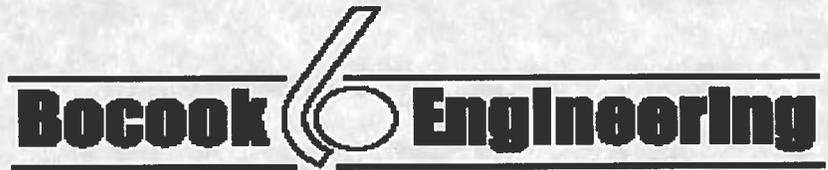




**PAINTSVILLE UTILITIES  
REGIONAL WASTEWATER FACILITIES PLAN**



[www.bocook.com](http://www.bocook.com)

[www.canntechengineers.com](http://www.canntechengineers.com)



4/14/2016

APRIL 2016

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## **1.01 INTRODUCTION AND BACKGROUND**

Paintsville is an incorporated City located in Johnson County in Eastern Kentucky. The City of Paintsville through Paintsville Utilities currently maintains and operates two separate sewage collection systems and wastewater treatment facilities, the Paintsville Wastewater Treatment Plant and the Honey Branch Wastewater Treatment Plant. Each treatment plant currently has a separate Regional Wastewater Facilities Plan and planning area. Paintsville Utilities has retained Bocook Engineering to complete a Wastewater Facility Plan that will combine the two planning areas and evaluate their current wastewater conveyance and treatment needs for a 20 year planning period.

### **1.02 Existing Wastewater Conveyance and Treatment Facilities**

The Paintsville Wastewater Treatment Plant (Paintsville WWTP) located within the Paintsville city limits currently receives and treats all of the wastewater from the City of Paintsville and some areas just outside of the city limits. The plant's design capacity is 0.99 MGD (million gallons per day). . The most recent flow data includes flow from the first 11 months of 2015. During this time period the average daily flow was 0.99 MGD. This flow was equal the plant's permitted design capacity and may result in sanctions being imposed by the KY Division of Water. This excessive daily flow is mostly due to excessive infiltration and inflow in the collection system in the downtown area of Paintsville. This flow is not entirely accurate as some recycled flow from the polishing clarifier and flow from sludge thickeners are measured at the influent flow meter as well. The existing Paintsville WWTP, originally constructed in 1986, is in need of an upgrade to meet current and projected demands.

The other sewage treatment facility that Paintsville Utilities operates is the Honey Branch Wastewater Treatment Plant. The Honey Branch WWTP was placed into operation in 2003. This plant currently receives and treats wastewater from communities within the Honey Branch Planning area that includes a Federal Bureau of Prisons facility, United

States Penitentiary (USP) Big Sandy that houses approximately 1,000 high-security inmates. The Honey Branch WWTP has a design capacity of 1.0 MGD. The average daily flow in 2015 was 0.34 MGD.

**1.03 Wasteload and Flow Forecasts**

This facility plan consolidates the existing Paintsville Planning Area and the existing Honey Branch Planning Area. Both existing and proposed expansions of sewer service were considered in this facilities plan. Areas targeted for future sewer service within the planning period include Powell’s Addition, Van Lear Area, US 23 Corridor, KY Hwy 321 south area, Hagar Hill/Allen Heights Area, Pack Hill, Thealka Area, Davis Branch, Southside, American Standard Area and Staffordsville. The associated population forecasts, flow projections and wasteload projections within the new planning area are included in Section 7 of this facility plan. Projected wastewater flows and loads for the year 2040 are as follows:

Parameter	Unit	2030	2040
<b>Paintsville WWTP</b>			
Wastewater Flows:			
Average Daily (ADF)	mgd	1.086	1.116
Peak Hourly (PHF)	mgd	3.25	3.348
Wasteloads: (Peak Monthly)			
BOD	lbs/day	3247	3322
TSS	lbs/day	2131	2216
<b>Honey Branch WWTP</b>			
Wastewater Flows:			
Average Daily (ADF)	mgd	0.51	0.57
Peak Hourly (PHF)	mgd	1.53	1.71
Wasteloads: (Peak Monthly)			
BOD	lbs/day	1846	1901
TSS	lbs/day	2436	2569

#### **1.04 Collection and Conveyance Alternatives**

Because of known issues and limited construction options, only one alternative was considered in the corrections to the Paintsville Collection and Conveyance System. The proposed alternative considered in this facility plan is intended to reduce the excessive infiltration and inflow in the downtown areas, eliminate outfall sewer overflows and to upgrade the existing pumping stations. A “Do Nothing” alternative was not considered as a viable option.

#### **1.05 Wastewater Treatment Alternatives**

This decentralized approach maintains both treatment facilities at their current locations. Alternatives to provide wastewater treatment capacity to meet current and future needs included:

##### **Paintsville WWTP**

The upgrade alternatives considered for the Paintsville WWTP were considered the most viable approach due to space limitations within the plant site and increased the plant capacity to approximately 1.5 MGD.

- Alternate P-1:** converting existing plant to a sequencing batch reactor plant
- Alternate P-2:** remove internal clarifiers and add additional oxidation ditch
- Alternative P-3:** phased upgrade that also reduces load on Paintsville WWTP by diverting flow from areas west of Paint Creek including hospital, hotel and apartment tower to the Honey Branch WWTP for treatment.

##### **Honey Branch WWTP**

The upgrade alternative considered for the Honey Branch WWTP included repairs to screening facilities, construction of effluent pumping station, construction of cloth media filters, chemical and acid feed facilities and installing a floating

insulating cover system on the lagoon #3 to address operational issues related to excessive suspended solids.

**Alternate HB-1:** repair and improvements to plant

### **Combining Treatment Plants**

The alternates considered below in this regionalized approach eliminates the existing Paintsville WWTP. The sewage currently being treated at the Paintsville will be pumped to the Honey Branch WWTP. The capacity of the existing Honey Branch WWTP is increased to meet the needs of the combined planning area for the next 20 years.

Alternates considered for the conveyance system to transfer the sewage to the Honey Branch Site include:

**Alternate C-1:** utilize the existing force mains that currently serve the West Van Lear Area.

**Alternate C-2:** construct a dedicated pumping station and a new force main from the Paintsville WWTP to the Honey Branch WWTP.

Alternates considered to upgrade and increase the capacity of the Honey Branch WWTP include:

**Alternate C-3:** expansion of plant utilizing deep cell aerated lagoons.

**Alternate C-3A:** expansion of plant utilizing sequencing batch reactor plant.

Detail discussions of each of the above alternates considered can be found in **Section 8-Evaluation of Alternates** in this Regional Facilities Plan.

### **1.06 Recommended Plan**

The following recommendations are intended to correct existing system deficiencies and to serve current and planned expansions of services of the next twenty years:

#### **Collection and Conveyance System:**

- Infiltration and Inflow Reduction Project
- Lift Station Improvement Project
- Outfall Sewer Upgrade

#### **Wastewater Treatment Facilities:**

The City of Paintsville’s recent plan to annex the US 23 corridor from KY 460 to the Hager Hill Area and to provide sewer services in this area provides an opportunity to divert sewage being produced in areas on the western end of Paintsville to the Honey Branch WWTP. This will benefit both treatment plants by reducing flow at the Paintsville WWTP and reduce hydraulic detention time at the Honey Branch WWTP. After looking at several alternatives and weighing the pros and cons of each, it is apparent that the logical and cost – effective path for Paintsville Utilities to pursue is to do a phased upgrade of the Paintsville WWTP and correct some issues at the Honey Branch WWTP. To achieve this we recommend that the following Alternates be considered:

#### **Alternative P-3 – Phased Upgrade to the Paintsville WWTP**

Alternative P-3 is a phased approach that is intended to address current issues and facilitate future anticipated loading at the Paintsville WWTP. The proposed phased construction is as follows:

- Reduce the flow to Paintsville WWTP by reducing I &I and diverting all flow west of Paint Creek to the Honey Branch WWTP.
- Repair/replace worn equipment at Paintsville WWTP

- Increase plant capacity for future flows by adding another oxidation ditch and final clarifier.

### **Alternative HB-1 – Upgrade to Honey Branch WWTP**

Under the current KPDES Permit, the plant is required to monitor for phosphorous but does not have discharge limits. This upgrade will include infrastructure improvements that should facilitate the plant to meet future phosphorous limits.

Proposed improvements to be included in this upgrade include:

- Replacing existing headworks screens with vertical mechanical screens
- Repairs to concrete channels in headworks
- New influent and effluent samplers
- Installing manual control valves in RAS/WAS pump station
- Pump repairs
- Adding additional yard hydrants
- Re-painting interior of control building
- Construction of a Chemical Feed/Effluent Filtration facility
- Construction of an Effluent pumping station.
- Installing an insulated floating cover on Lagoon #3

### **Expansion of Sewer Service:**

Expansion of sewer service is recommended to provide sewer service to areas currently utilizing failing septic systems and to increase the Paintsville Utilities customer base to limit fee increases required for system improvements. Expansion of sewer service is recommended into the following areas over the next twenty years:

US 23 Corridor, Powell's Addition, Van Lear Area, KY Route 321 to Floyd County, Pack Hill Drive, Hagar Hill Area, American Standard Area, Thealka Area, Davis Branch Area, Southside Area, Staffordsville Area and Thelma.

## **1.07 Phased Implementation**

The recommended plan construction will be phased over the next 20 years with the collection and conveyance system improvements and the treatment plant upgrade having the most priority. Expansion of sewer service into areas currently un-served will be prioritized by Paintsville Utilities and dependent upon available funding.

**Phase 1:** The scope of this phase addresses the problem of excessive infiltration and inflow in the gravity sanitary and storm water collection systems in the downtown area. The scope includes correcting known cross connections in the sanitary and storm water collection system, rehabilitation of leaking manholes, replacing existing leaking sewers, construction of new storm sewers.

**It is recommended that increasing the size of the main outfall sewer to eliminate sewer spills during rain events be delayed until the I & I reduction project and upgrade of lift station project can be completed and the impact can be determined in the system performance.**

This phase includes upgrades to the existing sanitary pumping stations in both the Paintsville Collection System and the Honey Branch Collection System.

**Phase 2:** This phase includes construction of the US 23 Corridor sewer system to divert existing west end flow to the Honey Branch WWTP, Plant Repairs at Paintsville WWTP and Honey Branch WWTP Upgrades.

**Phase 3:** This phase includes Expanding the Paintsville WWTP Capacity and Outfall Sewer Upgrade.

**1.08 Estimated Cost of Recommended Plan and Funding Options**

**Table 1.08 - 1** is a summary of the projected costs for Phase 1, Phase 2 and Phase 3 of the recommended project.

<b>TABLE 1.08-1: SUMMARY OF PROJECTED PROJECT COSTS</b>	
<b>RECOMMENDED PROJECT</b>	
<b>PHASE 1</b>	
Infiltration and Inflow Improvements (2016-2017)	\$2,249,335.00
Pump Station Improvements (2016-2017)	\$2,568,500.00
<b>Total Phase 1</b>	<b>\$4,817,835.00</b>
<b>PHASE 2</b>	
Plant Repairs and US 23 Corridor Sewer (2016-2018)	\$5,585,000.00
Honey Branch WWTP Upgrades (2017-2018)	<b>\$2,769,000.00</b>
<b>Total Phase 2</b>	<b>\$8,354,000.00</b>
<b>PHASE 3</b>	
Contract #2- Outfall Sewer Upgrade (2030)	\$2,687,400.00
Expanding Paintsville WWTP Capacity (2030)	\$9,401,300.00
<b>Total Phase 3</b>	<b>\$12,088,700.00</b>
<b>PROJECTED PROJECT COST</b>	<b>\$25,260,535.00</b>

The estimated costs for extending sewer service into areas currently not served are shown in Table 1.08-2 below. Detailed cost estimates for extensions can be found in Section 8 of this Combined Regional Facilities Plan.

**TABLE 1.08 - 2: SUMMARY OF PROJECTED PROJECT COSTS  
 Future Sewer Service Areas**

<b>Service Area</b>	<b>Construction Cost</b>	<b>Project Cost</b>
<b>Powell's Addition</b>	<b>\$850,000.00</b>	<b>\$1,110,000</b>
<b>Van Lear Area</b>	<b>\$3,750,000.00</b>	<b>\$4,640,000</b>
<b>KY Hwy 321 Area</b>	<b>\$2,100,000.00</b>	<b>\$2,670,000</b>
<b>Hagar Hill/Allen Heights Area</b>	<b>\$1,400,000.00</b>	<b>\$1,865,000</b>
<b>American Standard Area</b>	<b>\$1,000,000.00</b>	<b>\$1,350,000</b>
<b>Thealka Area</b>	<b>\$2,000,000.00</b>	<b>\$2,560,000</b>
<b>Davis Branch Area</b>	<b>\$800,000.00</b>	<b>\$1,065,000</b>
<b>Southside Area</b>	<b>\$500,000.00</b>	<b>\$700,000</b>
<b>Staffordsville</b>	<b>\$2,000,000.00</b>	<b>\$2,560,000</b>
<b>TOTAL</b>	<b>\$14,400,000.00</b>	<b>18,520,000</b>

### 1.09 Proposed Implementation Schedule

Paintsville Utilities is currently working in conjunction with the Big Sandy Area Development District in applying for funding assistance from Rural Development. The following schedule is proposed for implementing the recommended improvements and is dependent upon funding:

	<u>Design</u>	<u>Construction</u>
<b>Phase 1</b>		
Reduction of I & I Contract #1	Complete	2016-2017
Pumping Station Improvements	Complete	2016-2017
<b>Phase 2</b>		
Alt. P-3 – Phase 1	2016-2017	2018-2019
Honey Branch WWTP Upgrades	2016-2017	2018-2019
<b>Phase 3</b>		
Contract # 2 – Outfall Sewer	2028	2030- 2031
Alt P-3 – Phase 2 – Plant Expansion	2028-2029	2030-2031

### 1.10 Rate Impacts

The final impact to the Paintsville Utilities existing rate structure will depend upon the amount of grants that can be obtained and also on the number of new customers that can be added. Preliminary rate calculations assuming a funding package of approximately 30 % grant and 70% loan is obtained, the individual customer could see an increase of approximately \$ 22 per month. This assumes an equal distribution among residential and commercial customers.

## 2.01 Purpose and Scope

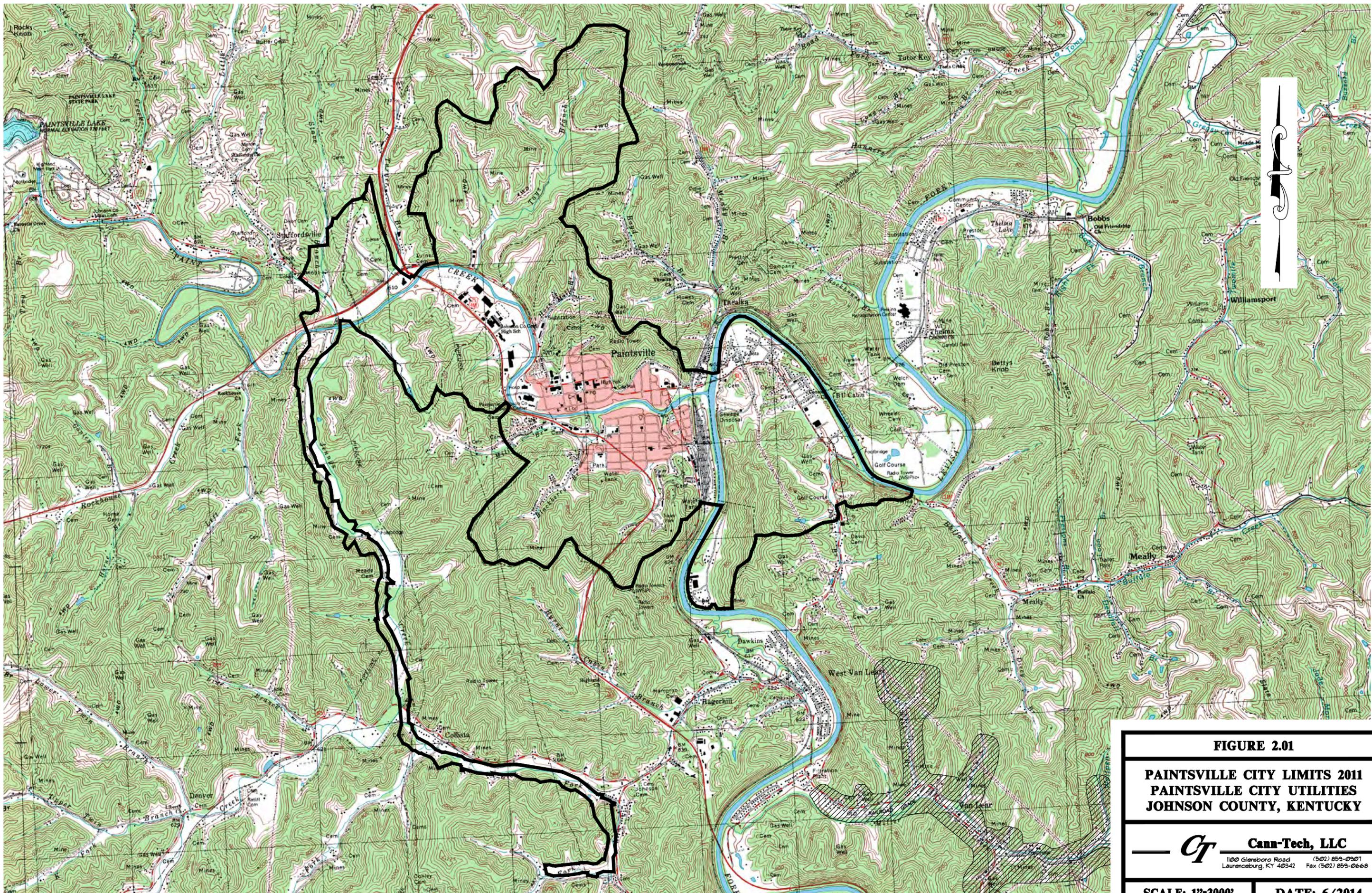
The City of Paintsville is located in Johnson County in eastern Kentucky. Paintsville Utilities currently maintains and operates two separate sewage collection systems and wastewater treatment facilities.

The Paintsville Wastewater Treatment Plant located within the Paintsville city limits currently receives and treats all of the wastewater from the City of Paintsville and some areas just outside of the city limits. The current Paintsville City Limits is shown on **Figure 2.01**. A Regional Wastewater Facilities Plan was prepared for this system and planning area by Stand Associates, Inc. in 2005 and revised in 2007.

The other sewage treatment facility that Paintsville Utilities operates is the Honey Branch Wastewater Treatment Plant. This plant currently receives and treats wastewater from communities within the Honey Branch Planning area that includes a Federal Bureau of Prisons facility, United States Penitentiary (USP) Big Sandy that houses approximately 1,000 high-security inmates. The original Regional Wastewater Facilities Plan for the Honey Branch Planning Area was prepared by PEH Engineers in 1998.

Bocook Engineering was retained by Paintsville Utilities to develop a Regional Wastewater Facilities Plan that includes both the existing Paintsville Planning Area as well as the existing Honey Branch Planning Area. The purpose of this combined Regional Wastewater Facilities Plan is to:

- Assess the condition of the existing collection and treatment systems.
- Provide growth and expansion projections that may be expected in the combined planning area.
- Provide solutions to correct existing issues.



**FIGURE 2.01**

**PAINTSVILLE CITY LIMITS 2011  
PAINTSVILLE CITY UTILITIES  
JOHNSON COUNTY, KENTUCKY**



**Cann-Tech, LLC**

1100 Glenboro Road (502) 853-0907  
Laurensburg, KY 40342 Fax (502) 853-0668

**SCALE: 1"=3000'**

**DATE: 6/2014**

- Identify alternatives for collection and treatment systems to meet anticipated growth as well as remaining in full compliance with current and anticipated regulatory discharge limitations.
- Evaluate and recommend alternatives.
- Provide guidance and recommendations for implementation.

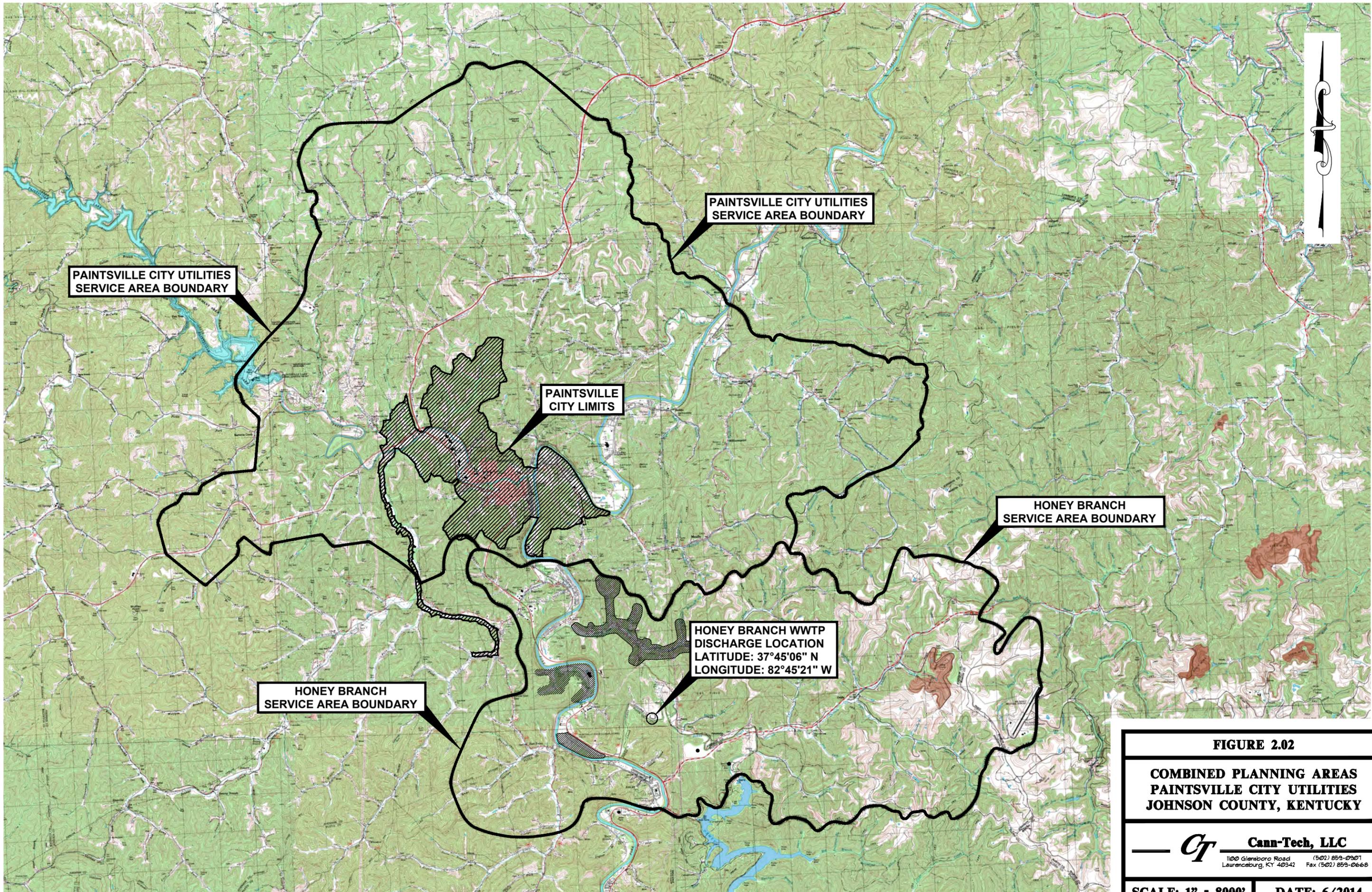
## **2.02 Location of Study**

The study area includes the current Paintsville City Limits, the Paintsville Utilities Service Area and the Honey Branch Service Area. This combined planning area is shown on **Figure 2.02**. The study area includes the dam area of Paintsville Lake, the area downstream of Dewey Lake in Floyd County as well as the Honey Branch Industrial Park and Regional Airport located in Martin County.

Letters from the City of Paintsville, City of Prestonsburg, Johnson County Fiscal Court, Floyd County Fiscal Court and Martin County Fiscal Court that agree to the original Honey Branch Planning Area are included in the Appendix.

## **2.03 Project Justification**

The existing Paintsville WWTP is currently operating at or in excess of the plant's rated capacity. An updated Facilities Plan is required in order to expand the plant's capacity to meeting projected needs. The downtown area of Paintsville experiences excessive infiltration and inflow during rainfall events. Most of this is due to cross connections with the existing storm system. The collection and conveyance system is in need of upgrades and repairs. The project proposed in this planning document will address these current needs as well as provide capacity for growth.



**FIGURE 2.02**

**COMBINED PLANNING AREAS  
 PAINTSVILLE CITY UTILITIES  
 JOHNSON COUNTY, KENTUCKY**

**CT Cann-Tech, LLC**  
 1100 Glenboro Road (502) 853-0507  
 Laurelsburg, KY 40342 Fax (502) 853-0668

**SCALE: 1" = 8000'      DATE: 6/2014**

## **2.04 Related Studies and Reports**

**Sewer System Evaluation Study, Phase I Report for Paintsville Utilities Commission**, May 2002, Howard K. Bell Consulting Engineers, Inc.

**Paintsville Utilities Regional Wastewater Facilities Plan of the Honey Branch Planning Area**, November 1998, PEH Engineers.

**Paintsville Utilities Regional Wastewater Facilities Plan**, January 2005, revised February 2007, Strand Associates, Inc.

**Population Forecasts based on 2010 Census for State of Kentucky**, Kentucky State Data Center

### 3.01 Introduction

The assessment of physical characteristics of the planning area is a critical part of a Facilities Plan. Paintsville Utilities has two existing Wastewater Facilities Plans. The Regional Wastewater Facilities Plan of the Honey Branch Planning Area was developed in 1998 by PEH Engineers. The Paintsville Regional Wastewater Facilities Plan was developed in 2005 and later revised in 2006 and 2007 by Strand Associates, Inc. This new Combined Regional Wastewater Facilities Plan represents a combination of these two planning areas as well as some adjustments to account for revised city limits.

### 3.02 Planning and Service Area Boundaries

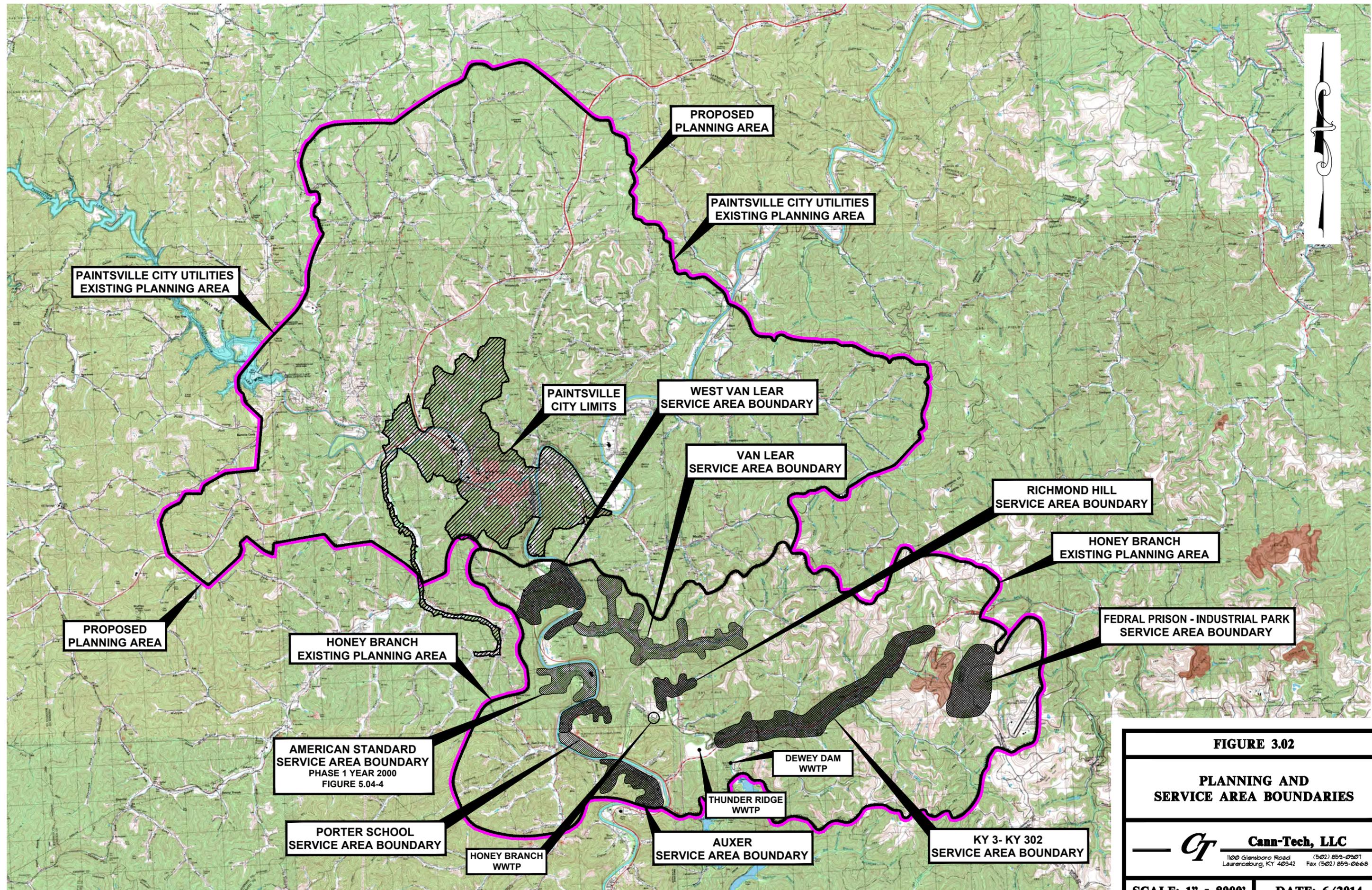
The planning and service area boundaries of this report can be found on **Figure 3.02**. They include the City of Paintsville City Limits, a large area of Johnson County as well as some areas within Floyd and Martin Counties.

### 3.03 Physiography

Based on data from the *Soil Survey of Floyd and Johnson Counties, Kentucky* as provided on the website of the United States Department of Agriculture Natural Resources Conservation Service, the planning area is set within the Big Sandy River Valley located in the eastern most part of Kentucky and within the Eastern Coal Field physiographic region of Kentucky

- **Topography:** The topography of the planning area is characterized by steep, mountainous topography with high sharp crested ridges to lower, less steep, more rounded forms. The elevation ranges within the area from about 400 feet to 1,200 feet above mean sea level.
- **Geology:** The planning area is underlain by Pennsylvanian sandstone of the Carboniferous period, with alternating layers of limestone, coal and shale.

U:\PAINTSVILLE\LE344-Paintsville Downtown Sewer Rehab\Drawings\Exhibits\Paintsville City Limits.dwg, FIG 3.02, 3/25/2016 1:42:10 PM, DWG To PDF.pcc



PAINTSVILLE CITY UTILITIES  
EXISTING PLANNING AREA

PROPOSED  
PLANNING AREA

PAINTSVILLE CITY UTILITIES  
EXISTING PLANNING AREA

PAINTSVILLE  
CITY LIMITS

WEST VAN LEAR  
SERVICE AREA BOUNDARY

VAN LEAR  
SERVICE AREA BOUNDARY

RICHMOND HILL  
SERVICE AREA BOUNDARY

HONEY BRANCH  
EXISTING PLANNING AREA

FEDERAL PRISON - INDUSTRIAL PARK  
SERVICE AREA BOUNDARY

PROPOSED  
PLANNING AREA

HONEY BRANCH  
EXISTING PLANNING AREA

AMERICAN STANDARD  
SERVICE AREA BOUNDARY  
PHASE 1 YEAR 2000  
FIGURE 5.04-4

PORTER SCHOOL  
SERVICE AREA BOUNDARY

HONEY BRANCH  
WWTP

THUNDER RIDGE  
WWTP

DEWEY DAM  
WWTP

AUXER  
SERVICE AREA BOUNDARY

KY 3- KY 302  
SERVICE AREA BOUNDARY

**FIGURE 3.02**

**PLANNING AND  
SERVICE AREA BOUNDARIES**



**Cann-Tech, LLC**

1100 Glenboro Road  
Laurensburg, KY 40342  
(502) 853-0507  
Fax (502) 853-0668

**SCALE: 1" = 8000'**

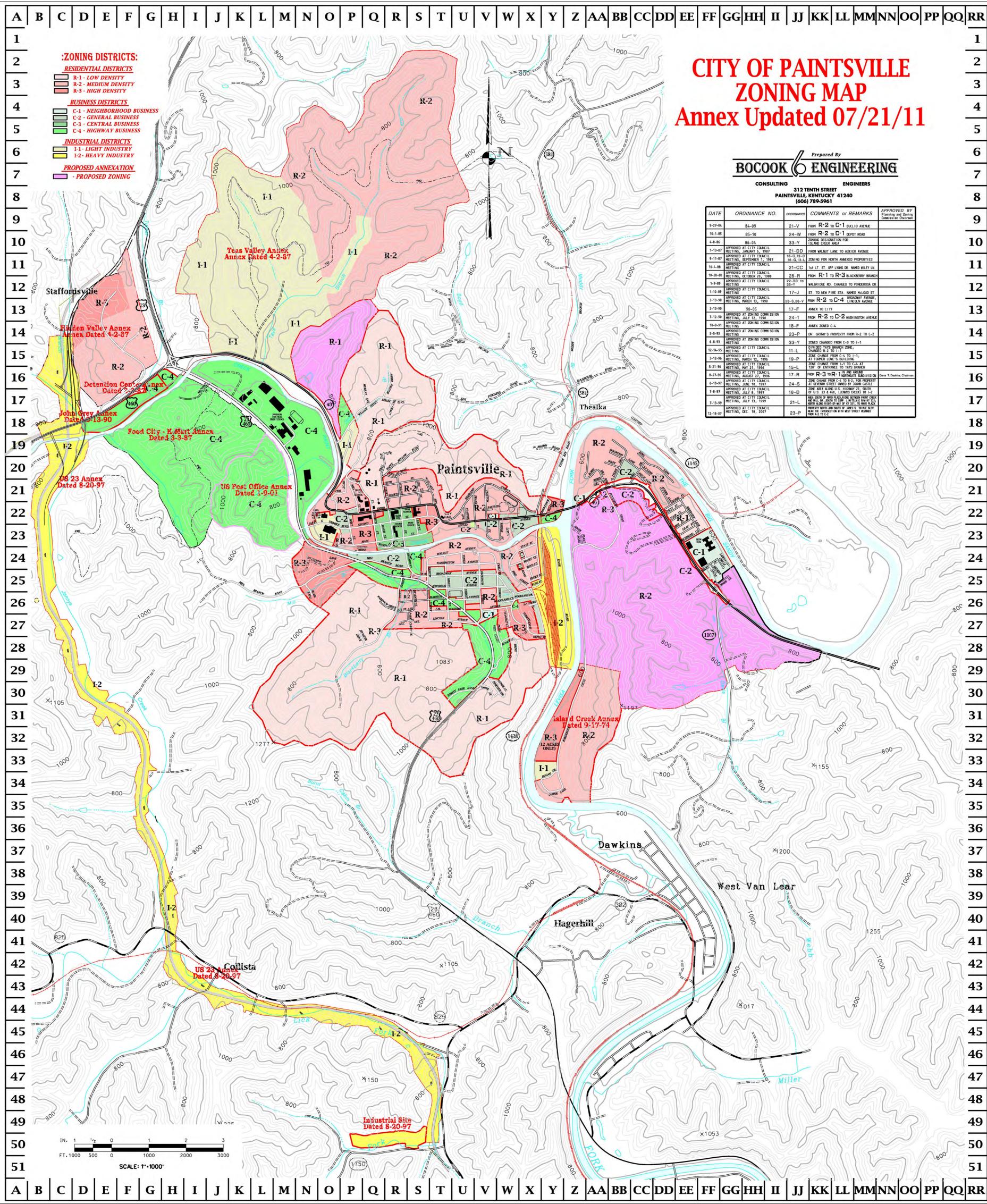
**DATE: 6/2014**

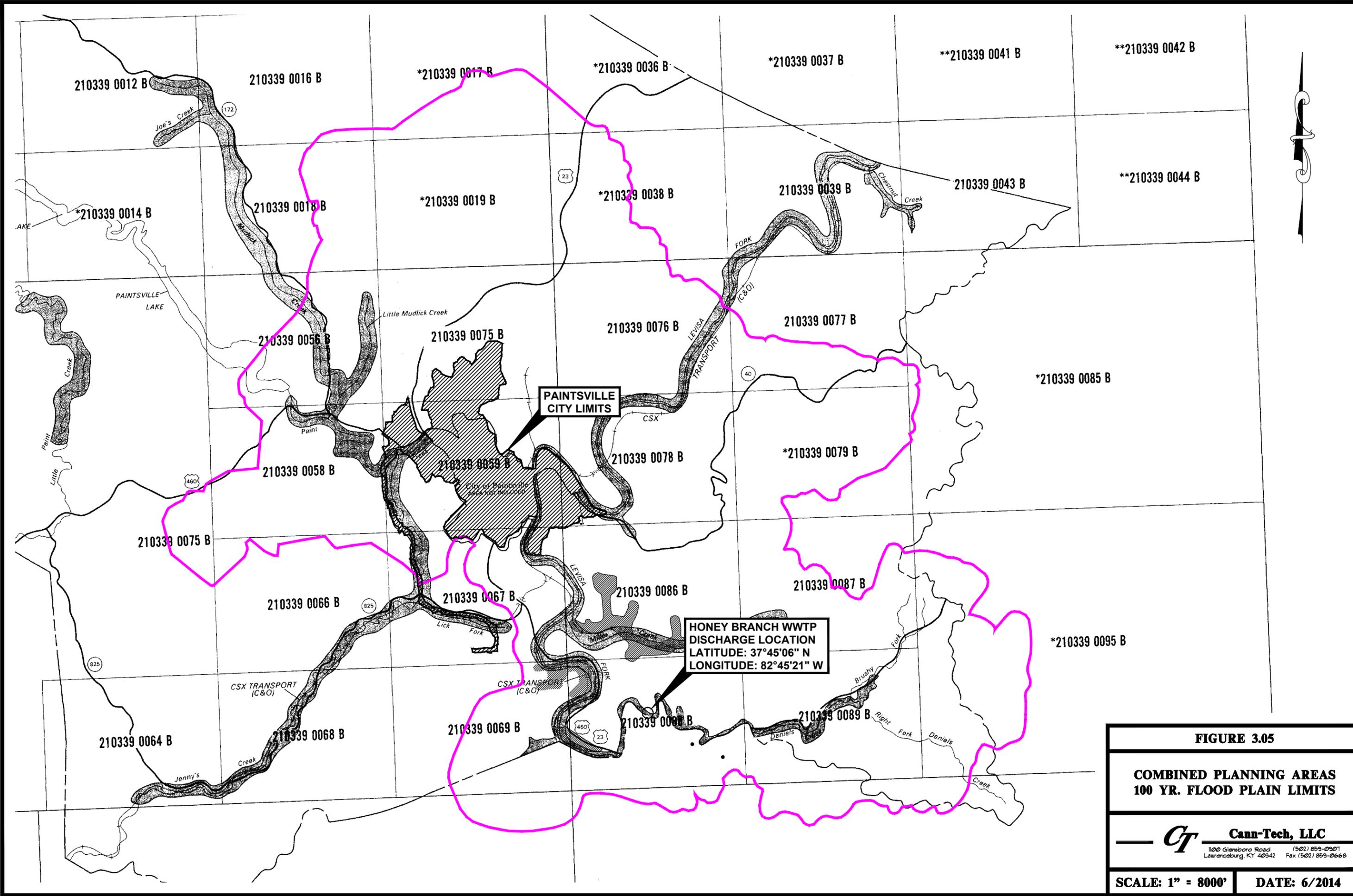
### **3.04 Planning and Zoning**

Planning and zoning regulations exist for areas within the Paintsville city limits, but do not apply to the remaining areas of Johnson County. Therefore, some of the areas included in this facility plan are not subject to planning and zoning restrictions.

### **3.05 100 Year Flood Plain Limits**

The Federal Emergency Management Agency (FEMA) through their National Flood Insurance Program provides Flood Insurance Rate Maps (FIRM). These maps provide identification of floodplain boundaries including the 100-year floodplain limits. Upon further review of the FEMA maps, it was determined that the approximately 100-year flood elevation around the existing Paintsville WWTP site is 614 feet and at the Honey Branch WWTP site is 635 feet. Figure 3.05 is a 100 year floodplain limits map of the planning area.





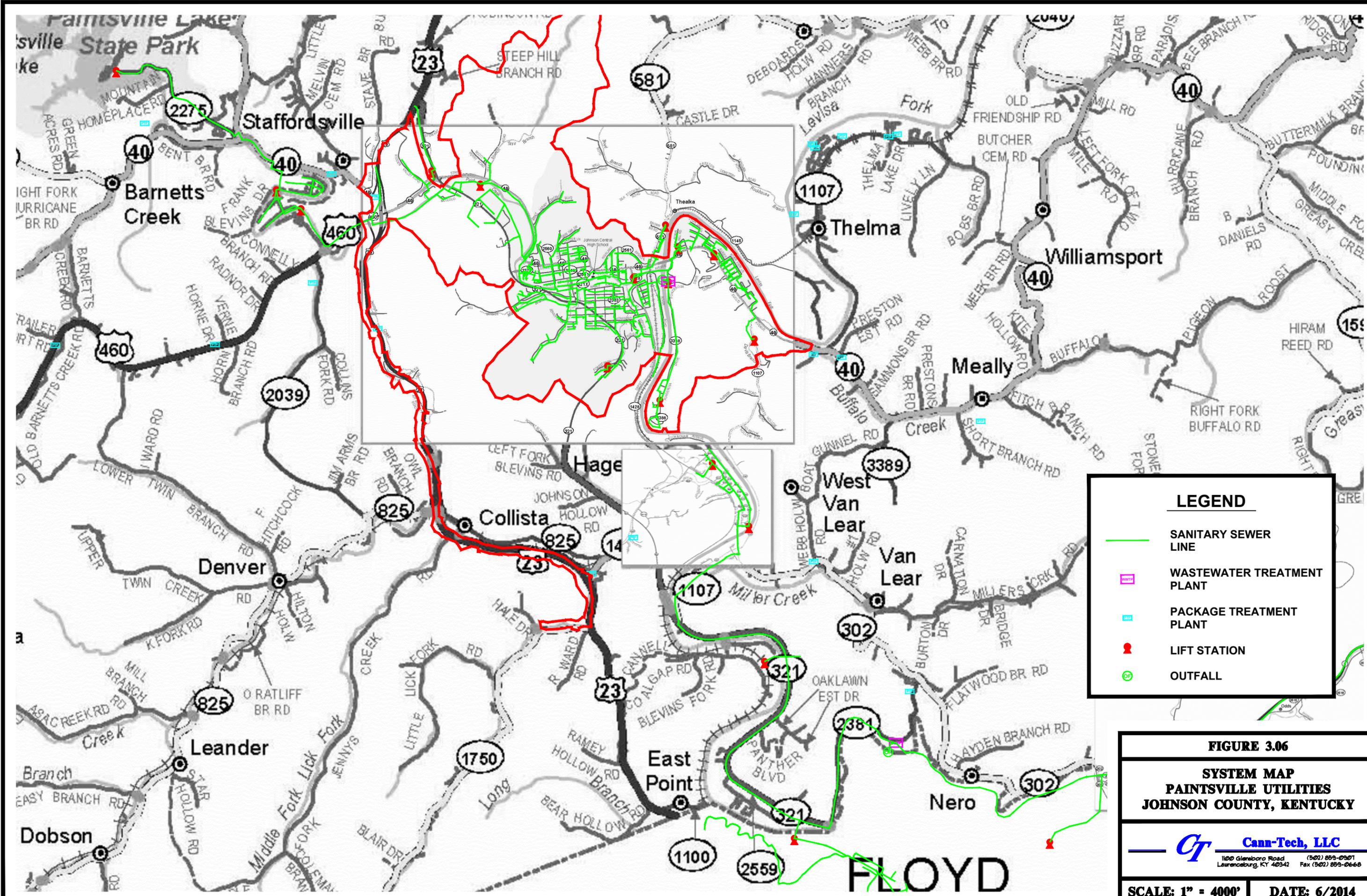
**FIGURE 3.05**

**COMBINED PLANNING AREAS  
100 YR. FLOOD PLAIN LIMITS**

**CT Cann-Tech, LLC**  
 1100 Glensboro Road (502) 853-0907  
 Laurensburg, KY 40342 Fax (502) 853-0668

**SCALE: 1" = 8000'**      **DATE: 6/2014**

U:\PAINTSVILLE\344-Paintsville Downtown Sewer Rehab\Drawings\Exhibits\Paintsville City Limits.dwg, FIG 3.05, 3/25/2016 1:43:47 PM, DWG To PDF.pcc



**LEGEND**

- SANITARY SEWER LINE
- WASTEWATER TREATMENT PLANT
- PACKAGE TREATMENT PLANT
- ▲ LIFT STATION
- OUTFALL

**FIGURE 3.06**

**SYSTEM MAP  
PAINTSVILLE UTILITIES  
JOHNSON COUNTY, KENTUCKY**

**Cann-Tech, LLC**  
 1100 Glenboro Road (502) 893-0307  
 Laurelsburg, KY 40342 Fax (502) 893-0668

**SCALE: 1" = 4000'      DATE: 6/2014**

U:\PAINTSVILLE\344-Paintsville Downtown Sewer Rehab\Drawings\System Map.dwg, FIG 3.06, 3/25/2016 1:51:57 PM, DWG To PDF.pcl

#### 4.01 Historical, Current and Projected Population

Resources used to estimate population and potential growth rates in the planning area include publications from the University of Louisville, KSDC, the U.S. Department of Commerce Bureau of the Census, and Johnson County representatives.

Review of information published by the U.S. Bureau of the Census and the University of Louisville KSDC indicates that the population of Johnson County and the City of Paintsville has remained fairly constant over the past two decades. Populations from 1990 to 2010 are shown in the table below:

<u>Year</u>	<u>1990</u>	<u>2000</u>	<u>2010</u>
<b>Johnson County</b>	<b>23,248</b>	<b>23,445</b>	<b>23,356</b>
<b>Paintsville</b>	<b>4,354</b>	<b>4,132</b>	<b>3,459</b>
<b>Rural</b>	<b>18,894</b>	<b>19,313</b>	<b>19,897</b>

The following are the projected populations of Johnson County through 2040:

	<u>2020</u>	<u>2030</u>	<u>2040</u>
<b>Johnson County</b>	<b>23,265</b>	<b>22,605</b>	<b>21,533</b>

Although the population of Johnson County is expected to **decrease by approximately 1,800** within the planning period, the number of sewer customers served by Paintsville Utilities is expected to increase due to planned expansion of sewer service into areas that currently are served by septic tanks or package treatment plants.

The approximate total residential population within the proposed planning area is 16,000.

**4.02 Current and Projected Population in Existing Service Areas and areas currently without sewers but within the planning area**

Currently Paintsville Utilities serves approximately 2,600 sewer customers or an approximate population of 5,600. This total includes approximately 350 commercial users. Over the past 3 years the number of sewer customers has increased by approximately 126 customers. This increase was mostly due to the completion of a project that eliminated package treatment plants in the communities of Preston Estates, Paradise Village, Richmond Hills, Burkshire, and Woodland Estates.

The areas that are most likely to be provided sewer service within the planning period and their current and projected number of customers are as follows:

<u>Area</u>	<u>Current and Projected Customers</u>	<u>Approx. Population</u>
<b>Thelma</b>	<b>85 homes</b>	<b>255</b>
<b>Staffordsville</b>	<b>180 homes</b>	<b>540</b>
<b>Powell’s Addition</b>	<b>100 homes</b>	<b>300</b>
<b>Van Lear Area</b>	<b>365 homes</b>	<b>1,095</b>
<b>US 23 Corridor/Hager Hill</b>	<b>60 homes</b>	<b>158</b>
<b>Pack Hill Drive</b>	<b>6 homes</b>	<b>16</b>
<b>Total Projected New Customers</b>	<b>796 homes</b>	<b>2,364</b>