Dewatering			

1*The number of units shall be in accordance with the reliability/redundancy checklist

2*The design criteria shall be in accordance with 401 KAR 5:005 including Ten States Standards

Note: This is a suggested format only. The process listed here will not fit every project and will therefore need to be revised accordingly.



STEVEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

LEONARD K. PETERS
SECRETARY

September 28, 2010

Mr. Charles King
City of Hawesville
Post Office Box 157
Hawesville, Kentucky 42348

Re: Hawesville WWTP
KPDES No.: KY0020087
AI No.: 1627
Hancock County, Kentucky

Dear Mr. King:

Enclosed is the Kentucky Pollutant Discharge Elimination System (KPDES) permit for the above-referenced facility. This action constitutes a final permit issuance under 401 KAR 5:075, pursuant to KRS 224.16-050.

This permit will become effective on the date indicated in the attached permit provided that no request for adjudication is granted. All provisions of the permit will be effective and enforceable in accordance with 401 KAR 5:075, unless stayed by the Hearing Officer under Sections 11 and 13.

Any demand for a hearing on the permit shall be filed in accordance with the procedures specified in KRS 224.10-420, 224.10-440, 224.10-470 and any regulations promulgated thereto. Any person aggrieved by the issuance of a permit final decision may demand a hearing, pursuant to KRS 224.10-420(2), within thirty (30) days from the date of the issuance of this letter. Two (2) copies of request for hearing should be submitted in writing to the Energy and Environment Cabinet, Office of Administrative Hearings, 35-36 Fountain Place, Frankfort, Kentucky 40601 and the Commonwealth of Kentucky, Energy and Environment Cabinet, Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky 40601. For your record keeping purposes, it is recommended that these requests be sent by certified mail. The written request must conform to the appropriate statutes referenced above.

If you have any questions regarding the KPDES decision, please contact Diana Davidson, Operational Permits Section, Surface Water Permits Branch, at (502) 564-8158, extension 4896.

Further information on procedures and legal matters pertaining to the hearing request may be obtained by contacting the Office of Administrative Hearings at (502) 564-7312.

Sincerely,

A handwritten signature in black ink, appearing to read "Sandra L. Gruzesky".

Sandra L. Gruzesky, Director
Division of Water

SLG:TJB:tjb
Enclosure
c: Division of Water



STEVEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

LEONARD K. PETERS
SECRETARY

FACT SHEET

**KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE TREATED WASTEWATER
INTO WATERS OF THE COMMONWEALTH**

KPDES No.: KY0020087 **Permit Writer:** Diana Davidson **Date:** September 28, 2010
AI No.: 1627

1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

City of Hawesville
P.O. Box 157
Hawesville, Kentucky 42348

b. Facility Location

Hawesville Sewage Treatment Plant
280 Nugent Lane
Hawesville, Hancock County, Kentucky

c. Description of Applicant's Operation

Municipal Wastewater Treatment Plant

d. Design Capacity

0.250 MGD

e. Description of Existing Pollution Abatement Facilities

Treatment process consists of screening, grit removal, primary settling, activated sludge, secondary settling, and ultraviolet disinfection. Solids are processed by sludge drying beds, and landfill disposal.

f. Permitting Action

This is a reissuance of a minor KPDES permit for a municipally owned wastewater treatment plant serving a city.

2. RECEIVING WATER

a. Name/Mile Point

Facility discharges to Lead Creek at latitude 37 ° 54' 30" and longitude 86 ° 45' 50".

b. Stream Segment Use Classification

Pursuant to 401 KAR 10:026, Section 5, Lead Creek carries the following classifications:

Warmwater Aquatic Habitat, Primary/Secondary Contact Recreation, and Domestic Water Supply

c. Stream Segment Categorization

Pursuant to 401 KAR 10:030, Section 1 Lead Creek is categorized as a High Quality Water.

d. Stream Low Flow Condition

The 7-day, 10-year low flow and harmonic mean conditions of Lead Creek are 0.0 and 0.0 cfs, respectively.

3. REPORTED DISCHARGE AND PROPOSED LIMITS

Serial Number 001 - Sanitary Wastewater (Design Flow = 0.250 MGD)

Effluent Characteristics	Reported Discharge		Proposed Limits		Applicable Water Quality Criteria and/or Effluent Guidelines
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	
Effluent Flow (MGD)	0.1835	0.3224	Report	Report	401 KAR 5:065, Section 2(4)
Influent Flow (MGD)	NR	NR	Report	Report	401 KAR 5:065, Section 2(4)
Effluent CBOD ₅ (mg/l)	4.86	9.29	10	15	401 KAR 10:031, Section 4 401 KAR 5:045, Sections 3 and 5
Influent CBOD ₅ (mg/l)	132.28	219.65	Report	Report	401 KAR 5:065, Section 2(4)
Percent Removal CBOD ₅ (%)	95.34	99	85 or greater		40 CFR 133.102(a)3
Effluent TSS (mg/l)	10.46	19.55	30	45	401 KAR 10:031, Section 4 401 KAR 5:045, Sections 2 and 3
Influent TSS (mg/l)	129.20	195.75	Report	Report	401 KAR 10:031, Section 4
Percent Removal TSS (%)	90.68	98	85 or greater		40 CFR 133.102(b)3
Fecal Coliform (N/100 ml)	29.70	99.40	Removing from permit		401 KAR 5:080, Section 2(3)
<i>Escherichia Coli</i> (N/100 ml)	NR	NR	130	240	401 KAR 10:031, Section 7 401 KAR 5:045, Section 4 401 KAR 5:080, Section 2(3)
Ammonia Nitrogen (as mg/l N)					
May 1 - October 31	11.22	15.91	2.0	3.0	401 KAR 10:031, Section 4
November 1 - April 30	5.40	8.84	10	15	401 KAR 5:045, Sections 3 and 5
Dissolved Oxygen (mg/l) (minimum)	8.09	N/A	Not less than 7.0		401 KAR 10:031, Section 4 401 KAR 5:045, Sections 3 and 5
pH (standard units)	6.1	8.0	6.0 (min)	9.0 (max)	401 KAR 10:031, Section 4 401 KAR 5:045, Section 4

3. REPORTED DISCHARGE AND PROPOSED LIMITS - SANITARY FACILITY

Serial Number 001 - Sanitary Wastewater (Design Flow = 0.250 MGD)

Effluent Characteristics	Reported Discharge		Proposed Limits		Applicable Water Quality Criteria and/or Effluent Guidelines
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	
Total Phosphorus (mg/l)	NR	NR	Report	Report	401 KAR 5:065, Section 2(4) 401 KAR 5:080, Section 2(3)
Total Nitrogen (mg/l)	NR	NR	Report	Report	401 KAR 5:065, Section 2(4)

The data contained under the reported discharge columns is not from the renewal application, but rather from the analysis of the DMR data that has been reported during the term of the previous permit.

The abbreviation CBOD₅ means Carbonaceous Biochemical Oxygen Demand (5-day).

The abbreviation TSS means Total Suspended Solids.

The abbreviation NR means not reported on the Discharge Monitoring Report (DMR).

The effluent limitations for CBOD₅ and TSS are Monthly (30 day) and Weekly (7 day) Averages.

The effluent limitations for *Escherichia Coli* are thirty (30) day and seven (7) day Geometric Means.

Total Nitrogen is to be reported as the summation of the analytical results for Total Nitrates, Total Nitrites, and Total Kjeldahl Nitrogen.

4. **METHODOLOGY USED IN DETERMINING LIMITATIONS**

a. Serial Number

Outfall 001 Sanitary Wastewater (Design Flow = 0.250 MGD)

b. Effluent Characteristics

Flow, CBOD₅ (Influent/Effluent), TSS (Influent/Effluent), Fecal Coliform Bacteria, *Escherichia Coli*, pH, Ammonia Nitrogen, Dissolved Oxygen, Total Phosphorus, and Total Nitrogen.

c. Pertinent Factors

This Publically Owned Treatment Works (POTW) does not retain any industrial users nor has a design flow rate equal or greater than 1 MGD; therefore the metal monitoring for Outfall 001M will be removed from the permit.

d. Monitoring Requirements

Influent sampling shall be conducted at the nearest accessible point in the collection system but prior to commencement of treatment.

Effluent sampling shall be conducted at the nearest point after final treatment but prior to discharge to or mixing with the receiving waters.

Effluent Flow monitoring shall be conducted continuously by recorder once per week.

Influent Flow monitoring shall be conducted instantaneously once per week.

CBOD₅ (Influent/Effluent) and TSS (Influent/Effluent) monitoring shall be conducted once per week by 24 hour composite sampling.

Percent Removal shall be determined monthly by calculation.

Ammonia Nitrogen, Total Phosphorus, and Total Nitrogen shall be monitored once per week by 24 hour composite sampling.

Escherichia Coli, pH, and Dissolved Oxygen shall be monitored once per week by grab sample.

e. Justification of Conditions

The Kentucky regulations cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes.

Escherichia Coli and Fecal Coliform Bacteria

The limits for *Escherichia Coli* are consistent with the requirements of 401 KAR 10:031, Section 7, 401 KAR 5:045 Section 4 and 401 KAR 5:080, Section 2(3). The removal of Fecal Coliform Bacteria is consistent with the requirements of 401 KAR 5:080k Section 2(3). Although Fecal Coliform Bacteria has been used as an indicator of fecal contamination, it does contain other species that are not necessarily fecal in origin. EPA recommends *Escherichia Coli*, which is specific to fecal material from warm-blooded animals, as the best indicator of health risk from contact with recreational waters. Therefore, it is the "Best Professional Judgment "BPJ" of the Division of Water that *Escherichia Coli* replace Fecal Coliform Bacteria on this permit.

Flow (Influent/Effluent)

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(4).

Influent CBOD₅, Influent TSS, and Percent Removal

The monitoring requirements for influent CBOD₅ and influent TSS are consistent with the requirements of 401 KAR 5:065, Section 2(4). The raw influent values of these two parameters are necessary to determine compliance with the 85 percent removal requirement specified by 40 CFR 133.102 (a)3 and (b)3.

CBOD₅, Ammonia Nitrogen, and Dissolved Oxygen

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4, and 401 KAR 5:045, Sections 3 and 5. Section 4 of 5:031 establishes water quality criteria for the protection of Kentucky's waters. Section 5 of 5:045 requires biochemically degradable wastewaters to receive treatment in excess of secondary treatment if the Cabinet determines that the receiving water would not satisfy applicable water quality standards as a result of a facility discharge or discharges from multiple facilities.

Total Suspended Solids

The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4 and 5:045, Sections 2 and 3. Section 4 of 5:031 establishes water quality criteria for the protection of Kentucky's waters. Sections 2 and 3 of 5:045 require biochemically degradable wastewaters to receive secondary treatment.

pH

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4 and 5:045, Section 4. Section 4 of 5:031 establishes water quality criteria for the protection of Kentucky's waters. Section 4 of 5:045 establishes the acceptable levels of these parameters for biochemically degradable wastewaters.

Total Phosphorus and Total Nitrogen

The monitoring requirements for these parameters are consistent with the requirements of 401 KAR 5:065, Section 2(4)(a). Total Nitrogen is TKN (as N) and nitrate/nitrite (as N).

5. ANTIDEGRADATION

The conditions of 401 KAR 10:029, Section 1 have been satisfied by this permit action. Since this permit action involves reissuance of an existing permit, and does not propose an expanded discharge, a review under 401 KAR 10:030 Section 1 is not applicable.

6. PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS

The permittee will comply with all effluent limitations by the effective date of the permit.

7. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Annual Sewer User Surveys

Consistent with the requirements of 401 KAR 5:057 and 401 KAR 5:080, Section 2(3) the permittee shall conduct annual sewer user surveys to determine if conditions warrant the development and implementation of a pretreatment program. This condition is representative of the Division of Water's "Best Professional Judgment" that such surveys are necessary to demonstrate compliance with 401 KAR 5:057.

Best Management Practices (BMP) Plan

Pursuant to 401 KAR 5:065, Section 2(10), a BMP requirement shall be included: to control or abate the discharge of pollutants from ancillary areas containing toxic or hazardous substances or those substances which could result in an environmental emergency; where numeric effluent limitations are infeasible; or to carry out the purposes and intent of KRS 224. The facility has several areas where support activities occur which have a potential of the discharge of such substances through storm water runoff or spillage. Some of these areas will drain to present wastewater treatment plants, others will not.

Certified Operators

Pursuant to 401 KAR 5:010, Section 1 wastewater systems shall be operated under the supervision of a certified operator who holds a Kentucky Certificate equivalent to the class of system being supervised.

Pursuant to 401 KAR 5:010, Section 3 the certified operator shall be reasonably available if not physically present while the system is operating.

Outfall Signage

The KPDES permit establishes monitoring points, effluent limitations, and other conditions to address discharges from the permitted facility pursuant to 40 CFR 122.48. In an effort to better document and clarify these locations the permittee should place and maintain a permanent marker at each of the monitoring locations.

Pretreatment Requirements

Pursuant to the requirements of 40 CFR 403, July 1, 2006 as incorporated by 401 KAR 5:057, November 11, 2008 a Publicly Owned Treatment Works (POTW) is required to implement the National Pretreatment Standards to control pollutants which pass through or interfere with the treatment process of the POTW or which contaminate the sewage sludge. These requirements include specific prohibitions and the necessity to development and implementation of Pretreatment Program if one or more specific criteria are met.

Sludge Disposal

The disposal or final use of sewage sludge generated during the treatment of domestic sewage in a treatment works is subject to federal requirements specified in 40 CFR Part 503 and state requirements specified in Division of Waste Management regulations 401 KAR Chapter 45.

8. PERMIT DURATION

Five (5) years. This facility is in the Tradewater, Green Basin Management Unit as per the Kentucky Watershed Management Framework.

9. **PERMIT INFORMATION**

The application, draft permit, fact sheet, public notice, comments received and additional information is available from the Division of Water at 200 Fair Oaks Lane, Frankfort, Kentucky 40601.

10. **REFERENCES AND CITED DOCUMENTS**

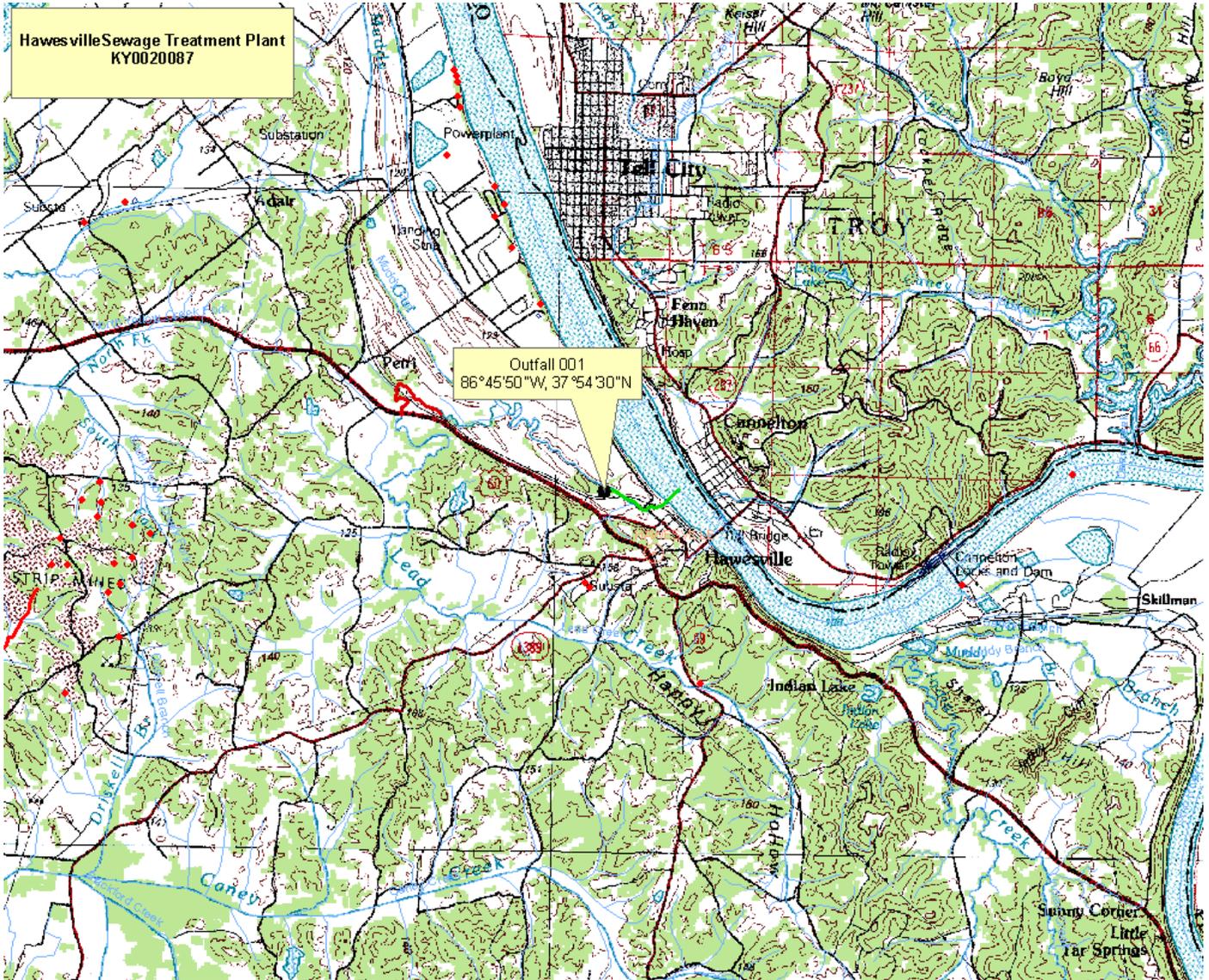
All material and documents referenced or cited in this fact sheet are parts of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the person listed below.

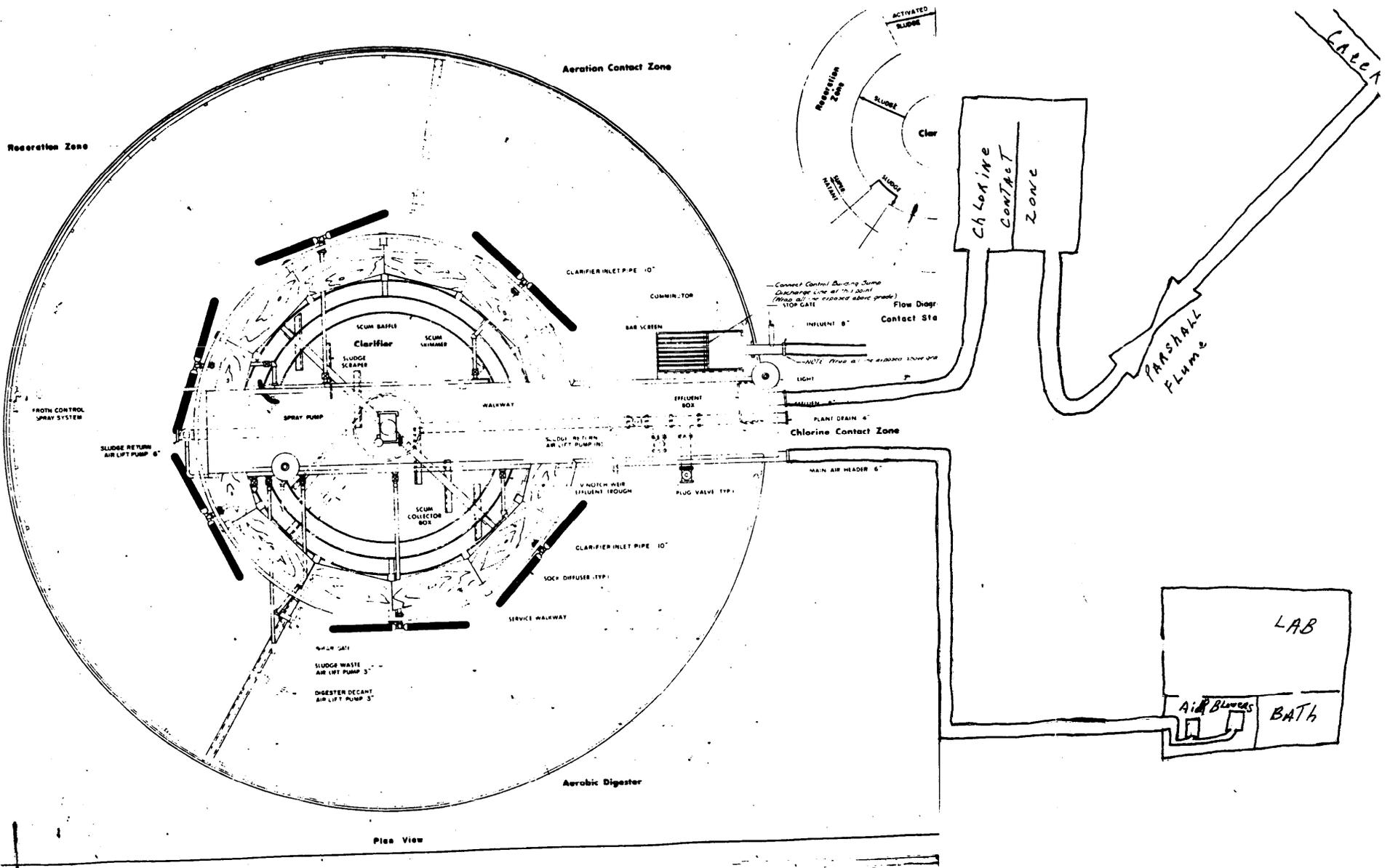
11. **CONTACT**

For further information on the draft permit or comment process, contact the individual identified on the Public Notice or the Permit Writer - Diana Davidson at (502) 564-8158, extension 4901, or email Diana.Davidson@ky.gov.

12. **PUBLIC NOTICE INFORMATION**

Please refer to the attached Public Notice for details regarding the procedures for a final decision, deadline for comments and other information required by 401 KAR 5:075, Section 4(2)(e).





KPDES



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

PERMIT NO.: KY0020087

AI NO.: 1627

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

City of Hawesville
P.O. Box 157
Hawesville, Kentucky 42348

is authorized to discharge from a facility located at

Hawesville Sewage Treatment Plant
280 Nugent Lane
Hawesville, Hancock County, Kentucky

to receiving waters named

Lead Creek at mile point 0.6

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III, IV, V and VI hereof. The permit consists of this cover sheet, and Part I 2 pages, Part II 1 pages, and Part III 1 page, and Part IV 4 pages.

This permit shall become effective on November 1, 2010.

This permit and the authorization to discharge shall expire at midnight, October 31, 2015.

A handwritten signature in black ink, appearing to read 'Sandra L. Gruzesky', located below the permit text.

September 28, 2010
Date Signed

Sandra L. Gruzesky, Director
Division of Water

PART I A - EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: 001 - Sanitary Wastewater (Design Flow = 0.250 MGD)

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTICS</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	(lbs/day)		Other Units (Specify)		<u>Measurement Frequency</u>	<u>Sample Type</u>
	<u>Monthly Avg.</u>	<u>Daily Max.</u>	<u>Monthly Avg.</u>	<u>Daily Max.</u>		
Effluent Flow (MGD)	Report	Report	N/A	N/A	Continuous	Recorder
Influent Flow (MGD)	Report	Report	N/A	N/A	1/Week	Instantaneous
Effluent CBOD ₅ (mg/l)	20.9	31.4	10	15	1/Week	24 Hr Composite
Influent CBOD ₅ (mg/l)	Report	Report	Report	Report	1/Week	24 Hr Composite
Percent Removal CBOD ₅ (%)			85 or greater		1/Month	Calculated
Effluent TSS (mg/l)	62.6	93.9	30	45	1/Week	24 Hr Composite
Influent TSS (mg/l)	Report	Report	Report	Report	1/Week	24 Hr Composite
Percent Removal TSS (%)			85 or greater		1/Month	Calculated
Ammonia Nitrogen (as mg/l N)						
May 1 - October 31	4.17	6.25	2.0	3.0	1/Week	24 Hr Composite
November 1 - April 30	20.9	31.4	10	15	1/Week	24 Hr Composite
<i>Escherichia Coli</i> (N/100 ml)	N/A	N/A	130	240	1/Week	Grab
Dissolved Oxygen (mg/l) (minimum)	N/A	N/A	Not less than	7.0	1/Week	Grab
pH (standard units)	N/A	N/A	6.0 (min)	9.0 (max)	1/Week	Grab
Total Phosphorus (mg/l)	N/A	N/A	Report	Report	1/Week	24 Hr Composite
Total Nitrogen (mg/l)	N/A	N/A	Report	Report	1/Week	24 Hr Composite

The abbreviation CBOD₅ means Carbonaceous Biochemical Oxygen Demand (5-day).

The abbreviation TSS means Total Suspended Solids.

The abbreviation N/A means Not Applicable.

The effluent limitations for CBOD₅ and TSS are Monthly (30 day) and Weekly (7 day) Averages.

The effluent limitations for *Escherichia Coli* are thirty (30) day and seven (7) day Geometric Means.

Total Nitrogen is to be reported as the summation of the analytical results for Total Nitrates, Total Nitrites, and Total Kjeldahl Nitrogen.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

PART I B - SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with all requirements on the effective date of this permit.

PART II - STANDARD CONDITIONS FOR KPDES PERMIT

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

The permittee is also advised that all KPDES permit conditions in KPDES Regulation 401 KAR 5:065, Section 1 will apply to all discharges authorized by this permit.

PART III - OTHER REQUIREMENTS

A. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported on a preprinted Discharge Monitoring Report (DMR) Form that will be mailed to you. The completed DMR for each monitoring period must be sent to the Division of Water at the address listed below (with a copy to the appropriate Regional Office) postmarked no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

Division of Water
Madisonville Regional Office
625 Hospital Drive
Madisonville, Kentucky 42431-1683
ATTN: Supervisor

Division of Water
Surface Water Permits Branch
Permit Support Section
200 Fair Oaks Lane
Frankfort, Kentucky 40601

B. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

This permit may be reopened to implement the findings of a reasonable potential analysis performed by the Division of Water.

This permit shall be reopened if Division of Water determines surface waters are aesthetically or otherwise degraded by substances that:

- (a) Settle to form objectionable deposits;
- (b) Float as debris, scum, oil, or other matter to form a nuisance;
- (c) Produce objectionable color, odor, taste, or turbidity;
- (d) Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life;
- (e) Produce undesirable aquatic life or result in the dominance of nuisance species; or
- (f) Cause fish flesh tainting

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

C. Sludge Disposal

The disposal or final use of sewage sludge generated during the treatment of domestic sewage in a treatment works shall be disposed of in accordance with federal requirements specified in 40 CFR Part 503 and state requirements specified in Division of Waste Management regulations 401 KAR Chapter 45.

D. Certified Operators

This wastewater system shall be operated under the supervision of a Class II, III, or IV Kentucky Certified Operator who shall be reasonably available at all times.

E. Outfall Signage

The KPDES permit establishes monitoring points, effluent limitations, and other conditions to address discharges from the permitted facility. In an effort to better document and clarify these locations the permittee should place and maintain a permanent marker at each of the monitoring locations.

PART IV - PRETREATMENT REQUIREMENTS

A. Annual Sewer User Surveys

The permittee shall conduct annual sewer user surveys to determine if conditions warrant the development and implementation of a pretreatment program. An annual report listing the industrial users, the manufacturing processes, the nature and volume of flow and any problems caused by the users shall be submitted no later than December 31 of each year, unless otherwise specified by the Division of Water.

B. Necessity to Develop and Implement a Pretreatment Program

POTWs which meet one or more of the following criteria are required to develop, submit for approval, and implement specific Pretreatment Program Requirements.

A POTW or combination of POTWs operated by the same authority, with a total design flow greater than five (5) million gallons per day (MGD) and receiving from industrial users which pass through or interfere with the operation of the POTW, or are otherwise subject to pretreatment standards.

A POTW with a design flow of five (5) MGD or less shall develop a pretreatment program if the cabinet determines that the nature or volume of the industrial wastewaters, upsets of the treatment process, violations of the POTW effluent limitations, contamination of municipal sludge or other circumstances warrant to prevent interference with the POTW or pass through.

C. Prohibited Discharges

The following are prohibited from being discharged to the POTW.

- ❖ Pollutants which create a fire or explosion hazard in the POTW;
- ❖ Pollutants which will cause corrosive structural damage to the POTW, but in no case, discharges with a pH lower than 5.0 unless the works is specifically designed to accommodate such discharges;
- ❖ Solid or viscous pollutants in amounts which will cause obstruction to the flow in sewers, or other interference with operation of the POTW;
- ❖ Any pollutant, including oxygen demanding pollutants (BOD₅, etc.), released in a discharge at such a volume or strength as to cause interference in the POTW;
- ❖ Heat in amounts, which will inhibit biological activity in the POTW, but in no case, heat in such quantities that the influent to the sewage treatment works exceeds 104° F (40° C) unless the Approval Authority upon request of the POTW approves alternate temperature limits;
- ❖ Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass-through;
- ❖ Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and,
- ❖ Any trucked or hauled waste except, at discharge points designated by the POTW.

PART V - BEST MANAGEMENT PRACTICES

SECTION A. GENERAL CONDITIONS

1. Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

2. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

3. Implementation

If this is the first time for the BMP requirement, then the plan shall be developed and submitted to the Division of Water within 90 days of the effective date of the permit. Implementation shall be within 180 days of that submission. For permit renewals the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

4. General Requirements

The BMP plan shall:

- a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.
- b. Establish specific objectives for the control of toxic and hazardous pollutants.

- (1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

- (2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.
- c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."
- d. Include any special conditions established in part b of this section.
- e. Be reviewed by plant engineering staff and the plant manager.

5. Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

- a. BMP Committee
- b. Reporting of BMP Incidents
- c. Risk Identification and Assessment
- d. Employee Training
- e. Inspections and Records
- f. Preventive Maintenance
- g. Good Housekeeping
- h. Materials Compatibility
- i. Security
- j. Materials Inventory

6. SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

7. Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

8. Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to EEC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3:

Division of Water
Madisonville Regional Office
625 Hospital Drive
Madisonville, Kentucky 42431-1683
ATTN: Supervisor

Division of Water
Surface Water Permits Branch
Permit Support Section
200 Fair Oaks Lane
Frankfort, Kentucky 40601

9. **BMP Plan Modification**

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

10. **Modification for Ineffectiveness**

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.

KPDES



KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM

PERMIT

PERMIT NO.: KY0092118

AI NO.: 1619

**AUTHORIZATION TO DISCHARGE UNDER THE
KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM**

Pursuant to Authority in KRS 224,

Precoat Metals
1310 Papin Street
St. Louis, Missouri 63103

is authorized to discharge from a facility located at

Precoat Metals
2604 River Road
Hawesville, Hancock County, Kentucky 42348

to receiving waters named

Ohio River, see Section 1.1 for location of all listed outfalls

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

This permit shall become effective on April 1, 2014.

This permit and the authorization to discharge shall expire at midnight, March 31, 2019.

January 27, 2014

Date Signed

A handwritten signature in black ink, appearing to read "Peter T. Goodmann", written over a horizontal line.

**Peter T. Goodmann, Acting Director
Division of Water**

**DEPARTMENT FOR ENVIRONMENTAL PROTECTION
Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky 40601**

1. EFFLUENT AND MONITORING REQUIREMENTS

1.1. Monitoring Locations

The following table lists the outfalls authorized by this permit, the latitude and longitude of each and the DOW assigned KPDES outfall number.

MONITORING LOCATIONS				
No.	Type	Latitude (N)	Longitude (W)	Description of Outfall
001	Direct	37° 55' 54.8"	86° 46' 25.64"	Ohio River Coil cleaning process wastewater (0.017303 MGD), Boiler Blowdown (0.0005 MGD), Coil Pretreatment wastewater (0.021197 MGD) and Cooling Tower Blowdown (0.001 MGD)
002	Direct	37° 55' 58"	86° 46' 31.77"	Ohio River Stormwater Runoff
003	Direct	37° 55' 48.22"	86° 46' 21.81"	Ohio River Noncontact Cooling Water (0.195 MGD), Cooling Tower Overflow (0.001 MGD) and Stormwater runoff
004	Direct	37° 55' 54.73"	86° 46' 29.33"	Ohio River Sanitary Wastewater (0.005 MGD)

1.2. Effluent Limitations and Monitoring Requirements

Beginning on the effective date and lasting through the term of this permit discharges from Outfall 001 shall comply with the effluent limitations.

EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS		
Effluent Characteristic	Loadings (lbs/day)		Concentrations (specify units)		Monitoring Frequency	Sample Type
	Monthly Average	Daily Maximum	Minimum	Daily Maximum		
Effluent Flow (MGD)	N/A	N/A	N/A	Report	1/Month	Instantaneous
Temperature °F	N/A	N/A	N/A	Report	1/Month	Grab
Total Suspended Solids	13.646	17.039	N/A	N/A	1/Month	24-hr Composite
Oil & Grease	11.412	11.429	N/A	N/A	1/Month	Grab
Total Recoverable Chromium	0.175	0.429	N/A	N/A	1/Month	24-hr Composite
Total Recoverable Copper	0.091	0.190	N/A	N/A	1/Month	24-hr Composite

EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
Effluent Characteristic	Loadings (lbs/day)		Concentrations (specify units)			Monitoring Frequency	Sample Type
	Monthly Average	Daily Maximum	Minimum	Monthly Average	Daily Maximum		
Total Recoverable Iron	0.280	0.577	N/A	N/A	N/A	1/Month	24-hr Composite
Total Recoverable Zinc	0.478	1.180	N/A	N/A	N/A	1/Month	24-hr Composite
Total Recoverable Aluminum	0.864	2.143	N/A	N/A	N/A	1/Month	24-hr Composite
Total Cyanide	0.093	0.234	N/A	N/A	N/A	1/Month	Grab
Hardness (mg/l of CaCO ₃)	N/A	N/A	N/A	Report	Report	1/Month	Grab
Acute Toxicity (TU _a)	N/A	N/A	N/A	N/A	9.29	1/Month	Grab
pH (standard units)	N/A	N/A	7.5	N/A	N/A	1/Month	Grab

Beginning on the effective date and lasting through the term of this permit discharges from Outfall 002 shall comply with the effluent limitations.

EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
Effluent Characteristic	Loadings (lbs/day)		Concentrations (specify units)			Monitoring Frequency	Sample Type
	Monthly Average	Weekly Average	Minimum	Monthly Average	Daily Maximum		
Effluent Flow (MGD)	N/A	N/A	N/A	Report	Report	1/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	N/A	30	60	1/Month	Grab
Oil & Grease (mg/l)	N/A	N/A	N/A	10	15	1/Month	Grab
Total Recoverable Cadmium (µg/l)	N/A	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Copper (µg/l)	N/A	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Silver (µg/l)	N/A	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Zinc (µg/l)	N/A	N/A	N/A	149.64	149.64	1/Month	Grab
Hardness (as mg/l CaCO ₃)	N/A	N/A	N/A	Report	Report	1/Month	Grab
pH (standard units)	N/A	N/A	6.0	N/A	N/A	1/Month	Grab

Beginning on the effective date and lasting through the term of this permit discharges from Outfall **003** shall comply with the effluent limitations.

Effluent Characteristic	EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
	Loadings (lbs/day)		Minimum	Concentrations (specify units)		Monitoring Frequency	Sample Type	
	Monthly Average	Weekly Average		Monthly Average	Daily Maximum			Maximum
Effluent Flow (MGD)	N/A	N/A	N/A	Report	Report	1/Month	Instantaneous	
Total Suspended Solids (mg/l)	N/A	N/A	N/A	30	60	1/Month	Grab	
Oil & Grease (mg/l)	N/A	N/A	N/A	10	15	1/Month	Grab	
Temperature °F	N/A	N/A	N/A	Report	89	1/Month	Grab	
Total Recoverable Cadmium (µg/l)	N/A	N/A	N/A	Report	Report	1/Quarter	Grab	
Total Recoverable Copper (µg/l)	N/A	N/A	N/A	Report	Report	1/Quarter	Grab	
Total Recoverable Silver (µg/l)	N/A	N/A	N/A	Report	Report	1/Quarter	Grab	
Total Recoverable Zinc (µg/l)	N/A	N/A	N/A	149.64	149.64	1/Month	Grab	
Hardness (as mg/l CaCO ₃)	N/A	N/A	N/A	Report	Report	1/Month	Grab	
pH (standard units)	N/A	N/A	6.0	N/A	N/A	1/Month	Grab	

Beginning on the effective date and lasting through the term of this permit discharges from Outfall **004** shall comply with the effluent limitations.

Effluent Characteristic	EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
	Loadings (lbs/day)		Minimum	Concentrations (specify units)		Monitoring Frequency	Sample Type	
	Monthly Average	Weekly Average		Monthly Average	Daily Maximum			Maximum
Effluent Flow (MGD)	N/A	N/A	N/A	Report	Report	1/Month	Instantaneous	
Total Suspended Solids (mg/l)	N/A	N/A	N/A	30	45	1/Month	Grab	
Ammonia Nitrogen (mg/l)	N/A	N/A	N/A	20	30	1/Month	Grab	
CBOD ₅ (mg/l)	N/A	N/A	N/A	30	45	1/Month	Grab	
Escherichia Coli (#/100 ml) ¹	N/A	N/A	N/A	130	240	1/Month	Grab	
Dissolved Oxygen (mg/l) ^{2,3}	N/A	N/A	4.0 ²	5.0 ³	N/A	1/Month	Grab	
Total Residual Chlorine (mg/l)	N/A	N/A	N/A	0.011	0.019	1/Month	Grab	

Effluent Characteristic	EFFLUENT LIMITATIONS					MONITORING REQUIREMENTS		
	Loadings (lbs/day)		Concentrations (specify units)			Monitoring Frequency	Sample Type	
	Monthly Average	Weekly Average	Minimum	Monthly Average	Daily Maximum			Maximum
pH (standard units)	N/A	N/A	6.0	N/A	N/A	9.0	1/Month	Grab

¹The effluent limitations for *Escherichia Coli* are 30 day and 7 day Geometric Means.
²The Dissolved Oxygen concentration shall not be less than 4.0 mg/l except during the April 15-June 15 spawning season when a minimum of 5.1 of 5.1 mg/l shall be maintained.
³This is a minimum monthly average limitation.

1.3. Standard Effluent Requirements

The discharges to waters of the Commonwealth shall not produce floating solids, visible foam or a visible sheen on the surface of the receiving waters.

Samples and measurements taken in accordance with the requirements of specified Section 1.2 shall be representative of the volume and nature of the monitored discharge and shall be taken at nearest accessible point after final treatment, but prior to actual discharge to or mixing with the receiving waters or wastestreams from other outfalls.

2. STANDARD CONDITIONS**2.1. Schedule of Compliance**

The permittee shall attain compliance with all requirements of this permit on the effective date of this permit unless otherwise stated.

2.2. Standard Conditions for KPDES Permit**2.2.1. Other Permits**

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

2.2.2. Sufficiently Sensitive Analytical Methods

Analytical methods utilized to demonstrate compliance with the effluent limitations established in this permit shall be sufficiently sensitive to detect pollutant levels at or below the required effluent limit, i.e. the Method Detection Limit (MDL) shall be at or below the effluent limit. In that instance where an EPA-approved method does not exist that has an MDL at or below the established effluent limitation, the permit shall: (1) use the method specified in the permit; or (2) the EPA-approved method with an MDL that is nearest to the established effluent limit.

2.2.3. Antidegradation

The conditions of 401 KAR 10:029, Section 1, have been satisfied. This permitting action is a renewal of a KPDES that includes the authorization of expanded discharge to waters categorized as “Impaired Waters” pursuant to 33 U.S.C. 1315(b). Therefore pursuant to 401 KAR 10:030, Section 1(4), further review is not required.

2.2.4. Conditions Applicable to All Permits

The following conditions apply to all KPDES permits.

2.2.4.1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of KRS Chapter 224 and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Any person who violates applicable statutes or who fails to perform any duty imposed, or who violates any determination, permit, administrative regulation, or order of the cabinet promulgated pursuant thereto shall be liable for a civil penalty as provided at KRS 224.99.010.

2.2.4.2. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit.

2.2.4.3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2.2.4.4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

2.2.4.5. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2.2.4.6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

2.2.4.7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

2.2.4.8. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

2.2.4.9. Inspection and Entry

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

2.2.4.10. Monitoring and Records

- (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 401 KAR 5:065 Section 2(10) [40 CFR 503]), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
- (3) Records of monitoring information shall include:
 - (i) The date, exact place, and time of sampling or measurements;
 - (ii) The individual(s) who performed the sampling or measurements;
 - (iii) The date(s) analyses were performed;
 - (iv) The individual(s) who performed the analyses;
 - (v) The analytical techniques or methods used; and
 - (vi) The results of such analyses.

(4) Monitoring must be conducted according to test procedures approved under 401 KAR 5:065 Section 2(8) [40 CFR 136] unless another method is required under 401 KAR 5:065 Section 2(9) or (10) [40 CFR subchapters N or O].

(5) KRS 224.99-010 provides that any person who knowingly violates KRS 224.70-110 or other enumerated statutes, or who knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall be guilty of a Class D felony and, upon conviction, shall be punished by a fine of not more than \$25,000, or by imprisonment for not more than one (1) year, or both. Each day upon which a violation occurs shall constitute a separate violation.

2.2.4.11. Signatory Requirement

(1) All applications, reports, or information submitted to the Director shall be signed and certified pursuant to 401 KAR 5:060, Section 4 [40 CFR 122.22].

(2) KRS 224.99-010 provides that any person who knowingly provides false information in any document filed or required to be maintained under KRS Chapter 224 shall be guilty of a Class D felony and upon conviction thereof, shall be punished by a fine not to exceed twenty-five thousand dollars (\$25,000), or by imprisonment, or by fine and imprisonment, for each separate violation. Each day upon which a violation occurs shall constitute a separate violation

2.2.4.12. Reporting Requirements**2.2.4.12.1. Planned Changes**

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- (i) The alteration or addition to a permitted facility may meet one (1) of the criteria for determining whether a facility is a new source in KRS 224.16-050 [40 CFR 122.29(b); or

- (ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under KRS 224.16-050 [40 CFR 122.42(a)(1)].
- (iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2.2.4.12.2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

2.2.4.12.3. Transfers

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under KRS 224 [CWA; see 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory].

2.2.4.12.4. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit.

- (i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
- (ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 401 KAR 5:065 Section 2(8) [40 CFR 136], or another method required for an industry-specific waste stream under 401 KAR 5:065 Section 2(9) or (10) [40 CFR subchapters N or O], the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
- (iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

2.2.4.12.5. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

2.2.4.12.6. Twenty-four-Hour Reporting

- (i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

- (ii) The following shall be included as information which must be reported within twenty-four (24) hours under this paragraph.

- (A) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See §122.41(g)).
- (B) Any upset which exceeds any effluent limitation in the permit.
- (C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within twenty-four (24) hours.
- (iii) The Director may waive the written report on a case-by-case basis for reports under paragraph (1)(6)(ii) of this section if the oral report has been received within twenty-four (24) hours.

2.2.4.12.7. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Sections 2.2.4.12.1, 2.2.4.12.4, 2.2.4.12.5, and 2.2.4.12.6, at the time monitoring reports are submitted. The reports shall contain the information listed in Section 2.2.4.12.6.

2.2.4.12.8. Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

2.2.4.13. Bypass

2.2.4.13.1. Definitions

- (i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
- (ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2.2.4.13.2. Bypass Not Exceeding Limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Section 2.2.4.13.1.

2.2.4.13.3. Notice

- (i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.
- (ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section 2.2.4.12.6.

2.2.4.13.4. Prohibition of Bypass

- (i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
 - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 (C) The permittee submitted notices as required under Section 2.2.4.13.3.

(ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three (3) conditions listed above in Section 2.2.4.13.3.

2.2.4.13.5. Upset

2.2.4.13.5.1. Definition

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2.2.4.13.5.2. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Section 2.2.4.13.5.3 are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2.2.4.13.5.3. Conditions Necessary for a Demonstration of Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (i) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (ii) The permitted facility was at the time being properly operated; and
- (iii) The permittee submitted notice of the upset as required in Section 2.2.4.12.6; and
- (iv) The permittee complied with any remedial measures required under Section 2.2.4.4.

2.2.4.13.5.4. Burden of Proof

In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

2.2.5. Additional Conditions Applicable to Existing Manufacturing, Commercial, Mining and Silvicultural Discharges

The permittee shall notify the Director as soon as they know or have reason to believe that toxic pollutants not limited in the permit have been or shall be discharge in excess of the highest of the following notification levels:

POLLUTANT	ROUTINE/FREQUENT BASIS	NON-ROUTINE/INFREQUENT BASIS
Any Toxic Pollutant	100 µg/l or level established by the Director	500 µg/l or level established by the Director

POLLUTANT	ROUTINE/FREQUENT BASIS	NON-ROUTINE/INFREQUENT BASIS
Acrolein	200 µg/l	500 µg/l or level established by the Director
Acrylonitrile	200 µg/l	500 µg/l or level established by the Director
2,4-dinitrophenol	500 µg/l	500 µg/l or level established by the Director
2-methyl-4,6-dinitrophenol	500 µg/l	500 µg/l or level established by the Director
Antimony	1 mg/l	1 mg/l
Pollutant reported in permit application	Five (5) times the maximum concentration value	Ten (10) times the maximum concentration value

2.3. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported. The completed Discharge Monitoring Report (DMR) for each monitoring period must be submitted no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

2.3.1. Electronic Submittal

The completed DMR for each monitoring period must be entered into the Division of Water approved electronic system no later than midnight on the 28th day of the month following the monitoring period for which monitoring results were obtained. The use of mailed (hardcopy) DMRs has ceased and electronic DMR submittal shall begin with the initial DMR.

For information regarding electronic submittal of DMRs please visit the Division’s website at <http://water.ky.gov/permitting/Pages/netDMRInformation.aspx> or contact the DMR Coordinator at (502) 564-3410.

2.4. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

This permit may be reopened to implement the findings of a reasonable potential analysis performed by the Division of Water.

This permit shall be reopened if Division of Water determines surface waters are aesthetically or otherwise degraded by substances that:

- (a) Settle to form objectionable deposits;
- (b) Float as debris, scum, oil, or other matter to form a nuisance;
- (c) Produce objectionable color, odor, taste, or turbidity;
- (d) Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life;
- (e) Produce undesirable aquatic life or result in the dominance of nuisance species; or
- (f) Cause fish flesh tainting.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

3. SPECIAL CONDITIONS

3.1. Diffuser Specifications and ZID Requirements

Within one (1) year of the effective date of this permit, the permittee shall provide and/or confirm the following information:

1. All the engineering specifications and geometric data for the installed diffuser.
2. Confirmation that the unit is functioning as originally designed.
3. Cross sectional width of the receiving stream at the point of discharge (Outfall 001).
4. The geometry of the diffuser with respect to its installed location.

The Division may reopen and modify this permit to further limit or exclude the acute mixing assigned as a result of the use of the submerged high-rate multipoint diffuser.

3.2. Cooling Water Additives, FIFRA and Mollusk Control

The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in cooling water which ultimately may be released to the waters of the Commonwealth is prohibited, except Herbicides, unless specifically identified and authorized by the KPDES permit. In the event the permittee needs to use a biocide or chemical not previously reported for mollusk control or other purpose, the permittee shall submit sufficient information, a minimum of thirty (30) days prior to the commencement of use of said biocides or chemicals, to the Division of Water for review and establishment of appropriate control parameters. Such information requirements shall include the name and general composition of biocide or chemical, any and all aquatic organism toxicity data, quantities to be used, frequencies of use, proposed discharge concentrations, and the EPA registration number, if applicable.

3.3. Best Management Practices

3.3.1. BMP - General Conditions

3.3.1.1. BMP - Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

3.3.1.2. BMP - Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate

through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

3.3.1.3. BMP - Implementation

If this is the first time for the BMP requirement, then the plan shall be developed and submitted to the Division of Water within 90 days of the effective date of the permit. Implementation shall be within 180 days of that submission. For permit renewals the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

3.3.1.4. BMP - General Requirements

The BMP plan shall:

- a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.
- b. Establish specific objectives for the control of toxic and hazardous pollutants.

(1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.

c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."

d. Include any special conditions established in part b of this section.

e. Be reviewed by plant engineering staff and the plant manager.

3.3.1.5. BMP - Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

- a. BMP Committee
- b. Reporting of BMP Incidents
- c. Risk Identification and Assessment
- d. Employee Training
- e. Inspections and Records
- f. Preventive Maintenance
- g. Good Housekeeping

- h. Materials Compatibility
- i. Security
- j. Materials Inventory

3.3.1.6. BMP - SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

3.3.1.7. BMP - Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

3.3.1.8. BMP - Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to EEC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3.3.1.9:

- Division of Water
- Surface Water Permits Branch
- Operational Permits Section
- 200 Fair Oaks Lane
- Frankfort, Kentucky 40601

3.3.1.9. BMP - Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

3.3.1.10. BMP - Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.

3.3.2. BMP - Specific Conditions

3.3.2.1. BMP - Periodically Discharged Wastewaters Not Specifically Covered by Effluent Conditions

The permittee shall include in this BMP plan procedures and controls necessary for the handling of periodically discharged wastewaters such as intake screen backwash, meter calibration, fire protection, hydrostatic testing water, water associated with demolition projects, etc.

4. STATE CONDITIONS

4.1. Outfall Signage

The permittee shall comply with the permanent marker requirements of Part V, Section A 3 of ORSANCO's Pollution Control Standards.

4.2. Discharge and Monitoring Point Accessibility

As previously stated in Section 2.2.4.9, the permittee shall allow authorized agency representatives to inspect the facility and collect samples to determine compliance. In order for such monitoring to be conducted either by the permittee or authorized agency personnel all monitoring and discharge points required by this permit shall be readily and safely accessible in all weather conditions.

5. ABBREVIATIONS, ACRONYMS AND DEFINITIONS

Abbreviation or Acronym	Full Phrase	Definition
MGD	Million Gallons Per Day	A measure of flow
cfs	cubic feet per second	A measure of flow
SU	Standard Units	A measure of pH
mg/l	milligrams per liter	A measure of pollutant concentration (1000 milligrams = 1 gram)
µg/l	micrograms per liter	A measure of pollutant concentration (1000 micrograms = 1 milligram)
°F	Degrees Fahrenheit	A measure of temperature
°C	Degrees Centigrade or Celsius	A measure of temperature
N/A	Not Applicable	
lbs/day	pounds per day	A measure of pollutant loading
Grab	Grab Sample	A sample taken from a wastestream on a one-time basis without consideration of the flow rate of the wastestream and without consideration of time.
24-Hr Composite	24-hour Composite Sample	Sample composed of discrete equal volume aliquots (100 ml minimum) collected every 15 minutes over a 24-hour period and aggregated by an automated sampling device. The aggregate sample will reflect the average water quality of the compositing or sample period.

KPDES



KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM

PERMIT

PERMIT NO.: KY0023981

AI NO.: 1629

**AUTHORIZATION TO DISCHARGE UNDER THE
KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM**

Pursuant to Authority in KRS 224,

Charles P. Jackson
900 Hartford Road
Hawesville, Kentucky 42328

is authorized to discharge from a facility located at

Jackson Mobile Home Park
900 Hartford Road
Hawesville, Hancock County, Kentucky

to receiving waters named

Lead Creek at Lat/Long 37°52'54"/ 86°44'49"

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

This permit shall become effective on September 1, 2015.

This permit and the authorization to discharge shall expire at midnight, August 31, 2020.

March 17, 2015

Date Signed

A handwritten signature in black ink, appearing to read 'Peter T. Goodmann', located above the signature line.

**Peter T. Goodmann, Director
Division of Water**

**DEPARTMENT FOR ENVIRONMENTAL PROTECTION
Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky 40601**

THIS KPDES PERMIT CONSISTS OF THE FOLLOWING SECTIONS.

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1. EFFLUENT AND MONITORING REQUIREMENTS

1.1. Monitoring Locations

The following table lists the outfalls authorized by this permit, the latitude and longitude of each and the DOW assigned KPDES outfall number.

MONITORING LOCATIONS					
Number	Type	Latitude (N)	Longitude (W)	Receiving Waters	Description of Outfall
001	Direct	37°52'54"	86°44'49"	Lead Creek	Sanitary Wastewater

1.2. Effluent Limitations and Monitoring Requirements

Beginning on the effective date and lasting through the term of this permit discharges from Outfall 001 shall comply with the effluent limitations.

Effluent Characteristic	EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS	
	Loadings (lbs/day)		Concentrations (specify units)				Monitoring Frequency	Sample Type
	Monthly Average	Max Weekly Average	Minimum	Monthly Average	Max Weekly Average	Maximum		
Effluent Flow (Design 0.0025 MGD)	Report	Report	N/A	N/A	N/A	N/A	Quarterly	Instantaneous
CBOD ₅	0.63	0.94	N/A	30 mg/l	45 mg/l	N/A	Quarterly	24-Hr Composite
Total Suspended Solids	0.63	0.94	N/A	30 mg/l	45 mg/l	N/A	Quarterly	24-Hr Composite
Ammonia (as mg/l NH ₃ N)								
May 1 – October 31	0.08	0.13	N/A	4 mg/l	6 mg/l	N/A	Quarterly	24-Hr Composite
November 1 – April 30	0.21	0.31	N/A	10 mg/l	15 mg/l	N/A	Quarterly	24-Hr Composite
E. Coli (colonies/100 ml) ¹	N/A	N/A	N/A	130	240	N/A	Quarterly	Grab
Dissolved Oxygen	N/A	N/A	7 mg/l	N/A	N/A	N/A	Quarterly	Grab
pH (Standard Units)	N/A	N/A	6.0 SU	N/A	N/A	9.0 SU	Quarterly	Grab
Total Residual Chlorine	N/A	N/A	N/A	0.011 mg/l	0.019 mg/l	N/A	Quarterly	Grab

¹The effluent limitations for *Escherichia Coli* are 30 day and 7 day Geometric Means.

1.3. Standard Effluent Requirements

The discharges to waters of the Commonwealth shall not produce floating solids, visible foam or a visible sheen on the surface of the receiving waters.

Samples and measurements taken in accordance with the requirements of specified Section 1.2 shall be representative of the volume and nature of the monitored discharge and shall be taken at nearest accessible point after final treatment, but prior to actual discharge to or mixing with the receiving waters or wastestreams from other outfalls.

SECTION 2

ADDITIONAL REQUIREMENTS

2. ADDITIONAL REQUIREMENTS

2.1. Schedule of Compliance

The permittee shall attain compliance with all requirements of this permit on the effective date of this permit unless otherwise stated.

2.2. Other Permits

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

2.3. Sufficiently Sensitive Analytical Methods

Analytical methods utilized to demonstrate compliance with the effluent limitations established in this permit shall be sufficiently sensitive to detect pollutant levels at or below the required effluent limit, i.e. the Method Detection Limit (MDL) shall be at or below the effluent limit. In that instance where an EPA-approved method does not exist that has an MDL at or below the established effluent limitation, the permit shall: (1) use the method specified in the permit; or (2) the EPA-approved method with an MDL that is nearest to the established effluent limit.

2.4. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported. The completed Discharge Monitoring Report (DMR) for each monitoring period must be submitted no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

2.4.1. Electronic Submittal

The completed DMR for each monitoring period must be entered into the Division of Water approved electronic system no later than midnight on the 28th day of the month following the monitoring period for which monitoring results were obtained. The use of mailed (hardcopy) DMRs has ceased and electronic DMR submittal shall begin with the initial DMR.

For information regarding electronic submittal of DMRs please visit the Division's website at <http://water.ky.gov/permitting/Pages/netDMRInformation.aspx> or contact the DMR Coordinator at (502) 564-3410.

2.5. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

This permit may be reopened to implement the findings of a reasonable potential analysis performed by the Division of Water.

This permit shall be reopened if Division of Water determines surface waters are aesthetically or otherwise degraded by substances that:

- (a) Settle to form objectionable deposits;
- (b) Float as debris, scum, oil, or other matter to form a nuisance;
- (c) Produce objectionable color, odor, taste, or turbidity;

- (d) Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life;
- (e) Produce undesirable aquatic life or result in the dominance of nuisance species; or
- (f) Cause fish flesh tainting.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

2.6. Outfall Signage

The KPDES permit establishes monitoring points, effluent limitations, and other conditions to address discharges from the permitted facility. In an effort to better document and clarify these locations the permittee should place and maintain a permanent marker at each of the monitoring locations.

2.7. Discharge and Monitoring Point Accessibility

As previously stated in Section 3.9, the permittee shall allow authorized agency representatives to inspect the facility and collect samples to determine compliance. In order for such monitoring to be conducted either by the permittee or authorized agency personnel all monitoring and discharge points required by this permit shall be readily and safely accessible in all weather conditions.

2.8. Disposal of Non-Domestic Wastes

The pass through or non-treatment by the wastewater treatment plant of chemicals or compounds which may injure, be chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish and other aquatic life is not desirable. Materials such as acids, caustics, herbicides, household chemicals or cleansers, insecticides, lawn chemicals, non-biodegradable products, paints, pesticides, pharmaceuticals, and petroleum based products may not be treatable by the wastewater treatment plant and should not be introduced and other environmentally sound methods for disposal should be utilized. The permittee should educate users of its system that introduction of such chemicals or compounds could result in an adverse environmental impact and provide the users with alternative disposal measures.

2.9. Certified Operators

Pursuant to 401 KAR 5:010, Section 1 a treatment plant with a design capacity of less than or equal to 50,000 gallons per day shall be under the primary responsibility of a certified operator holding an active Class I, II, III, or IV treatment certificate.

2.10. Connection to Regional Sewer System

This treatment unit is temporary and in no way supersedes the need of a regional sewer system. The permittee will eliminate the discharge and treatment unit by connection to a regional sewer system when it becomes available as defined in 401 KAR 5:002.

2.11. Certified Laboratory Requirements

All laboratory analyses and tests required to demonstrate compliance with the conditions of this permit shall be performed by EEC certified general wastewater laboratories and EEC certified field-only laboratories. Compliance with this requirement shall commence on January 1, 2015 for analyses and tests performed by a general wastewater laboratory and January 1, 2016 for field-only wastewater laboratories.

SECTION 3
STANDARD CONDITIONS

3. STANDARD CONDITIONS

The following conditions apply to all KPDES permits.

3.1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of KRS Chapter 224 and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Any person who violates applicable statutes or who fails to perform any duty imposed, or who violates any determination, permit, administrative regulation, or order of the cabinet promulgated pursuant thereto shall be liable for a civil penalty as provided at KRS 224.99.010.

3.2. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit.

3.3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3.4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

3.5. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

3.6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

3.7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

3.8. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

3.9. Inspection and Entry

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

3.10. Monitoring and Records

- (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 401 KAR 5:065 Section 2(10) [40 CFR 503]), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
- (3) Records of monitoring information shall include:
 - (i) The date, exact place, and time of sampling or measurements;
 - (ii) The individual(s) who performed the sampling or measurements;
 - (iii) The date(s) analyses were performed;
 - (iv) The individual(s) who performed the analyses;
 - (v) The analytical techniques or methods used; and
 - (vi) The results of such analyses.
- (4) Monitoring must be conducted according to test procedures approved under 401 KAR 5:065 Section 2(8) [40 CFR 136] unless another method is required under 401 KAR 5:065 Section 2(9) or (10) [40 CFR subchapters N or O].
- (5) KRS 224.99-010 provides that any person who knowingly violates KRS 224.70-110 or other enumerated statutes, or who knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall be guilty of a Class D felony and, upon conviction, shall be punished by a fine of not more than \$25,000, or by imprisonment for not more than one (1) year, or both. Each day upon which a violation occurs shall constitute a separate violation.

3.11. Signatory Requirement

- (1) All applications, reports, or information submitted to the Director shall be signed and certified pursuant to 401 KAR 5:060, Section 4 [40 CFR 122.22].
- (2) KRS 224.99-010 provides that any person who knowingly provides false information in any document filed or required to be maintained under KRS Chapter 224 shall be guilty of a Class D felony and upon conviction thereof, shall be punished by a fine not to exceed twenty-five thousand dollars (\$25,000), or by imprisonment, or by fine and imprisonment, for each separate violation. Each day upon which a violation occurs shall constitute a separate violation

3.12. Reporting Requirements

3.12.1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- (i) The alteration or addition to a permitted facility may meet one (1) of the criteria for determining whether a facility is a new source in KRS 224.16-050 [40 CFR 122.29(b)]; or
- (ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under KRS 224.16-050 [40 CFR 122.42(a)(1)].
- (iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

3.12.2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3.12.3. Transfers

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under KRS 224 [CWA; see 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory].

3.12.4. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit.

- (i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
- (ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 401 KAR 5:065 Section 2(8) [40 CFR 136], or another method required for an industry-specific waste stream under 401 KAR 5:065 Section 2(9) or (10) [40 CFR subchapters N or O], the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
- (iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

3.12.5. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

3.12.6. Twenty-four-Hour Reporting

- (i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the

noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within twenty-four (24) hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See §122.41(g))

(B) Any upset which exceeds any effluent limitation in the permit.

(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within twenty-four (24) hours.

(iii) The Director may waive the written report on a case-by-case basis for reports under paragraph (1)(6)(ii) of this section if the oral report has been received within twenty-four (24) hours.

3.12.7. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Sections 3.12.1, 3.12.4, 3.12.5, and 3.12.6, at the time monitoring reports are submitted. The reports shall contain the information listed in Section 3.12.6.

3.12.8. Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

3.13. Bypass

3.13.1. Definitions

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

3.13.2. Bypass Not Exceeding Limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Section 3.13.1.

3.13.3. Notice

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section 3.12.6.

3.13.4. Prohibition of Bypass

(i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of

reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The permittee submitted notices as required under Section 3.13.3.

(ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three (3) conditions listed above in Section 3.13.3.

3.14. Upset

3.14.1. Definition

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

3.14.2. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Section 3.14.3 are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

3.14.3. Conditions Necessary for a Demonstration of Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (i) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (ii) The permitted facility was at the time being properly operated; and
- (iii) The permittee submitted notice of the upset as required in Section 3.12.6; and
- (iv) The permittee complied with any remedial measures required under Section 3.4.

3.14.4. Burden of Proof

In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

SECTION 4

ABBREVIATIONS, ACRONYMS AND DEFINITIONS

4. ABBREVIATIONS, ACRONYMS AND DEFINITIONS

Abbreviation or Acronym	Full Phrase	Definition
MGD	Million Gallons Per Day	A measure of flow
cfs	cubic feet per second	A measure of flow
SU	Standard Units	A measure of pH
mg/l	milligrams per liter	A measure of pollutant concentration (1000 milligrams = 1 gram)
µg/l	micrograms per liter	A measure of pollutant concentration (1000 micrograms = 1 milligram)
°F	Degrees Fahrenheit	A measure of temperature
°C	Degrees Centigrade or Celsius	A measure of temperature
N/A	Not Applicable	
lbs/day	pounds per day	A measure of pollutant loading
Grab	Grab Sample	A sample taken from a wastestream on a one-time basis without consideration of the flow rate of the wastestream and without consideration of time.
24-Hr Composite	24-hour Composite Sample	Sample composed of discrete equal volume aliquots (100 ml minimum) collected every 15 minutes over a 24-hour period and aggregated by an automated sampling device. The aggregate sample will reflect the average water quality of the compositing or sample period.



STEVEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

LEONARD K. PETERS
SECRETARY

FACT SHEET

**KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE TREATED WASTEWATER
INTO WATERS OF THE COMMONWEALTH**

KPDES No.: KY0066524 Permit Writer: Diana Davidson Date: August 24, 2010
AI No.: 1638

1. **SYNOPSIS OF APPLICATION**

a. Name and Address of Applicant

Hancock County Board of Education
83 State Route 271 North
Hawesville, Kentucky 42348

b. Facility Location

South Hancock Elementary
8631 State Route 69
Hawesville, Hancock County, Kentucky

c. Description of Applicant's Operation

Public Elementary School

d. Design Capacity

0.00375 MGD

e. Description of Existing Pollution Abatement Facilities

Process consists of screening, activated sludge, secondary settling, and chlorine disinfection.

2. **RECEIVING WATER**

a. Name/Mile Point

Facility discharges to the unnamed tributary of Horse Fork at latitude 37° 46' 52" and longitude 86° 46' 40".

b. Stream Segment Use Classification

Pursuant to 401 KAR 10:026, Section 5, the unnamed tributary of Horse Fork carries the following classifications: Warmwater Aquatic Habitat, Primary/Secondary Contact Recreation, and Domestic Water Supply.

c. Stream Segment Categorization

Pursuant to 401 KAR 10:030, Section 1 the unnamed tributary of Horse Fork is categorized as a High Quality Water.

d. Stream Low Flow Condition

The 7-day, 10-year low flow and harmonic mean conditions of the unnamed tributary of Horse Fork are 0.0 and unknown cfs, respectively.

3. REPORTED DISCHARGE AND PROPOSED LIMITS

Serial Number 001 - Sanitary Wastewater (Design Flow = 0.00375 MGD)

Effluent Characteristics	Reported Discharge Monthly Average	Daily Maximum	Proposed Limits Monthly Average	Daily Maximum	Applicable Water Quality Criteria and/or Effluent Guidelines
Flow (MGD)	0.0009	0.0011	Report	Report	401 KAR 5:065, Section 2 (4) 40 CFR 122.4 (i) (1) (ii)
CBOD ₅ (mg/l)	5.08	5.08	15	22.5	401 KAR 10:031, Section 4 401 KAR 5:045, Sections 3 and 5
TSS (mg/l)	13.13	13.77	30	45	401 KAR 10:031, Section 4 401 KAR 5:045, Sections 2 and 3
Fecal Coliform (N/100 ml)	7.15	7.15	Removing from permit		401 KAR 5:080, Section 2 (3)
<i>Escherichia Coli</i> (N/100 ml)	NR	NR	130	240	401 KAR 10:031, Section 7 401 KAR 5:045, Section 4 401 KAR 5:080, Section 2 (3)
Ammonia Nitrogen (as mg/l N) May 1 - October 31 November 1 - April 30	2.99 6.21	2.99 8.48	2.0 5.0	3.0 7.5	401 KAR 10:031, Section 4 401 KAR 5:045, Sections 3 and 5
Dissolved Oxygen (mg/l) (minimum)	7.75	N/A	Not less than 7.0		401 KAR 10:031, Section 4 401 KAR 5:045, Sections 3 and 5
pH (standard units)	6.17	7.9	6.0 (min)	9.0 (max)	401 KAR 10:031, Section 4 401 KAR 5:045, Section 4
Total Residual Chlorine (mg/l)	NR	NR	0.011	0.019	401 KAR 10:031, Section 4(k)

The data contained under the reported discharge columns is not from the renewal application, but rather from the analysis of the DMR data that has been reported during the term of the previous permit.

The abbreviation CBOD₅ means Carbonaceous Biochemical Oxygen Demand (5-day).
 The abbreviation TSS means Total Suspended Solids.
 The abbreviation NR means not reported on the Discharge Monitoring Report (DMR).
 The effluent limitations for CBOD₅ and TSS are Monthly (30 day) and Weekly (7 day) Averages.
 The effluent limitations for *Escherichia Coli* are thirty (30) day and seven (7) day Geometric Means.

4. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Serial Number

Outfall 001 Sanitary Wastewater (Design Flow = 0.00375 MGD)

b. Effluent Characteristics

Flow, CBOD₅, TSS, Fecal Coliform Bacteria, *Escherichia Coli*, pH, Ammonia Nitrogen, Dissolved Oxygen, and Total Residual Chlorine (TRC).

c. Pertinent Factors

None

d. Monitoring Requirements

Flow monitoring shall be conducted instantaneously once per quarter.

CBOD₅, TSS, Ammonia Nitrogen, shall be monitored once per quarter by 12 hour composite sampling. Composite sample means an effluent portion consisting of a minimum of six (6) combined equal volume grab samples taken approximately two (2) hours apart. The representative flow period established for this facility's composite sampling hours are between 6:00 a.m. and 6:00 p.m.

Escherichia Coli, pH, Dissolved Oxygen and Total Residual Chlorine shall be monitored once per quarter by grab sample.

e. Justification of Conditions

The Kentucky regulations cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes.

Escherichia Coli and Fecal Coliform Bacteria

The limits for *Escherichia Coli* are consistent with the requirements of 401 KAR 10:031, Section 7, 401 KAR 5:045 Section 4 and 401 KAR 5:080, Section 2(3). The removal of Fecal Coliform Bacteria is consistent with the requirements of 401 KAR 5:080k Section 2(3). Although Fecal Coliform Bacteria has been used as an indicator of fecal contamination, it does contain other species that are not necessarily fecal in origin. EPA recommends *Escherichia Coli*, which is specific to fecal material from warm-blooded animals, as the best indicator of health risk from contact with recreational waters. Therefore, it is the "Best Professional Judgment "BPJ" of the Division of Water that *Escherichia Coli* replace Fecal Coliform Bacteria on this permit.

Flow

The monitoring requirements for this parameter are consistent with the requirements of 40 CFR 122.44(i)(1)(ii) as incorporated by 401 KAR 5:065, Section 2(4).

CBOD₅, Ammonia Nitrogen, and Dissolved Oxygen

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4, and 401 KAR 5:045, Sections 3 and 5. Section 4 of 5:031 establishes water quality criteria for the protection of Kentucky's waters. Section 5 of 5:045 requires biochemically degradable wastewaters to receive treatment in excess of secondary treatment if the Cabinet determines that the receiving water would not satisfy applicable water quality standards as a result of a facility discharge or discharges from multiple facilities.

Total Suspended Solids

The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4 and 5:045, Sections 2 and 3. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Sections 2 and 3 of 5:045 require biochemically degradable wastewaters to receive secondary treatment.

pH

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4 and 5:045, Section 4. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Section 4 of 5:045 establishes the acceptable levels of these parameters for biochemically degradable wastewaters.

Total Residual Chlorine

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4.

5. ANTIDEGRADATION

The conditions of 401 KAR 10:029, Section 1 have been satisfied by this permit action. Since this permit action involves reissuance of an existing permit, and does not propose an expanded discharge, a review under 401 KAR 10:030 Section 1 is not applicable.

6. PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS

The permittee will comply with all effluent limitations by the effective date of the permit.

7. PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE

Disposal of Non-Domestic Wastes

The pass through or non-treatment by the wastewater treatment plant of chemicals or compounds which may injure, be chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish and other aquatic life is not desirable. Materials such as acids, caustics, herbicides, household chemicals or cleansers, insecticides, lawn chemicals, non-biodegradable products, paints, pesticides, pharmaceuticals, and petroleum based products may not be treatable by the wastewater treatment plant and should not be introduced and other environmentally sound methods for disposal should be utilized. The permittee should educate users of its system that introduction of such chemicals or compounds could result in an adverse environmental impact and provide the users with alternative disposal measures. This requirement is consistent with the requirements of 401 KAR 5:065, Section 1(5) and 401 KAR 5:080, Section 2(3).

Certified Operators

Pursuant to 401 KAR 5:010, Section 1 wastewater systems shall be operated under the supervision of a certified operator who holds a Kentucky Certificate equivalent to the class of system being supervised.

Pursuant to 401 KAR 5:010, Section 3 the certified operator shall be reasonably available if not physically present while the system is operating.

Outfall Signage

The KPDES permit establishes monitoring points, effluent limitations, and other conditions to address discharges from the permitted facility pursuant 40 CFR 122.48. In an effort to better document and clarify these locations the permittee should place and maintain a permanent marker at each of the monitoring locations.

8. **PERMIT DURATION**

Five (5) years. This facility is in the Tradewater, Green Basin Management Unit as per the Kentucky Watershed Management Framework.

9. **PERMIT INFORMATION**

The application, draft permit, fact sheet, public notice, comments received, and additional information is available from the Division of Water at 200 Fair Oaks Lane, Frankfort, Kentucky 40601.

10. **REFERENCES AND CITED DOCUMENTS**

All material and documents referenced or cited in this fact sheet are a part of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the person listed below.

11. **CONTACT**

For further information on the draft permit or comment process, contact the individual identified on the Public Notice or the Permit Writer - Diana Davidson at (502) 564-8158, extension 4901, or email Diana.Davidson@ky.gov.

12. **PUBLIC NOTICE INFORMATION**

Please refer to the attached Public Notice for details regarding the procedures for a final decision, deadline for comments and other information required by 401 KAR 5:075, Section 4(2)(e).



KPDES



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

PERMIT NO.: KY0066524
AI NO.: 1638

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

Hancock County Board of Education
83 State Route, 271 North
Hawesville, Kentucky 42348

is authorized to discharge from a facility located at

South Hancock Elementary
8631 State Road 69
Hawesville, Hancock County, Kentucky

to receiving waters named

unnamed tributary of Horse Fork at latitude 37 ° 46' 52" and
longitude 86 ° 46' 40"

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III, and IV hereof. The permit consists of this cover sheet, and Part I 2 pages, Part II 1 pages, and Part III 2 page.

This permit shall become effective on October 1, 2010.

This permit and the authorization to discharge shall expire at midnight, September 30, 2015.

A handwritten signature in black ink, appearing to read 'Sandra L. Gruzesky', located below the permit text.

August 24, 2010
Date Signed

Sandra L. Gruzesky, Director
Division of Water

PART I A - EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: 001 - Sanitary Wastewater (Design Flow = 0.00375 MGD)

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS		
	(lbs/day) Monthly Avg.	Daily Max.	Other Units (Specify) Monthly Avg.	Measurement Frequency	Sample Type	
Flow (MGD)	Report	Report	N/A	1/Quarter	Instantaneous	
CBOD ₅ (mg/l)	0.47	0.70	15	1/Quarter	12 Hr Composite	
TSS (mg/l)	0.94	1.41	30	1/Quarter	12 Hr Composite	
Ammonia Nitrogen (as mg/l N) May 1 - October 31 November 1 - April 30	0.06 0.16	0.09 0.23	2.0 5.0	1/Quarter 1/Quarter	12 Hr Composite 12 Hr Composite	
Escherichia Coli (N/100 ml)	N/A	N/A	130	1/Quarter	Grab	
Dissolved Oxygen (mg/l) (minimum)	N/A	N/A	Not less than 7.0	1/Quarter	Grab	
pH (standard units)	N/A	N/A	6.0 (min)	1/Quarter	Grab	
Total Residual Chlorine (mg/l)	N/A	N/A	0.011	1/Quarter	Grab	

The abbreviation CBOD₅ means Carbonaceous Biochemical Oxygen Demand (5-day).
 The abbreviation TSS means Total Suspended Solids.

The abbreviation N/A means Not Applicable.
 The effluent limitations for CBOD₅ and TSS are Monthly (30 day) and Weekly (7 day) Averages.
 The effluent limitations for Escherichia Coli are thirty (30) day and seven (7) day Geometric Means.
 There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location:
 nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

PART I B - SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with all requirements on the effective date of this permit.

PART II - STANDARD CONDITIONS FOR KPDES PERMIT

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

All conditions of 40 CFR 122.41 (401 KAR 5:065, Section 2(1)) are hereby incorporated by reference as conditions of this permit.

PART III - OTHER REQUIREMENTS

A. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported on a preprinted Discharge Monitoring Report (DMR) Form that will be mailed to you. The completed DMR for each monitoring period must be sent to the Division of Water at the address listed below (with a copy to the appropriate Regional Office) postmarked no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

Division of Water
Madisonville Regional Office
625 Hospital Drive
Madisonville, Kentucky 42431-1683
ATTN: Supervisor

Division of Water
Surface Water Permits Branch
Permit Support Section
200 Fair Oaks Lane
Frankfort, Kentucky 40601

B. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

This permit may be reopened to implement the findings of a reasonable potential analysis performed by the Division of Water.

This permit shall be reopened if Division of Water determines surface waters are aesthetically or otherwise degraded by substances that:

- (a) Settle to form objectionable deposits;
- (b) Float as debris, scum, oil, or other matter to form a nuisance;
- (c) Produce objectionable color, odor, taste, or turbidity;
- (d) Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life;
- (e) Produce undesirable aquatic life or result in the dominance of nuisance species; or
- (f) Cause fish flesh tainting

C. Disposal of Non-Domestic Wastes

The pass through or non-treatment by the wastewater treatment plant of chemicals or compounds which may injure, be chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish and other aquatic life is not desirable. Materials such as acids, caustics, herbicides, household chemicals or cleansers, insecticides, lawn chemicals, non-biodegradable products, paints, pesticides, pharmaceuticals, and petroleum based products may not be treatable by the wastewater treatment plant and should not be introduced and other environmentally sound methods for disposal should be utilized. The permittee should educate users of its system that introduction of such chemicals or compounds could result in an adverse environmental impact and provide the users with alternative disposal measures.

D. Certified Operators

This wastewater system shall be operated under the supervision of a Class I Kentucky Certified Operator who shall be reasonably available at all times. All other operators employed by the system shall hold a Kentucky Certificate or shall be in the process of obtaining a Kentucky Certificate. The certificates of each operator shall be prominently displayed on the wall of the system office.

E. Outfall Signage

The KPDES permit establishes monitoring points, effluent limitations, and other conditions to address discharges from the permitted facility. In an effort to better document and clarify these locations the permittee should place and maintain a permanent marker at each of the monitoring locations.

KPDES



KENTUCKY POLLUTANT
DISCHARGE ELIMINATION
SYSTEM

PERMIT

PERMIT NO.: KY0025241

AI NO.: 1633

**AUTHORIZATION TO DISCHARGE UNDER THE
KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM**

Pursuant to Authority in KRS 224,

City of Lewisport
P O Box 22
Lewisport, Kentucky 42351

is authorized to discharge from a facility located at

Lewisport Wastewater Treatment Plant
1700 Riverview Drive
Lewisport, Hancock County, Kentucky

to receiving waters named

Ohio River at Latitude 37°55'55.538" Longitude 86°55'23.106" NHD index 736.1

in accordance with effluent limitations, monitoring requirements and other conditions set forth in this permit.

This permit shall become effective on April 1, 2014.

This permit and the authorization to discharge shall expire at midnight, March 31, 2019.

January 27, 2014

Date Signed

A handwritten signature in black ink, appearing to read "Peter T. Goodmann", written over a horizontal line.

**Peter T. Goodmann, Acting Director
Division of Water**

**DEPARTMENT FOR ENVIRONMENTAL PROTECTION
Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky 40601**

1. EFFLUENT AND MONITORING REQUIREMENTS

1.1. Monitoring Locations

The following table lists the outfalls authorized by this permit, the latitude and longitude of each and the DOW assigned KPDES outfall number.

MONITORING LOCATIONS			
Number	Type	Latitude (N)	Longitude (W)
001	Effluent	37°55'55.538"	86°55'23.106"
001	Influent	Headworks	
			Treated Domestic Wastewater
			Raw Domestic Wastewater

1.2. Effluent Limitations and Monitoring Requirements

Beginning on the effective date and lasting through the term of this permit discharges from Outfall 001 shall comply with the effluent limitations.

Effluent Characteristic	EFFLUENT LIMITATIONS						MONITORING REQUIREMENTS			
	Loadings (lbs/day)		Concentrations (specify units)				Monitoring		Sample Type	
	Monthly Average	Weekly Average	Minimum	Monthly Average	Weekly Average	Maximum	Location	Frequency		
Flow (Design 0.40 MGD)	Report	Report	N/A	N/A	N/A	N/A	Effluent	Continuous	Recorder	
Flow (MGD)	Report	Report	N/A	N/A	N/A	N/A	Influent	Continuous	Recorder	
BOD ₅	100	150	N/A	30 mg/l	45 mg/l	N/A	Effluent	1/Week	24-Hr Composite	
BOD ₅	Report	Report	N/A	Report, mg/l	Report, mg/l	N/A	Influent	1/Week	24-Hr Composite	
Percent Removal BOD ₅	N/A	N/A	N/A	85%	N/A	N/A	N/A	1/Month	Calculated	
TSS	100	150	N/A	30 mg/l	45 mg/l	N/A	Effluent	1/Week	24-Hr Composite	
TSS	Report	Report	N/A	Report, mg/l	Report, mg/l	N/A	Influent	1/Week	24-Hr Composite	
Percent Removal TSS	N/A	N/A	N/A	85%	N/A	N/A	N/A	1/Month	Calculated	
Ammonia (as NH ₃ N)	67	100	N/A	20 mg/l	30 mg/l	N/A	Effluent	1/Week	24-Hr Composite	
E. Coli (colonies/100 ml) ¹	N/A	N/A	N/A	130	240	N/A	Effluent	1/Week	Grab	
Dissolved Oxygen	N/A	N/A	2.0 mg/l	N/A	N/A	N/A	Effluent	1/Week	Grab	
pH (Standard Units)	N/A	N/A	6.0	N/A	N/A	9.0	Effluent	1/Week	Grab	
Total Phosphorus	N/A	N/A	N/A	Report, mg/l	Report, mg/l	N/A	Effluent	1/Week	24-Hr Composite	
Total Nitrogen	N/A	N/A	N/A	Report, mg/l	Report, mg/l	N/A	Effluent	1/Week	24-Hr Composite	
Hardness as mg/l CaCO ₃	N/A	N/A	N/A	Report, mg/l	Report, mg/l	N/A	Effluent	1/Quarter	24-Hr Composite	

EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS					
Effluent Characteristic	Loadings (lbs/day)		Concentrations (specify units)			Monitoring		Sample Type	
	Monthly Average	Weekly Average	Minimum	Monthly Average	Weekly Average	Maximum	Location		Frequency
Total Recoverable Cadmium	N/A	N/A	N/A	Report, mg/l	Report, mg/l	N/A	Effluent	1/Quarter	24-Hr Composite
Total Recoverable Copper	N/A	N/A	N/A	Report, mg/l	Report, mg/l	N/A	Effluent	1/Quarter	24-Hr Composite
Total Recoverable Lead	N/A	N/A	N/A	Report, mg/l	Report, mg/l	N/A	Effluent	1/Quarter	24-Hr Composite
Total Recoverable Zinc	N/A	N/A	N/A	Report, mg/l	Report, mg/l	N/A	Effluent	1/Quarter	24-Hr Composite
†The effluent limitations for <i>Escherichia Coli</i> are 30 day and 7 day Geometric Means. Total Nitrogen is the summation of the analytical results for Total Nitrates, Total Nitrites, and Total Kjeldahl Nitrogen.									

1.3. Standard Effluent Requirements

The discharges to waters of the Commonwealth shall not produce floating solids, visible foam or a visible sheen on the surface of the receiving waters.

Samples and measurements taken in accordance with the requirements of specified Section 1.2 shall be representative of the volume and nature of the monitored discharge and shall be taken at nearest accessible point after final treatment, but prior to actual discharge to or mixing with the receiving waters or wastestreams from other outfalls.

2. STANDARD CONDITIONS

2.1. Schedule of Compliance

The permittee shall attain compliance with all requirements of this permit on the effective date of this permit unless otherwise stated.

2.2. Standard Conditions for KPDES Permit

2.2.1. Other Permits

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

2.2.2. Sufficiently Sensitive Analytical Methods

Analytical methods utilized to demonstrate compliance with the effluent limitations established in this permit shall be sufficiently sensitive to detect pollutant levels at or below the required effluent limit, i.e. the Method Detection Limit (MDL) shall be at or below the effluent limit. In that instance where an EPA-approved method does not exist that has an MDL at or below the established effluent limitation, the permit shall: (1) use the method specified in the permit; or (2) the EPA-approved method with an MDL that is nearest to the established effluent limit.

2.2.3. Antidegradation

For those discharges subject to the provisions of 401 KAR 10:030, Section 1(3)(b)5, the permittee shall install, operate, and maintain wastewater treatment facilities consistent with those identified as follows: Screening, Grit Chamber, Splitter Box, 2 – Bio Lac Aerated Basins, 2 – Clarifiers, UV disinfection, Gravity Thickening, and Sludge Solids are thickened in holding tanks, then to polymer drying beds, then hauled to landfill for disposal.

2.2.4. Conditions Applicable to All Permits

The following conditions apply to all KPDES permits.

2.2.4.1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of KRS Chapter 224 and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Any person who violates applicable statutes or who fails to perform any duty imposed, or who violates any determination, permit, administrative regulation, or order of the cabinet promulgated pursuant thereto shall be liable for a civil penalty as provided at KRS 224.99.010.

2.2.4.2. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit.

2.2.4.3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2.2.4.4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

2.2.4.5. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2.2.4.6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

2.2.4.7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

2.2.4.8. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

2.2.4.9. Inspection and Entry

The permittee shall allow the Director or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- (1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

2.2.4.10. Monitoring and Records

- (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 401 KAR 5:065 Section 2(10) [40 CFR 503]), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
- (3) Records of monitoring information shall include:
 - (i) The date, exact place, and time of sampling or measurements;
 - (ii) The individual(s) who performed the sampling or measurements;
 - (iii) The date(s) analyses were performed;
 - (iv) The individual(s) who performed the analyses;
 - (v) The analytical techniques or methods used; and
 - (vi) The results of such analyses.

(4) Monitoring must be conducted according to test procedures approved under 401 KAR 5:065 Section 2(8) [40 CFR 136] unless another method is required under 401 KAR 5:065 Section 2(9) or (10) [40 CFR subchapters N or O].

(5) KRS 224.99-010 provides that any person who knowingly violates KRS 224.70-110 or other enumerated statutes, or who knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall be guilty of a Class D felony and, upon conviction, shall be punished by a fine of not more than \$25,000, or by imprisonment for not more than one (1) year, or both. Each day upon which a violation occurs shall constitute a separate violation.

2.2.4.11. Signatory Requirement

(1) All applications, reports, or information submitted to the Director shall be signed and certified pursuant to 401 KAR 5:060, Section 4 [40 CFR 122.22].

(2) KRS 224.99-010 provides that any person who knowingly provides false information in any document filed or required to be maintained under KRS Chapter 224 shall be guilty of a Class D felony and upon conviction thereof, shall be punished by a fine not to exceed twenty-five thousand dollars (\$25,000), or by imprisonment, or by fine and imprisonment, for each separate violation. Each day upon which a violation occurs shall constitute a separate violation

2.2.4.12. Reporting Requirements**2.2.4.12.1. Planned Changes**

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- (i) The alteration or addition to a permitted facility may meet one (1) of the criteria for determining whether a facility is a new source in KRS 224.16-050 [40 CFR 122.29(b); or

- (ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under KRS 224.16-050 [40 CFR 122.42(a)(1)].
- (iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2.2.4.12.2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

2.2.4.12.3. Transfers

This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under KRS 224 [CWA; see 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory].

2.2.4.12.4. Monitoring Reports

Monitoring results shall be reported at the intervals specified elsewhere in this permit.

- (i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
- (ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 401 KAR 5:065 Section 2(8) [40 CFR 136], or another method required for an industry-specific waste stream under 401 KAR 5:065 Section 2(9) or (10) [40 CFR subchapters N or O], the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
- (iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

2.2.4.12.5. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

2.2.4.12.6. Twenty-four-Hour Reporting

- (i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

- (ii) The following shall be included as information which must be reported within twenty-four (24) hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See §122.41(g)).

(B) Any upset which exceeds any effluent limitation in the permit.

(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within twenty-four (24) hours.

(iii) The Director may waive the written report on a case-by-case basis for reports under paragraph (1)(6)(ii) of this section if the oral report has been received within twenty-four (24) hours.

2.2.4.12.7. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Sections 2.2.4.12.1, 2.2.4.12.4, 2.2.4.12.5, and 2.2.4.12.6, at the time monitoring reports are submitted. The reports shall contain the information listed in Section 2.2.4.12.6.

2.2.4.12.8. Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

2.2.4.13. Bypass

2.2.4.13.1. Definitions

(i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

2.2.4.13.2. Bypass Not Exceeding Limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Section 2.2.4.13.1.

2.2.4.13.3. Notice

(i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.

(ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section 2.2.4.12.6.

2.2.4.13.4. Prohibition of Bypass

(i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The permittee submitted notices as required under Section 2.2.4.13.3.

(ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three (3) conditions listed above in Section 2.2.4.13.3.

2.2.4.13.5. Upset

2.2.4.13.5.1. Definition

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2.2.4.13.5.2. Effect of an Upset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Section 2.2.4.13.5.3 are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2.2.4.13.5.3. Conditions Necessary for a Demonstration of Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (i) An upset occurred and that the permittee can identify the cause(s) of the upset;
- (ii) The permitted facility was at the time being properly operated; and
- (iii) The permittee submitted notice of the upset as required in Section 2.2.4.12.6; and
- (iv) The permittee complied with any remedial measures required under Section 2.2.4.4.

2.2.4.13.5.4. Burden of Proof

In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

2.3. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported. The completed Discharge Monitoring Report (DMR) for each monitoring period must be submitted no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

2.3.1. Electronic Submittal

The completed DMR for each monitoring period must be entered into the Division of Water approved electronic system no later than midnight on the 28th day of the month following the monitoring period for which monitoring results were obtained.

For information regarding electronic submittal of DMRs please visit the Division's website at <http://water.ky.gov/permitting/Pages/netDMRInformation.aspx> or contact the DMR Coordinator at (502) 564-3410.

2.4. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved in accordance with 401 KAR 5:050 through 5:080, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

This permit may be reopened to implement the findings of a reasonable potential analysis performed by the Division of Water.

This permit shall be reopened if Division of Water determines surface waters are aesthetically or otherwise degraded by substances that:

- (a) Settle to form objectionable deposits;
- (b) Float as debris, scum, oil, or other matter to form a nuisance;
- (c) Produce objectionable color, odor, taste, or turbidity;
- (d) Injure, are chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish, and other aquatic life;
- (e) Produce undesirable aquatic life or result in the dominance of nuisance species; or
- (f) Cause fish flesh tainting.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

3. SPECIAL CONDITIONS

3.1. Pretreatment Program

At the present time neither the current wastewater treatment system operated by the permittee nor the current users meet the conditions necessitating the development and implementation a pretreatment program. Although current conditions do not warrant a pretreatment program the permittee shall continue to enforce the general and specific prohibitions listed in Sections 3.1.1 and 3.1.2 respectively of this permit. The permittee shall at a minimum conduct annual industrial wastes surveys to determine if there has been changes to the industrial users' discharges that would necessitate the development an implementation of a pretreatment program. In the event the permittee becomes aware of a new industrial user or modification to an existing industrial user the permittee shall require the submission of an industrial waste survey fore evaluation. Should any industrial waste survey indicate that a pretreatment program is required the permittee shall notify DOW within 30 days of this determination and provide a schedule not to exceed one year for development and implementation of the pretreatment program. The permittee shall submit to DOW an annual report by January 28th of the following year detailing the results of the annual and any other industrial waste surveys reviewed.

3.1.1. General Prohibitions

No user is to introduce to a POTW any pollutant or pollutants that will cause pass through or interference even if the user is not subject to National Pretreatment Standards or any national, state, or local requirements. A user shall have an affirmative defense against a violation of the general prohibitions where the user can demonstrate that:

- (1) It did not know or have reason to know that its discharge singly or in conjunction with other discharges would result in pass through or interference with the POTW; and
- (2) The discharge met the local limit designed to prevent pass through or interference or in the case of no local limit the user's discharge did not substantially change in nature or substance during the occurrence from the pre-occurrence conditions.

3.1.2. Specific Prohibitions

No user is to introduce to a POTW any of the following pollutants:

- (1) Pollutants which create a fire or explosion hazard, including but not limited to, wastestreams with a closed cup flashpoint of less than 140 °F (60 °C);
- (2) Pollutants which will cause corrosive structural damage or have a pH less than 5.0 standard units unless the POTW is designed to accommodate such pH levels;
- (3) Solid or viscous pollutants in amounts that would obstruct the flow to the POTW thus resulting in interference;
- (4) Any pollutant released in a discharge at such a volume or strength as to cause interference in the POTW;
- (5) Heat in amounts that will inhibit biological activity in the POTW thus resulting in interference. In no case heat in such quantities that the temperature at the POTW treatment plant exceeds 104 °F (40 °C) unless the POTW requests and the Approval Authority grants alternate temperature limits;
- (6) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass-through;
- (7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and,
- (8) Any trucked or hauled waste except, at discharge points designated by the POTW

3.2. Collection Systems

3.2.1. Operation and Maintenance

CMOM Programs

The permittee shall have in place Capacity, Management, Operation and Maintenance (CMOM) Programs that are effective at eliminating SSOs and other unpermitted discharges. The permittee shall submit a completed CMOM Programs Self-Assessment report within two (2) years of the effective date of this permit, which includes the checklist in the "Guide for Evaluation Capacity, Management, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems," EPA 305-B-05-002. This document is available at: http://www.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf. The self-assessment shall include an evaluation of relevant CMOM program elements and a schedule for implementation of recommended program improvements.

The CMOM programs and Self-Assessment report shall be available to EEC or its authorized representative for review and copying during on-site inspections. Where the CMOM refers to procedures in other documents, copies of the relevant portions of those documents must be kept with the CMOM.

3.2.2. Monitoring, Recordkeeping, and Reporting

The permittee shall provide estimated volumes of all reported overflows, bypasses, other releases, and unpermitted discharges, in documentation and reporting of overflows to DOW. The method of estimating volume shall be rationally justifiable, and the same method shall be used for all reportable events in the absence of different circumstances.

Sewer Overflow Response Protocol (SORP)

The permittee shall implement a Sewer Overflow Response Protocol (SORP) in compliance with 401 KAR 5:015 for 1) responding to, cleaning up, and/or minimizing the impact of all overflows, including unauthorized discharges; 2) reporting the location, volume, cause and impact of overflows, including CSOs, SSO's and unauthorized discharges, to the Cabinet; and 3) notifying the potentially-impacted public. The permittee shall submit a SORP within one (1) year of the effective date of this permit, which shall include, but not be limited to, the following components.

- (1) An overflow response procedure including designated responders for the city, response times, and cleanup methods
- (2) A public advisory procedure
- (3) A regulatory agency notification procedure
- (4) A manhole and pump station inspection schedule

The SORP shall be reviewed by the permittee at least annually and amended if it is determined to be in conflict with 401 KAR 5:015 or that changes in procedures, changes in designated and/or contact personnel, or changes due to regulatory requirements are appropriate. The permittee shall prepare revisions to the SORP to adequately address these provisions or changes and submit the revisions to the cabinet for review and approval and to the Frankfort Regional Office of the Division of Water. The permittee shall implement the revised SORP within 30 days of receiving notification from the cabinet that the proposed changes are acceptable.

The SORP shall be available to EEC or its authorized representative for review and copying during on-site inspections. Where the SORP refers to procedures in other documents, copies of the relevant portions of those documents must be kept with the SORP.

3.3. Best Management Practices**3.3.1. BMP - General Conditions****3.3.1.1. BMP - Applicability**

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

3.3.1.2. BMP - Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

3.3.1.3. BMP - Implementation

If this is the first time for the BMP requirement, then the plan shall be developed and submitted to the Division of Water within 90 days of the effective date of the permit. Implementation shall be within 180 days of that submission. For permit renewals the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

3.3.1.4. BMP - General Requirements

The BMP plan shall:

- a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.
- b. Establish specific objectives for the control of toxic and hazardous pollutants.
 - (1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.
 - (2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.

- c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."
- d. Include any special conditions established in part b of this section.
- e. Be reviewed by plant engineering staff and the plant manager.

3.3.1.5. BMP - Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

- a. BMP Committee
- b. Reporting of BMP Incidents
- c. Risk Identification and Assessment
- d. Employee Training
- e. Inspections and Records
- f. Preventive Maintenance
- g. Good Housekeeping
- h. Materials Compatibility
- i. Security
- j. Materials Inventory

3.3.1.6. BMP - SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

3.3.1.7. BMP - Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

3.3.1.8. BMP - Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to EEC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3.3.1.9:

Division of Water
Surface Water Permits Branch
Operational Permits Section

200 Fair Oaks Lane
Frankfort, Kentucky 40601

3.3.1.9. BMP - Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

3.3.1.10. BMP - Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.

3.3.2. BMP - Specific Conditions

3.3.2.1. BMP - Periodically Discharged Wastewaters Not Specifically Covered by Effluent Conditions

The permittee shall include in this BMP plan procedures and controls necessary for the handling of periodically discharged wastewaters such as intake screen backwash, meter calibration, fire protection, hydrostatic testing water, water associated with demolition projects, etc.

4. STATE CONDITIONS**4.1. Outfall Signage**

The permittee shall comply with the permanent marker requirements of Part V, Section A 3 of ORSANCO's Pollution Control Standards.

4.2. Discharge and Monitoring Point Accessibility

As previously stated in Section 2.2.4.9, the permittee shall allow authorized agency representatives to inspect the facility and collect samples to determine compliance. In order for such monitoring to be conducted either by the permittee or authorized agency personnel all monitoring and discharge points required by this permit shall be readily and safely accessible in all weather conditions.

4.3. Certified Operators

Pursuant to 401 KAR 5:010, a treatment plant with a design capacity of more than 50,000 gallons per day, but less than or equal to two (2) million gallons per day shall be under the primary responsibility of a certified operator holding an active Class II, III, or IV treatment certificate.

4.4. Application Monitoring

To ensure that sufficient samples are collected and analyzed DOW is imposing annual sampling and reporting for those parameters in Sections A.12 and B.6 of KPDES Form A. The results of the application monitoring shall be submitted on an annual DMR and summarized on the renewal application.

5. ABBREVIATIONS, ACRONYMS AND DEFINITIONS

Abbreviation or Acronym	Full Phrase	Definition
MGD	Million Gallons Per Day	A measure of flow
cfs	cubic feet per second	A measure of flow
SU	Standard Units	A measure of pH
mg/l	milligrams per liter	A measure of pollutant concentration (1000 milligrams = 1 gram)
µg/l	micrograms per liter	A measure of pollutant concentration (1000 micrograms = 1 milligram)
°F	Degrees Fahrenheit	A measure of temperature
°C	Degrees Centigrade or Celsius	A measure of temperature
N/A	Not Applicable	
lbs/day	pounds per day	A measure of pollutant loading
Grab	Grab Sample	A sample taken from a wastestream on a one-time basis without consideration of the flow rate of the wastestream and without consideration of time.
24-Hr Composite	24-hour Composite Sample	Sample composed of discrete equal volume aliquots (100 ml minimum) collected every 15 minutes over a 24-hour period and aggregated by an automated sampling device. The aggregate sample will reflect the average water quality of the compositing or sample period.