Purpose

The purpose of this chapter is to provide background information on Oldham County relative to factors that could impact the development of wastewater system alternatives. Land use patterns, socio-economic status, land features, climatic conditions, historical sites, and other environmental considerations directly affect the growth and development of the planning area and its subsequent needs.

Land Use

The land use pattern of an area is one of the major factors in determining potential water quality issues. Typical water quality problems that can arise from conditions such as unrestricted growth, inadequate zoning ordinances and subdivision regulations, and poor site designs are as follow:

- Poor distribution of point source waste discharges.
- Non-point source discharges from urban and rural uses.
- Reduction in ground cover, floodplains, and wetlands.

Residential, commercial, industrial, and public development patterns within Oldham County are depicted in Figure 3-1. As in the past, rural and low density residential land uses will continue to dominate the landscape. Commercial and industrial growth is expected to concentrate in the accessible areas around Buckner and the City of LaGrange.

The county’s future land use was evaluated in Outlook 2020, the Comprehensive Plan adopted by the Oldham County Planning Commission on February 26, 2002. This document identified the following eight (8) geographic planning areas in its future land use analysis:

1) Crestwood 5) Northeast Oldham
2) Pewee Valley 6) Buckner
3) Brownsboro 7) Centerfield/Ballardsville
4) Goshen/N. Oldham 8) LaGrange

Implementation measures associated with the land use element of the planning document included preparing area master plans, updating ordinances and regulations, preparing annual reports, and establishing development priority areas. Due to a limited funding mechanism, these various tasks were
also ranked in importance based on their benefits, relationships to other measures, and feasibility of implementation.

General descriptions of the individual Outlook 2020 planning areas, with current and potential land use assessments, are included in this wastewater facilities plan. Reference should be made to the Comprehensive Plan for more detailed coverage of particular locations within Oldham County.

**Planning Area 1 - Crestwood**

The Crestwood planning area is bounded on the north by Interstate 71 (I-71), on the east by Curry’s Creek, on the south by Shelby County and the corporate limits of Pewee Valley, and on the west by the Jefferson County line. It includes the cities of Crestwood, Park Lake, and Orchard Grass Hills as well as the old, deteriorated Lake Louisvilla resort area. Land use varies within the planning area, including a number of non-residential use types such as the industrial development on the western side of Haunz Lane.

In September 2005, the city of Crestwood joined the Oldham County Sewer District with the appointment of two members to the Board of Directors. The sanitary sewer system for the city is connected via a pump station to the existing Hite Creek Wastewater Treatment Plant, which is owned and operated by the Louisville and Jefferson County Metropolitan Sewer District (MSD). The plant is located off Hitt Lane in eastern Jefferson County near the Oldham County line. The availability of municipal sewer service has been a driving force in the commercial and residential growth experienced within the area.

The business district of Crestwood and the area to its east along the Hwy. 146 corridor contain a number of commercial and office properties. The area to the north and northeast of the business district has the most immediate potential for development due to its proximity to the Hwy. 329 Bypass, I-71, and available sewer service. Increased commercial and residential development has been experienced in the vicinity of the Hwy. 329 Bypass extension to Hwy. 22. On the other hand, the mansion and original 320 acres of property associated with the Waldeck Farm, which are opposite the intersection of the two roads, have been listed on the National Register of Historical Places.

The city of Orchard Grass Hills is a single-family subdivision served by a package wastewater treatment plant. Major development expansion to the north and east is unlikely due to the existing road network and topographical conditions.
The old summer resort area of Lake Louisvillla has been in a state of disrepair and deterioration for some 30 years. Illegal dumping has also contributed to the problem. Efforts to restore and cleanup the area have brought about some minor redevelopment and new residential construction to this portion of Oldham County.

The southeast sector of the Crestwood planning area associated with Curry’s Fork contains woodlands, creek-related floodplains, steep slopes, and lowlands. Property ownership is primarily large tracts designated for agricultural use; however, pockets of residential development dot the landscape.

**Planning Area 2 - Pewee Valley**

This area is surrounded on all sides, except the southwest, by the previously described Crestwood planning area. The Jefferson County line forms the southwest boundary. It includes the corporate limits of the city of Pewee Valley and the Confederate Estates, Ashbrook, and Village Green subdivisions.

The business district of Pewee Valley consists of commercial and office establishments centered along Hwy. 146 and Mount Mercy Drive. Prior to the 1920s, residential development was primarily large houses constructed for vacationers and wealthy commuters. In the 1960s, following several decades of hard times fueled by The Depression, the loss of commuter rail service, and World War II, modern type subdivisions came of age. Basically, the sanitary needs of all development within the Pewee Valley planning area is provided by septic tanks.

The former Red Penn Landfill, which is located on Ash Avenue (Hwy. 362) at the Shelby County line, has been designated a Superfund Cleanup Site by the U.S. Environmental Protection Agency (EPA). The facility has been closed and capped according to EPA standards.

**Planning Area 3 - Brownsboro**

The Brownsboro planning area is bounded on the north by Darby Creek and Harrods Creek, on the east by Cedar Point Road, on the south by I-71, and on the west by the Jefferson County line. This portion of Oldham County has historically been characterized by large farms, large lot residential tracts, and industrial uses associated with gravel quarry operations on the west side of Hwy. 329. Recently, expansion of MSD’s Hite Creek Wastewater Treatment Plant coupled with the ability to extend sewer service have led to an influx of
growth near the Jefferson County line. Even though these higher density developments such as Moser Farms, GlenOaks, and the planned expansion of Norton Commons have shifted the population center to the southwest, single-family residences grouped along Old Brownsboro Road and Old Zaring Road continue to define the rural community of Brownsboro, and it remains the focal point of the planning area to many county residents.

Although the area along Hwy. 329 north of I-71 is scarcely developed with a few single-family homes and a mini-warehouse facility, it is considered to have the most immediate potential for growth due to its proximity to the interstate and available sewer service. Progress is currently being made on the mixed-use Celebration Park at Apple Patch for mentally challenged adults located in the northwest quadrant of the Hwy. 329/I-71 interchange. Future development in the northeast quadrant of the interchange is expected to be residential in nature.

In June 2006, the Oldham County Planning and Zoning office designated Brownsboro to be the first of the study areas to undergo master planning. At that same time, the Brownsboro Area Master Plan Task Force was assembled to assist planning staff in the preparation of growth and development guidance that is aimed at protecting the Harrods Creek Watershed and respecting the local character of small town living. The Task Force is comprised of Brownsboro citizens, magistrates, Planning and Zoning Commissioners, developers, realtors, and representatives from Oldham Ahead and the Brownsboro Conservation Council.

Since initiation of the project, the planning staff in conjunction with the Task Force have conducted a kickoff meeting, open house, and workshop to generate interest and public involvement in the planning effort. Goals have been established relative to community character; environmental resources, open space, and farmland; land use; and transportation. Having completed an assessment of existing conditions, the planning team is currently developing viable alternatives for addressing the issues, challenges, and opportunities that face the Brownsboro area community.

Planning Area 4 - Goshen/N. Oldham

The Goshen/N. Oldham planning area is bounded on the north by the Ohio River, on the east by Hwy. 393, on the south by Darby Creek and Harrods Creek, and on the west by the Jefferson County line. The city of Goshen, formerly Harmony Lake Estates, the city of River Bluff, and the diminishing community of Skylight are all located within this geographical
region which is characterized by single-family subdivisions, horse farms, and riverfront development along the Ohio River.

Development is most dense along and adjacent to US 42, particularly to the east between the Jefferson County line and Goshen Lane. This section of the planning area includes the city of Goshen and its surrounding collection of single-family residential subdivisions, as well as the city of River Bluff and other large single-family developments such as Paramount Estates and Hillcrest. As US 42 continues eastward, land use patterns gradually change from single-family residential to primarily agricultural at Hwy. 393. Open space to the east of Goshen Lane is considered the prime location for future expansion of small tract residential properties.

In terms of responding to community development needs, the Mahan-Oldham County Public Library and the Creasey Mahan Nature Preserve provide educational and recreational opportunities to area residents. These facilities are sited on 157 acres of perpetually protected land adjacent to the small tract residential properties in Goshen.

**Planning Area 5 - Northeast Oldham**

The sparsely populated Northeast Oldham planning area runs from the Ohio River on the north to a network of local roads (Ballard School Road, Yager Lane, Fendley Mill Road, and Bennett Lane) on the south and reaches east to west from Hwy. 393 to the Henry and Trimble county lines. The densest population growth in this section of the county is centered in the communities of Westport and L’Esprit. Located on Hwy. 524 near the confluence of the Ohio River and Eighteen Mile Creek, Westport is comprised of a cluster of single-family residences with limited commercial development. The L’Esprit subdivision, with its extensive infrastructure system, was constructed to promote the Arabian horse industry.

Due to limited accessibility, open space, agriculture, and large lot single-family homes dominate the land use pattern. Residential growth in the area between the river and US 42 has generally been concentrated on the higher ridge lines to avoid creeks, drainage swales, and other unfavorable building conditions. This development trend in the Northeast Oldham planning area is expected to continue for the foreseeable future.

**Planning Area 6 - Buckner**

The community of Buckner is essentially located in the center of Oldham County. It abuts the Northeast Oldham planning area on the north,
the City of LaGrange on the east, I-71 on the south, and Cedar Point Road on
the west. Rail service to the area is provided by CSX Railroad, and access to I-
71 is available at Hwy. 146 and Hwy. 393 interchanges.

The Buckner area is noted for its diverse mix of public, institutional,
industrial, commercial, and residential land uses. The list of public and
institutional facilities includes a park, aquatics/convention center, country
club, police headquarters, roadway departments, school campuses and
administrative offices, and sports complexes. Commercial establishments are
generally sited along the Hwy. 146 corridor which is the major thoroughfare
running through the planning area. Industrial development has occurred east
and west of Hwy. 146 just north of the interstate and, to a limited degree, in
the Oldham County Business Park which is located between Hwy. 146 and I-71
east of Hwy. 393. With the recent construction of Commerce Parkway
providing a connection between Hwy. 393 and Hwy. 53, expectations are for
more rapid growth in the business park and along the Hwy. 393 corridor from
the I-71 interchange to its intersection with Hwy. 146.

The largest industry in Oldham County is located in the Buckner
planning area. Carriage House Companies, Inc. (CHC), which produces salsas,
sauces, syrups, jams, and jellies, is on the west side of Hwy. 146 just north of I-
71. The close proximity of the interstate and the availability of rail service
provide ready access to the plant site. At the present time, CHC has an active
permit which allows its process wastewater to be land applied on undeveloped
areas adjacent to the production facility.

The Kentucky State Reformatory (KSR) makes the Commonwealth of
Kentucky the largest landowner and employer in Oldham County. The
expansive prison site, accounting for approximately a third of the entire
Buckner planning area, is also home to the Roederer Correctional Complex
and the Luther Luckett Correctional Complex. The presence of an existing
sewage plant serving the penal facilities and the restrictive nature of the
property are conditions that favor locating a new regional wastewater
treatment plant on the KSR site.

Planning Area 7 - Centerfield/Ballardsville

The Centerfield/Ballardsville planning area is bounded on the north by
HWY 2856 and Blakemore Lane, on the east by the Henry County line, on the
south by the Shelby County line, and on the west by Curry’s Creek. The small
historic settlements of Centerfield and Ballardsville serve as community
neighborhood centers.

Located at the intersection of Hwy. 22 and Hwy. 393, Centerfield is
comprised primarily of large lot residential developments with a scattering of
single-family residences, farms, and undeveloped tracts along Hwy. 22.
Ballardsville is located east of Centerfield and just south of LaGrange at the intersection of Hwy. 22 and Hwy. 53. Large agricultural tracts dominate the landscape in this sector of the planning area. A mixture of commercial uses and single-family residences exists in the heart of the community.

**Planning Area 8 – LaGrange**

The LaGrange planning area is the most densely populated and urbanized area within Oldham County. Its northern boundary is defined by Ballard School Road, Yager Road, Fendley Mill Road, and Bennett Lane which also serve as the southern boundary for the Northeast planning area. The remaining boundaries include the Henry County line on the east, Hwy. 2856 and Blakemore Lane on the south, and Dawkins Road and the City of LaGrange corporate limits on the west.

The hub of the planning area is the City of LaGrange. It was founded as a railroad community and serves as the county seat. A concerted effort has been made to maintain the historical nature of the central business district which currently houses a number of county government, private business, and institutional facilities. The growth of the city has outpaced development guidelines, particularly with regard to access management and transportation. As a result, significant congestion is experienced due to train and heavy truck traffic on the city streets.

The City of LaGrange has its own water and sewer systems which are operated and maintained by the LaGrange Utilities Commission (LUC). An existing 0.775 MGD wastewater plant, located along the south side of New Moody Lane, treats and discharges flow into the North Fork of Curry’s Creek. Although the city is in the process of preparing a planning document for expansion of its treatment facility, efforts have been made and will continue to be pursued to regionalize the LUC and OCSD wastewater systems.

Hwy. 53 and Hwy. 146 are the primary routes serving the LaGrange planning area. Commercial and office uses have developed along these traffic corridors in the more urbanized areas. For the most part, industrial uses have been limited to land along Hwy. 146 east of Fort Pickens Road. The medium to high density residential land uses north of I-71 tend to taper off to the more modest low residential category beyond Old Sligo Road.

The most important factor affecting land use patterns in the LaGrange planning area is the Oldham County Economic Development Authority (OCEDA) development proposed in the southwest quadrant of I-71 and Hwy. 53. The mixture of medium/high residential, commercial, and light industrial
uses will necessitate extensive roadway projects to improve accessibility; the extension of water, sewer, and other utility services; and the expansion of wastewater treatment capacity.

**Socio-Economic Conditions**

The initial capital costs and annual operation and maintenance costs of wastewater collection and treatment improvements proposed in any planning document must be paid for in large part by the users of the system. The socio-economic conditions within the planning area provide a clear indication as to the viability of the selected plan and the ability of the served population to cover expenses without undue hardship.

**Income Levels**

As a historical reference, Table 3-1 summarizes the per capita personal income for Oldham County, Kentucky, and the United States between 1993 and 2003. According to recent data published by the U.S. Department of Commerce, Bureau of Economic Analysis, the county had a per capita personal income of $33,972 in 2004, which represents a 7.7 percent increase over the 1999 personal income figure of $31,530. Although a positive for county residents, changes in the statewide and national personal income levels of 19.8 percent and 18.3 percent, respectively, were significantly higher over the same comparable time period. However, per capita income in Oldham County remains some 25 percent above the state average and slightly exceeds the national average.

**Table 3-1**

*1993-2003 Per Capita Personal Income Data*¹

<table>
<thead>
<tr>
<th>Year</th>
<th>Oldham County</th>
<th>Kentucky</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>$23,500</td>
<td>$17,815</td>
<td>$21,718</td>
</tr>
<tr>
<td>1994</td>
<td>$24,811</td>
<td>$18,514</td>
<td>$22,581</td>
</tr>
<tr>
<td>1995</td>
<td>$25,688</td>
<td>$19,215</td>
<td>$23,562</td>
</tr>
<tr>
<td>1996</td>
<td>$26,793</td>
<td>$20,155</td>
<td>$24,651</td>
</tr>
<tr>
<td>1997</td>
<td>$27,853</td>
<td>$21,221</td>
<td>$25,874</td>
</tr>
<tr>
<td>1998</td>
<td>$29,756</td>
<td>$22,123</td>
<td>$26,909</td>
</tr>
<tr>
<td>1999</td>
<td>$31,530</td>
<td>$22,712</td>
<td>$27,859</td>
</tr>
<tr>
<td>2000</td>
<td>$32,342</td>
<td>$24,085</td>
<td>$29,469</td>
</tr>
<tr>
<td>2001</td>
<td>$32,186</td>
<td>$25,057</td>
<td>$30,271</td>
</tr>
<tr>
<td>2002</td>
<td>$32,803</td>
<td>$25,657</td>
<td>$30,832</td>
</tr>
<tr>
<td>2003</td>
<td>$33,460</td>
<td>$26,352</td>
<td>$31,459</td>
</tr>
</tbody>
</table>

¹Note: Source - U.S. Department of Commerce, Bureau of Economic Analysis
Median household income for the county was $70,603 in 2005, which is about twice the state average and more than triple the poverty threshold for a family of four. With a median home price estimated at $168,000, it is quite apparent that Oldham is one of the most affluent counties in Kentucky.

**Employment and Economic Development**

According to the Kentucky State Data Center, service related jobs and government positions, including teachers and school administrators, represented the bulk of Oldham County employment as of 2000. As shown in Table 3-2, this trend has continued through 2004, with jobs in these two categories accounting for 59 percent of the total employment countywide. The largest employer in the area is the Kentucky State Reformatory (KSR) which is owned and operated by the Commonwealth of Kentucky.

**Table 3-2**

*2004 Oldham County Employment and Wages by Category*¹

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Jobs</th>
<th>Average Weekly Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture²</td>
<td>Not Included</td>
<td>Not Included</td>
</tr>
<tr>
<td>Mining</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>973</td>
<td>$743</td>
</tr>
<tr>
<td>Construction</td>
<td>1,204</td>
<td>$601</td>
</tr>
<tr>
<td>Utilities, Trade &amp; Transportation</td>
<td>2,033</td>
<td>$641</td>
</tr>
<tr>
<td>Information</td>
<td>216</td>
<td>$681</td>
</tr>
<tr>
<td>Finance, Insurance &amp; Real Estate</td>
<td>479</td>
<td>$754</td>
</tr>
<tr>
<td>Services</td>
<td>4,170</td>
<td>$457</td>
</tr>
<tr>
<td>State &amp; Local Government</td>
<td>3,127</td>
<td>$578</td>
</tr>
<tr>
<td>Other</td>
<td>208</td>
<td>$619</td>
</tr>
<tr>
<td><strong>County Total/All Categories</strong></td>
<td><strong>12,410</strong></td>
<td><strong>$573</strong></td>
</tr>
</tbody>
</table>

Notes: ¹Sources: Kentucky Workforce Development Cabinet and U.S. Department of Labor, Bureau of Labor Statistics for workers covered by unemployment insurance ²Agriculture discussed as separate topic

Employment opportunities in the utilities, trade, and transportation industries; construction; and manufacturing are also vital to the county workforce. Weekly wages in these categories are above the average of all industries, and manufacturing wages rank second only to jobs associated with financial, insurance, and real estate activities.

The major businesses and industries located in the countywide planning area are listed in Table 3-3. They are grouped according to their associated population center. The largest industry in Oldham County is the Carriage
House Companies, Inc. (CHC) with a workforce of 350 employees. The CHC facility, which produces salsas, sauces, syrups, jams, and jellies, is located in the Buckner area on the west side of Hwy. 146 just north of I-71.

**Table 3-3**

*Major Businesses and Industries in Oldham County*¹

*OCSD Facilities Plan*

<table>
<thead>
<tr>
<th>Firm</th>
<th>Product(s)/Service(s)</th>
<th>No. of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Buckner</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggressive Tool &amp; Die Inc.</td>
<td>Tolls &amp; die, molds</td>
<td>7</td>
</tr>
<tr>
<td>Caibe &amp; Co.</td>
<td>Solid surface counter tops and granite</td>
<td>8</td>
</tr>
<tr>
<td>Carriage House Companies, Inc.</td>
<td>Mexican salsas, barbeque steak sauces, chocolate and pancake syrups, jams and jellies</td>
<td>350</td>
</tr>
<tr>
<td>Clayton &amp; Lambert Manufacturing Co.</td>
<td>Grain bins, storage silos, stainless steel panels for in-ground pools and spas and pool structures, outdoor poster panels, standing seam roofs, above-ground containment basins</td>
<td>9</td>
</tr>
<tr>
<td>Fastline Publications</td>
<td>Monthly magazine publishing</td>
<td>155</td>
</tr>
<tr>
<td>Hartlage Manufacturing</td>
<td>Injection molded plastic parts</td>
<td>15</td>
</tr>
<tr>
<td>Metro Window Co.</td>
<td>Custom windows and doors</td>
<td>7</td>
</tr>
<tr>
<td>OCTA Inc.</td>
<td>Tube specialist – cutting, bending, forming, etc. (i.e., copper, aluminum, etc.)</td>
<td>17</td>
</tr>
<tr>
<td>Pearce Brothers Ready-Mix Concrete &amp; Supply Co.</td>
<td>Ready-mixed concrete</td>
<td>25</td>
</tr>
<tr>
<td>Toolcraft Co.</td>
<td>Foil container dies, special machinery, precision CNC machining, tool and die, jigs and fixtures, cutting, boring, drilling, grinding, lathe and mill work</td>
<td>8</td>
</tr>
<tr>
<td>Tri-County Steel, Inc.</td>
<td>Sheet, structure and ornamental steel fabricating</td>
<td>9</td>
</tr>
<tr>
<td><strong>Crestwood</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micrody, Inc.</td>
<td>Industrial microwaves</td>
<td>12</td>
</tr>
<tr>
<td>Nemeth Engineering Associates</td>
<td>Dielectric and induction heating equipment, microwave drying systems, wood gluing equipment and presses</td>
<td>18</td>
</tr>
<tr>
<td>Oldham County Stone Co.</td>
<td>Crushed limestone</td>
<td>25</td>
</tr>
<tr>
<td>Zabel Industries International Ltd.</td>
<td>Wastewater septic system filters, distribution, product development and marketing</td>
<td>18</td>
</tr>
<tr>
<td><strong>LaGrange</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allstate Ready-Mix</td>
<td>Ready-mix concrete</td>
<td>28</td>
</tr>
<tr>
<td>Jenner Co.</td>
<td>Stationery engraving, thermography, lithography and foil stampings</td>
<td>23</td>
</tr>
<tr>
<td>Lesco Design &amp; Manufacturing Co., Inc.</td>
<td>Steel fabricators: conveyors, cranes and vehicle loading ramps</td>
<td>130</td>
</tr>
<tr>
<td>Northland Corp.</td>
<td>Kiln-dried hardwood lumber</td>
<td>100</td>
</tr>
<tr>
<td>Oldham Era, Inc.</td>
<td>Weekly newspaper publishing</td>
<td>14</td>
</tr>
<tr>
<td>Parts Unlimited, Inc.</td>
<td>Warehouse and sales center</td>
<td>30</td>
</tr>
</tbody>
</table>

¹Source: Kentucky Cabinet for Economic Development (9/21/06)
From 2001 to 2003, the unemployment rate for Oldham County increased from 3.4 percent to 4.2 percent. Following a fall back to 3.8 percent in 2004, it reached a high of 4.6 percent in 2005. The county unemployment rate is typically less than the national average and has consistently been under the state rate by a point and a half to two points over the same 5-year time period.

Employee commuting patterns are directly affected by the close proximity of Oldham County to the Louisville metropolitan area. According to data prepared by the U.S. Department of Commerce, Bureau of the Census, the number of residents that commute out of the county for work is double the number that live and work within the county boundary. The number of employees commuting into the county for work makes up about 46 percent of the total Oldham County labor force, but those coming in equate to less than half of the residents lost to employment opportunities elsewhere.

Agriculture

The U.S. Department of Agriculture National Agricultural Statistics Service (NASS) conducts a national census of agriculture once every five years. According to the most recent census count figures released in mid-2004, the number of farms in Oldham County increased from 392 in 1997 to 481 in 2002. This reversed a decline reflected in the prior census report which showed a decrease in the number of farms from 468 in 1992 to the previously mentioned 392 in 1997.

Historical trending indicates that the amount of farmland in Oldham County is steadily decreasing. In 2002, farmland represented approximately 51 percent of the total acreage in the county compared to 69 percent in 1992. Although the number of farm units has increased, the accompanying loss of agricultural land indicates that the average size of farms has decreased approximately 50 acres in the 10-year period between 1992 and 2002. The 2002 Census of Agriculture estimated that an average farm in Oldham County contained 130 acres, with a median farm size of 57 acres.

For 2002, agricultural product sales receipts increased 32 percent over 1997 figures. Crops accounted for 42 percent of the total $21 million dollar market value. The remaining 58 percent of sales involved livestock, poultry, and their related products.

Per the latest agricultural census, principal operators of 247 of the 481 farms in Oldham County reported that farming was their primary occupation.
177 of the farms hired 968 workers with an annual payroll of almost $6 million dollars. Of that total, 71 farms employed 826 workers.

**Hydrology**

As shown previously in Figure 2-2, Oldham County is dissected by three distinct watersheds. The Ohio River watershed drains the northern portion of the county, the Harrods Creek watershed drains the central section, and the Floyds Fork watershed drains the county area to the south.

**Ohio River Watershed**

The Ohio River watershed encompasses an area of approximately 32,420 acres and is bounded on the north by the Patton Creek channel (Oldham-Trimble County Line), on the east by the Harrods Creek divide which generally follows Hwy. 42, on the south by the watershed divide between Pond Creek and Harrods Creek, and on the west by the Ohio River. A report prepared by the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service indicates that there are eight named and eight unnamed sub-watersheds tributary to the Ohio. Those identified by name include Eighteen Mile Creek, Organ Creek, Dunbar Hollow, Morris Branch, Bull Creek, Taylor Creek, Little Huckleberry Creek, and Pond Creek.

In the southern portion of the Ohio River watershed, basically from Pond Creek through Dunbar Hollow, broad gently rolling ridges transition to steep hillsides and cliffs along stream channels. Towards the north, the ridge tops begin to narrow and become more numerous and elongated in the vicinity of Eighteen Mile and Organ Creeks. The tributary creek channels are very scenic and have natural, ecologically healthy riparian areas. The developable land adjacent to Jefferson County has experienced the growth of residential communities, while the rest of the watershed to the north remains characteristically rural.

**Harrods Creek Watershed**

The multi-county Harrods Creek watershed drains approximately 69,262 acres and extends from Henry County in the northeast, through Oldham County, and into Jefferson County in the southwest. Harrods Creek flows into the Ohio River upstream of the McAlpin Locks and Dam. The control structure is used to maintain a normal pool elevation of 420 in the river which creates a detrimental backwater condition in the lower segments of the creek that extends some 4.2 miles upstream from its confluence with the river. This pooling action causes slow moving sluggish conditions which do not
assimilate contaminants very effectively. The stream slope is moderate in the upper reaches of the creek, and flows are unaffected by the downstream embayment area.

According to the USDA study, there are five major tributaries to Harrods Creek - South Fork Harrods Creek, Darby Creek, Cedar Creek, Brush Creek, and Ash Run. The general characteristics of the watershed in its upper reaches above HWY 393 are sloping to strongly sloping uplands with broad floodplains along the creek channels. Below HWY 393, Harrods Creek and its major tributaries form a gorge with narrow floodplains and steep cliffs opening up to very broad gently rolling uplands. The watershed area adjacent to Jefferson County reflects an urban type development pattern. Except for the population centers of Buckner and LaGrange, the rest of the area to the northeast is primarily rural and agricultural in nature.

**Floyds Fork Watershed**

Like Harrods Creek, the Floyds Fork watershed serves multiple counties. Its headwaters originate in Henry County, it serves the southern portion of Oldham County, it collects drainage from Jefferson and Shelby Counties, and it eventually empties into the Salt River in Bullitt County. For the most part, the City of LaGrange, Crestwood, Pewee Valley, and other small communities and subdivisions which have developed adjacent to Jefferson County drain into the upper tributaries of Floyds Fork. With the exception of these specific concentrations of population, the remainder of the watershed in Oldham County tends to favor rural and agricultural uses.

In Oldham County, the major tributary to Floyds Fork is Currys Fork which splits into north and south forks a little less than a mile southeast of the I-71 interchange with HWY 146. The North Fork Currys Fork actually runs in the bifurcated northbound and southbound lanes of the interstate between Buckner and LaGrange. Stream slopes in the Oldham County portion of the watershed are considered moderate.

**Land Features**

The physical characteristics of Oldham County significantly influence growth and development patterns in the region. In some sections of the planning area, the geology, topography, and soil conditions can adequately support infrastructure improvements and new building construction. In other areas, steep slopes, poorly draining soils, and similar types of issues serve as obstacles that negatively impact future development.
Geology

Oldham County is in the Outer Bluegrass physiographic region of north-central Kentucky. In the higher elevations of the northern half of the county, most of the exposed rock is Silurian age limestone or calcareous shale. A significant layer of loess or windblown silt (20 to 40 inches thick) covers the majority of the ridge tops. Crider and Nicholson soils, underlain by the Louisville Limestone Formation, are common to this area. Lower elevations in the north lack the loess mantle and are typically Beasley soils underlain with soft calcareous shales and siltstones that weather rapidly when exposed. Caneyville soils underlain by the Saluda Dolomite member of the Drakes Formation are generally found in the lowest elevations in the northern half of the county.

In the southern half of the county, most of the exposed rock is of Ordovician age. Some of the broader ridge tops have a loess mantle over the residuum similar to that found to the north. Beasley soils underlain in part by the Saluda Dolomite and Bardstown members of the Drakes Formation are typical of the area.

A narrow band of deep mixed alluvium washed from the upper reaches of the drainage basin parallels the Ohio River. Small bands of alluvial material can also be found along Floyds Fork, Harrods Creek, and their tributaries.

Topography

The northwestern boundary of Oldham County is the Ohio River. With a normal pool elevation of 420, it represents the lowest elevation in the planning area. The general terrain is gently rolling to hilly with steep slopes and bluffs rising approximately 200 to 350 feet adjacent to the river or its narrow floodplain. Upland elevations range from 650 feet on the west side to 900 feet on the east. A flat-topped ridge located east of HWY 53 about two miles southeast of LaGrange is the highest elevation in the county at 920 feet. Other elevations of interest in the planning area include the county seat of LaGrange at 867 feet, Ballardsville at 860 feet, Brownsboro at 721 feet, Buckner at 831 feet, Crestwood at 798 feet, Skylight at 730 feet, Westport at 486 feet, and Crystal Lake at 777 feet.

Waterways generally run east to west and are considered to have moderate to nearly flat slopes. In the eastern edge of the county, the topography is hillier and laced with normal stream erosion. There are a few flat-topped ridges that tend to increase in width to the west. Except near the Floyds Fork and Harrods Creek streambeds, the western edge of the county
contains gently rolling nearly flat land with only slight local relief. The streams, on the other hand, have carved valleys some 150 to 200 feet below the surrounding upland areas.

**Soils**

Land is one of the most valuable natural resources in Oldham County. Its ability to sustain wildlife, agricultural, residential, or other nonresidential uses is primarily defined by the characteristics of the soil. For land to be economically and ecologically developable, the soil types must be able to support both building construction and essential infrastructure components such as roads, water lines, sanitary sewers, and other utility services.

A general soils map for Oldham County is included in this planning document as Figure 3-2. Compiled in 1976 by the U.S. Department of Agriculture, Soil Conservation Service, the map provides a broad perspective of the county’s various soil types and landscapes and serves as a basis for generalizing large-scale land use potentials.

A soil association, typically consisting of one or more soils of major prominence and others of minor significance, is named for the major soil types. The kinds of soil in one association can occur in others, but in a different pattern. The seven soil associations defined for Oldham County are shown in the previously referenced figure and listed below:

- Wheeling-Huntington
- Beasley-Caneyville
- Crider-Nicholson
- Crider-Beasley
- Beasley-Cynthiana-Faywood
- Beasley-Nicholson
- Lowell-Faywood-Beasley

The Wheeling-Huntington association is comprised of deep, well drained soils that have a loamy subsoil. Occupying approximately 3 percent of the county, this soil association is found in the stream terraces and floodplains in two separate narrow bands along the Ohio River.

The Beasley-Caneyville association makes up about 12 percent of the county and is characterized by deep to moderately deep, well drained, rocky soils that have a clayey subsoil. This soil association is generally limited to the western half of the county and is located on strongly sloping to very steep hillsides along Harrods Creek and its tributaries and the Ohio River bluff from just south of Westport to the Jefferson County line.
The Crider-Nicholson association dominates the HWY 42 ridge line and adjacent hillsides in the western half of the county between the two areas comprised of the Beasley-Nicholson soil association. It consists of deep, gently sloping to sloping, well and moderately well drained soils that have a loamy subsoil. Some areas have a fragipan, and other small areas scattered throughout have karst relief with sinkholes and underground drains. This soil association occupies approximately 14 percent of the county.

The Crider-Beasley soil association is found in about 14 percent of the land area in the west-central and southwestern portions of the county. This association is located on ridge tops and gently sloping to strongly sloping hillsides and is defined by deep, well drained soils that have a loamy or clayey subsoil. Similar to Crider-Nicholson, small areas having karst relief with sinkholes and underground drains are scattered throughout this association.

The Beasley-Cynthiana-Faywood association contains deep to shallow, well drained soils that have a clayey subsoil. Occupying approximately 10 percent of the county, this soil association is found on ridge tops and gently sloping to very steep hillsides located in the northern portion of the county drained by Pattons Creek and Eighteen Mile Creek.

The Beasley-Nicholson association is the major soils group in Oldham County, occupying about 37 percent of the land area. It is found in the eastern half of the county on ridge tops and gently sloping to strongly sloping hillsides to the north and south of the HWY 146 ridge line. This association is characterized by deep, well and moderately well drained soils that have a clayey or loamy subsoil. Some areas have a fragipan.

The Lowell-Faywood-Beasley association is encountered in about 10 percent of the county and is comprised of deep and moderately deep soils that have a clayey subsoil. This soil association is generally located on ridge tops and gently sloping to moderately steep hillsides in the extreme southeastern portion of the county.

The detailed soils map presented in Figure 3-3 can be used to identify and determine the extent of specific soils attributable to localized areas. Each symbol on the map represents a soil type that may or may not be conducive to certain development uses. The narrative that follows provides the names of the soil types associated with each symbol, a description of the soil profile, its percentage of the county’s land area, and a summary of each soil’s potential relative to supporting different land uses. Additional information can be obtained from the Soil Survey of Oldham County published by the U.S. Department of Agriculture, Soil Conservation Service.
• **BeB** - Beasley silt loam, 2 to 6 percent slopes. Deep, well drained, gently sloping soil on uniform, slightly convex ridge tops mostly in the eastern half of the county. 1.7 percent of county land area. High potential for agricultural uses. Medium potential for woodland and urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

• **BeC** - Beasley silt loam, 6 to 12 percent slopes. Deep, well drained, sloping soil on convex ridge tops and complex side slopes mostly in the eastern half of the county. 14 percent of county land area. Medium to high potential for agricultural uses. Medium potential for woodland and urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

• **BeD** - Beasley silt loam, 12 to 20 percent slopes. Deep, well drained, moderately steep soil on complex side slopes mostly in the eastern half of the county. 1.5 percent of county land area. Medium potential for agricultural and woodland uses. Low potential for urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

• **BfC3** - Beasley silty clay loam, 6 to 12 percent slopes, severely eroded. Deep, well drained, severely eroded, sloping soil on convex ridge tops and complex side slopes mostly in the eastern half of the county. 4.5 percent of county land area. Low to medium potential for agricultural uses. Medium potential for woodland and urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

• **BfD3** - Beasley silty clay loam, 12 to 20 percent slopes, severely eroded. Deep, well drained, severely eroded, moderately steep soil on complex side slopes mostly in the eastern half of the county. 3 percent of county land area. Low potential for agricultural uses. Medium potential for woodland uses. Low potential for urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

• **BnF** - Beasley-Caneyville rocky silt loams, 30 to 60 percent slopes. Complex of intermingled soils on steep hillsides and very steep bluffs along the Ohio River, Harrods Creek, and their tributaries. 4.6 percent of county land area. Low potential for agricultural and urban uses. Medium potential for woodland uses.

• **Bo** - Boonesboro silt loam. Moderately deep, well drained soil on nearly level floodplains along the upper reaches of smaller streams. Usually flooded at least once a year. 0.7 percent of county land area. Medium to high potential for agricultural uses. High potential for woodland uses. Low potential for urban uses.

• **BsE** - Brassfield-Beasley silt loams, 20 to 30 percent slopes. Complex of intermingled soils on moderately steep complex hillsides throughout the
county. 3.5 percent of county land area. Low potential for agricultural, woodland, and urban uses.

- **CaC** - Caneyville silt loam, 6 to 12 percent slopes. Moderately deep, well drained soil on sloping convex ridge tops and side slopes mostly in the western half of the county. 0.6 percent of county land area. Medium potential for agricultural, woodland, and urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

- **CbD** - Caneyville-Beasley rocky silt loams, 12 to 30 percent slopes. Complex of intermingled soils on convex, moderately steep and steep hill sides mostly in the western half of the county. 4.1 percent of county land area. Low potential for agricultural and urban uses. Medium potential for woodland uses.

- **CrA** - Crider silt loam, 0 to 2 percent slopes. Deep, well drained, nearly level soil on ridge tops mostly in the western half of the county. 0.3 percent of county land area. High potential for agricultural, woodland, and urban uses.

- **CrB** - Crider silt loam, 2 to 6 percent slopes. Deep, well drained soil on gently sloping convex ridge tops mostly in the western half of the county. 13.5 percent of county land area. High potential for agricultural, woodland, and urban uses.

- **CrC** - Crider silt loam, 6 to 12 percent slopes. Deep, well drained soil on sloping ridge tops and side slopes mostly in the western half of the county. 5.5 percent of county land area. High potential for agricultural and woodland uses. Medium potential for urban uses.

- **CyF** - Cynthiana-Faywood-Beasley complex, 30 to 60 percent slopes. Complex of intermingled soils on steep and very steep complex hillsides mostly in the northeastern portion of the county. 5.9 percent of county land area. Low potential for agricultural, woodland, and urban uses.

- **ElB** - Elk silt loam, 2 to 6 percent slopes. Deep, well drained, gently sloping soil on uniform convex stream terraces along the Ohio River, Harrods Creek, Floyds Fork, and their tributaries. 0.4 percent of county land area. High potential for agricultural, woodland, and urban uses.

- **FaC** - Faywood silt loam, 6 to 12 percent slopes. Moderately deep, well drained, sloping soil on convex ridge tops and side slopes throughout the county. 0.2 percent of county land area. Medium potential for agricultural, woodland, and urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.
• **FaD** - Faywood silt loam, 12 to 30 percent slopes. Moderately deep, well drained, moderately steep to steep soil on hillsides throughout the county. 0.4 percent of county land area. Low to medium potential for agricultural uses. Medium potential for woodland uses. Low potential for urban uses.

• **FsD3** - Faywood silty clay, 12 to 30 percent slopes, severely eroded. Moderately deep, well drained, moderately steep to steep soil on hillsides throughout the county. 1 percent of county land area. Low potential for agricultural and urban uses. Medium potential for woodland uses.

• **HaB** - Hagerstown silt loam, 2 to 6 percent slopes. Deep, well drained, gently sloping soil on uniform convex ridge tops mostly in the western half of the county. 0.3 percent of county land area. High potential for agricultural, woodland, and urban uses.

• **HaC** - Hagerstown silt loam, 6 to 12 percent slopes. Deep, well drained, sloping soil on convex ridge tops and side slopes mostly in the western half of the county. 2.8 percent of county land area. High potential for agricultural and woodland uses. Medium potential for urban uses.

• **HsC3** - Hagerstown silty clay loam, 6 to 12 percent slopes, severely eroded. Deep, well drained, severely eroded, sloping soil on convex ridge tops and side slopes mostly in the western half of the county. 0.3 percent of county land area. Low to medium potential for agricultural uses. High potential for woodland uses. Medium potential for urban uses.

• **Hu** - Huntington silt loam. Deep, well drained, level to nearly level soil on floodplains along the Ohio River. Usually flooded at least once a year. 0.5 percent of county land area. High potential for agricultural and woodland uses. Low potential for urban uses.

• **La** - Lawrence silt loam. Deep, somewhat poorly drained, nearly level soil on broad upland flats throughout the county. 0.8 percent of county land area. Medium potential for agricultural uses. High potential for woodland uses. Low potential for urban uses. Compact and brittle fragipan percs slowly, limiting use for septic tank absorption fields.

• **Ln** - Lindside silt loam. Deep, moderately well drained, nearly level soil on floodplains along major streams and their tributaries. Usually flooded at least once a year. 1.5 percent of county land area. High potential for agricultural and woodland uses. Low potential for urban uses.

• **LoB** - Lowell silt loam, 2 to 6 percent slopes. Deep, well drained, gently sloping soil on uniform convex ridge tops mostly in the southeastern portion of the county. 1.9 percent of county land area. High potential for agricultural and woodland uses. Medium potential for urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.
• **LoC** - Lowell silt loam, 6 to 12 percent slopes. Deep, well drained, sloping soil on uniform convex ridge tops and side slopes mostly in the southeastern portion of the county. 3.4 percent of county land area. Medium to high potential for agricultural uses. High potential for woodland uses. Medium potential for urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

• **LsC3** - Lowell silty clay loam, 6 to 12 percent slopes, severely eroded. Deep, well drained, severely eroded, sloping soil on convex ridge tops and side slopes mostly in the southeastern portion of the county. 0.3 percent of county land area. Low to medium potential for agricultural uses. High potential for woodland uses. Low potential for urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

• **Ne** - Newark silt loam. Deep, somewhat poorly drained, nearly level soil on floodplains along major streams and their tributaries. Usually flooded at least once a year. 0.6 percent of county land area. High potential for agricultural and woodland uses. Low potential for urban uses.

• **NhB** - Nicholson silt loam, 2 to 6 percent slopes. Deep, moderately well drained, gently sloping soil on uniform convex ridge tops throughout the county. 11.5 percent of county land area. High potential for agricultural and woodland uses. Medium potential for urban uses. Compact and brittle fragipan percs slowly, limiting use for septic tank absorption fields.

• **NhC** - Nicholson silt loam, 6 to 12 percent slopes. Deep, moderately well drained, sloping soil on uniform convex ridge tops and side slopes throughout the county. 1.2 percent of county land area. High potential for agricultural and woodland uses. Medium potential for urban uses. Compact and brittle fragipan percs slowly, limiting use for septic tank absorption fields.

• **No** - Nolin silt loam. Deep, well drained, nearly level soil on floodplains along major streams and their tributaries. Usually flooded at least once a year. 2.1 percent of county land area. High potential for agricultural and woodland uses. Low potential for urban uses.

• **OtB** - Otwell silt loam, 2 to 6 percent slopes. Deep, moderately well drained, gently sloping soil on convex stream terraces along the Ohio River, Harrods Creek, Floyds Fork, and their tributaries. 0.7 percent of county land area. High potential for agricultural uses. Medium potential for woodland and urban uses. Compact and brittle fragipan percs slowly, limiting use for septic tank absorption fields.

• **Pt** - Pits. Open excavations from which soil and underlying material have been removed. Usually limestone quarries. 0.2 percent of county land area.
• **W** - Water. 4.2 percent of county land area.

• **We** - Weinbach silt loam. Deep, somewhat poorly drained, nearly level soil on slightly concave stream terraces along the Ohio River, Harrods Creek, Floyds Fork, and their tributaries. 0.5 percent of county land area. Medium potential for agricultural uses. High potential for woodland uses. Low potential for urban uses. Compact and brittle fragipan percs slowly, limiting use for septic tank absorption fields.

• **WhA** - Wheeling silt loam, 0 to 2 percent slopes. Deep, well drained, nearly level soil on stream terraces along the Ohio River. 0.2 percent of county land area. High potential for agricultural, woodland, and urban uses.

• **WhB** - Wheeling silt loam, 2 to 6 percent slopes. Deep, well drained, gently sloping soil on uniform stream terraces along the Ohio River. 0.6 percent of county land area. High potential for agricultural, woodland, and urban uses.

• **WhC** - Wheeling silt loam, 6 to 12 percent slopes. Deep, well drained sloping soil on uniform stream terraces along the Ohio River. 0.3 percent of county land area. High potential for agricultural and woodland uses. Medium potential for urban uses.

• **WID** - Wheeling soils, 12 to 30 percent slopes. Deep, well drained, strongly sloping to moderately steep soil on stream terraces along the Ohio River. 0.3 percent of county land area. Low to medium potential for agricultural uses. High potential for woodland uses. Low potential for urban uses.

• **WoB** - Woolper silty clay loam, 2 to 6 percent slopes. Deep, well drained, gently sloping soil on concave toe slopes throughout the county. 0.2 percent of county land area. High potential for agricultural and woodland uses. Medium potential for urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

• **WoC** - Woolper silty clay loam, 6 to 12 percent slopes. Deep, well drained sloping soil on concave toe slopes throughout the county. 0.2 percent of county land area. Medium to high potential for agricultural uses. High potential for woodland uses. Medium potential for urban uses. Clayey subsoil percs slowly, limiting use for septic tank absorption fields.

**Septic Systems**

Until OCSD was established in 1996 and began purchasing existing infrastructure, the LaGrange Wastewater Treatment Plant was the only municipally owned facility in Oldham County. Prior to its construction in
1984, the only sewage disposal options available were individual on-site systems and package plants designed for specific developments.

Between 1970 and 1980, the population of Oldham County nearly doubled, primarily the result of an influx of Jefferson County residents avoiding the school busing issue. Because septic systems are approved in the county for lots as small as one acre and are significantly cheaper than a subdivision sanitary sewer system and package plant, the need for additional housing promoted the construction of more and more individual on-site systems.

Today, the septic tank absorption field is the most widely used on-site sewage disposal system in Oldham County. The problem is that approximately 75 percent of the county land area is comprised of soils that have severe limitations relative to supporting this type of wastewater treatment. The failure of septic systems to percolate properly ultimately leads to contamination of the groundwater and streams within the affected areas.

In the early development phase of the OCSD Facilities Plan, discussions were held with representatives of the Oldham County Health Department to obtain background information on the extent and status of on-site septic systems. That effort led to the designation of septic tank problem areas illustrated in Figure 3-4. Due to the lack of existing infrastructure, the implementation of a long-term program to eliminate these individual on-site sewage systems will be expensive. It is expected that assessment projects will be the most effective means of achieving this environmentally beneficial goal.

**Floodplain**

Drainage needs within the planning area are served by three distinct watersheds that dissect Oldham County. The Ohio River watershed covers that portion of the countywide planning area from HWY 42 north to the river. The Harrods Creek watershed encompasses the area between HWYS 42 and 146. The Floyds Fork watershed handles the remainder of the county south of HWY 146.

The effectiveness of each of these watersheds to adequately collect and drain stormwater runoff and prevent flooding is dependent on numerous factors ranging from localized rainfall intensity and duration to the pool levels controlled by the Corps of Engineers (COE) through the series of locks and dams on the Ohio River. Based on flood insurance maps prepared by the Federal Emergency Management Agency (FEMA), the 100-year floodplain for the countywide planning area is illustrated in Figure 3-5.
Figure 3-4
Septic Tank Problem Areas
Besides flooding along the riverbank in the Ohio, there are significant backwater issues shown for Eighteen Mile Creek, Pattons Creek, and their tributaries. According to prior study documentation, the floodplain along Harrods Creek ranges from 100 to 500 feet wide, and the backwater impacts along its tributaries are estimated to be between 80 to 130 feet wide. In the Floyds Fork watershed, the floodplain width varies from 200 to 400 feet along Currys Fork to 100 to 200 feet along Floyds Fork near the Jefferson County line.

**Wetlands**

Wetlands as defined by the U.S. Fish and Wildlife Service are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. They essentially must have one or more of the following characteristics:

- At least periodically, the land supports predominantly hydrophytes.
- The substrate is predominantly undrained hydric soil.
- The substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of the year.

Wetlands benefit the ecosystem by providing a wide array of functions such as flood control, erosion control, groundwater recharge, and water quality protection. They also help support and maintain aquatic, plant, and wildlife habitats. Wetlands dampen the effects of flooding and erosion through a combination of water storage and braking actions. Serving as natural sponges, they trap and slowly release surface water, rain, snow melt, groundwater, and flood waters. Wetland vegetation also tends to slow approaching flood waters and distribute them over the floodplain. Water quality is naturally enhanced through sediment removal and nutrient cycling.

Although wetlands account for approximately 5 percent of the land area of the continental United States, they contain over 30 percent of the nation’s vascular flora. As of December 2006, the responsibility for maintaining and updating the national list of wetland plants was transferred to the U.S. Army Corps of Engineers.

The National Wetland Inventory included on the U.S. Fish and Wildlife Service website ([www.fws.gov/nwi](http://www.fws.gov/nwi)) is an extremely valuable reference source relative to the small and intermittent wetlands that dot the Oldham County landscape. The website contains current information on such things as wetland functions, plants, status and trends, education, and publications. It also has provisions for viewing, downloading, or printing maps of wetland digital data through its wetland mapper software system.
Climate and Precipitation

Oldham County generally experiences hot summers and moderately cold winters. While the average annual temperature is approximately 57°F, seasonal temperature readings vary significantly due to the area’s latitudinal and continental location. The record high of 106°F occurred in July 1999, and the lowest reading of –22°F was recorded in January 1994. Based on information provided by the U.S. Department of Commerce and the National Climatic Data Center, Oldham County normally sees 4,352 heating degree days during a typical year. This total is defined as the sum of departures of average daily temperature below 65°F and is used to help establish facility heating requirements. In contrast, the study area experiences about 1,443 cooling degree days, or the sum of departures of average daily temperature above 65°F, which plays a role relative to determining air conditioning needs.

Total precipitation for Oldham County averages 44.5 inches per year. The mean annual snowfall is estimated at 14.6 inches. Rains are generally heavy throughout the year but tend to peak slightly in the spring. Snow falls almost every winter, but the snow cover typically lasts only a few days. There are approximately 126 days per year that precipitation amounts to 0.01 inch or more, and thunderstorms occur an average of 47 days per year.

As a general rule, the relative humidity is higher in the early morning than it is in the afternoon and evening. The relative humidity drops from an average high of 83 percent at 7:00 a.m. to 63 percent at 7:00 p.m. The prevailing winds in Oldham County are from the south, and the highest average wind speed of 10 miles per hour occurs during the spring months.

Air Quality

Any improvements to the wastewater collection and treatment systems recommended in this Facilities Plan are not expected to adversely impact the air quality of Oldham County. It is the intent of the Oldham County Sewer District (OCSD) to ensure environmental quality through the proper operation and maintenance of its gravity sewers, pump stations, force mains, and treatment plants. At any of its facilities, the emission of odors deemed objectionable to the surrounding community will be addressed and remedial actions will be undertaken. These corrective measures may include scheduling maintenance activities, modifying process operating procedures, or in some cases, installing effective odor control devices.
Biotic Communities

This is a countywide wastewater facilities planning document for the OCSD. Except for urban development in communities such as LaGrange, Crestwood, Buckner, Pewee Valley, and Goshen, most of Oldham County is rural in nature. As such, the county supports a diverse assortment of wildlife. The U.S. Department of the Interior, Fish and Wildlife Service, maintains a detailed record of endangered and/or threatened species in Oldham County as well as documented wetland locations.

Archaeology

This Facilities Plan documents the wastewater collection and treatment needs for Oldham County over the next twenty years. The general arrangement of recommended improvements is shown on various figures contained herein. When design activities commence on the proposed gravity sewers, pump stations, force mains, and treatment plants, a professional archaeological survey will be performed to ensure that the pipeline routes and facility locations selected do not compromise historical sites.

For the purpose of this planning document, contact was made with the Kentucky Heritage Council and the Oldham County Historical Society relative to the sites in the county currently on the National Register of Historic Places. These sites are listed, along with addresses and identification numbers, in Table 3-4.

The Historical Society also provided a road map indicating the approximate locations of cemeteries throughout Oldham County. The map designates nearly 180 burial sites which will have to be avoided by the proposed wastewater improvements. The cemetery information will be retained for reference during project design.
### Table 3-4

**National Register of Historic Places – Oldham County**  
**OCSD Facilities Plan**

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<thead>
<tr>
<th>Historic Name</th>
<th>NPS Number</th>
<th>Location</th>
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<tr>
<td>Confederate Memorial</td>
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<td>Reuben Sale House</td>
<td>82001574</td>
<td>3700 Smith Lane (1 mi NW of US 42</td>
<td>LaGrange</td>
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<td>Clifton/Gottbrath Home</td>
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<td>Greenhaven Lane, 2.5 mi NW US 42</td>
<td>Goshen</td>
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<td>87000202</td>
<td>4 mi S US 42, 1.4 mi E Hwy. 393</td>
<td>LaGrange</td>
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<td>William Ingram House</td>
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<td>1.7 mi W of Shrader Lane, 1.5 mi W</td>
<td>Buckner</td>
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<td>William McMakin House</td>
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<td>3 mi S Old Zaring Rd, 1.4 mi E Inte</td>
<td>Brownsboro</td>
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<td>.6 mi W of Shuler Lane, .1 mi N of</td>
<td>Louisville</td>
</tr>
<tr>
<td>Yowell-Snyder House</td>
<td>83003802</td>
<td>.7 mi N off N. Hitt Lane</td>
<td>Brownsboro</td>
</tr>
<tr>
<td>Wesley Methodist Church</td>
<td>87000179</td>
<td>1 mi E of Haunz Lane, 1.1 mi, N of</td>
<td>Anchorage</td>
</tr>
<tr>
<td>Yager House</td>
<td>82002740</td>
<td>.7 mi N Covered Bridge Rd, 1.1 mi</td>
<td>Goshen</td>
</tr>
<tr>
<td>Locke-Mount House</td>
<td>82001573</td>
<td>11801 Covered Bridge Road</td>
<td>Goshen</td>
</tr>
<tr>
<td>The Hermitage</td>
<td>82001572</td>
<td>9513 US Hwy. 41 (.7 mi SW of Shilo</td>
<td>Goshen</td>
</tr>
<tr>
<td>John Leslie Bate House</td>
<td>87000144</td>
<td>.5 mi E of Buckeye Lane, 1 mi N of</td>
<td>Goshen</td>
</tr>
<tr>
<td>Albert E. Clore House</td>
<td>83002842</td>
<td>End of Clore Lane</td>
<td>Crestwood</td>
</tr>
<tr>
<td>St. Aloysius Church</td>
<td>89001983</td>
<td>130 Rollington Rd</td>
<td>Pewee Valley</td>
</tr>
<tr>
<td>The Locust</td>
<td>75000817</td>
<td>LaGrange Rd, .2 mi N of Woolridge</td>
<td>Pewee Valley</td>
</tr>
<tr>
<td>Tanglewood</td>
<td>89001981</td>
<td>417 LaGrange Rd</td>
<td>Pewee Valley</td>
</tr>
<tr>
<td>St. James’ Episcopal Church</td>
<td>82003072</td>
<td>401 LaGrange Rd</td>
<td>Pewee Valley</td>
</tr>
<tr>
<td>301 LaGrange Road Building</td>
<td>89001880</td>
<td>301 LaGrange Rd</td>
<td>Pewee Valley</td>
</tr>
<tr>
<td>Tuliphurst</td>
<td>89001979</td>
<td>Dogwood Lane</td>
<td>Pewee Valley</td>
</tr>
<tr>
<td>Bondurant-Hustin House</td>
<td>89001989</td>
<td>Mt. Mercy Drive</td>
<td>Pewee Valley</td>
</tr>
<tr>
<td>Dr. Thomas C. Peebles House</td>
<td>89001985</td>
<td>Maple Avenue</td>
<td>Pewee Valley</td>
</tr>
<tr>
<td>Joseph H. Ellis House</td>
<td>89001988</td>
<td>320 Maple Avenue</td>
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<tr>
<td>Van Horn-Ross House</td>
<td>89001978</td>
<td>138 Roswood Dr</td>
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</tr>
<tr>
<td>George Miller House</td>
<td>89001986</td>
<td>Central Avenue</td>
<td>Pewee Valley</td>
</tr>
<tr>
<td>William Alexander Smith House</td>
<td>89001982</td>
<td>Mt. Mercy Drive</td>
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</tr>
<tr>
<td>Pewee Valley Confederate Cemetery</td>
<td>89001984</td>
<td>Maple Avenue</td>
<td>Pewee Valley</td>
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<tr>
<td>McMahan House</td>
<td>82002741</td>
<td>203 Washington</td>
<td>LaGrange</td>
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<td>Forrester-Duvall House</td>
<td>89001987</td>
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<td>Pewee Valley</td>
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<tr>
<td>D. W. Griffith House</td>
<td>76000935</td>
<td>206 N 4th</td>
<td>LaGrange</td>
</tr>
<tr>
<td>Spring Hill</td>
<td>80001664</td>
<td>3 mi SE of Ballardsville, KY Hwy. 53</td>
<td>Ballardville</td>
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