INTERSTATE GROWTH AND UTILITY SUPPORT

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The HUB of Southwest Virginia

Hot Topics in Municipal Utilities, Mimslyn Inn, Luray, Virginia, June 29, 2017
Exit 24 Wastewater Improvements
Exit 24 Wastewater Improvements

Why does the County need a sewage plant in this area?
FUTURE LAND USE IN WYTHE COUNTY

It is important to consider future growth in Wythe County and to plan for the demands of population and industrial growth. A future land use map can assist in a general plan for denoting land uses throughout the county to guide growth and conservation. The future land use map is intended to promote development and conservation in a way that is predicts trends of development, areas where utilities like water and wastewater lines are current or planned, and other various land use factors like where current roadways and residential development has or is occurring. The land use designations of the future land use maps should be viewed as suggested uses for county development and conservation for a period of 10 to 20 years. There are two future land use maps depicted in this plan, Future Land Use-Development and Future Land Use-Conservation.

Kayakers on the New River
Economic Drivers: Past.

Colonial Times (1)

- The establishment of ferries appears to have been a prime concern of the inhabitants upon the creation of the counties.
- Ferries appeared for diverse reasons.

- The desire of private individuals to undertake a profitable business venture prompted the establishment of many of them. Such persons would stress the convenient location of the site they proposed.

- Ferries also facilitated travel, and settlers in remote areas often desired such conveyances to reduce their difficulties in going to court, vestry, or musters.

- Another function of ferries was to complete road systems. When a road was constructed which crossed a creek or river too wide to bridge, a ferry was necessary to provide the connecting link.

Economic Drivers: Past.

Genealogy of Wythe County
Economic Drivers: Past.
Industrial Revolution, 19th and 20th Century

- Lead mines important from Colonial times.
- During the Civil War, the Austinville lead mines became the major source of lead for the Confederacy.
  - Three and a half million pounds of lead were produced for the Confederacy by the Austinville mines during the war. This was one third of the total used by the Confederacy.
  - The shot tower continued to be used to make round lead shot.
Economic Drivers: Present.
Current
• Recreation
• Tourism
• Travel
Economic Enablers

Robust Water Distribution System
Economic Enablers

Sewage Collection and Treatment System
Economic Enablers
Get a plan!
Economic Enablers
County Comprehensive Plan
WASTEWATER TREATMENT

Sewage treatment and collection services are provided by the two towns and the county. In 1990, according to the U.S. Census Bureau, a total of 3665 households were served by public sewer, representing 34.4 percent of all housing units in the county. Most of these households were located within the two municipalities in the county. The 2000 or the 2010 U.S. Census did not identify households served by public sewer.

The Town of Wytheville operates a 4.0 MGD wastewater treatment facility. This plant currently accepts an average of 2.12 MGD. The town of Wytheville has approximately 2058 households on public sewer. During rainfall events and generally wet weather, plant flows increase to approximately 7.0 MGD.

The Fort Chiswell wastewater treatment plant, which went online October 1998, provides sewer service to the Max Meadows, Fort Chiswell and Grahams Forge areas and Progress Park. The Fort Chiswell plant can process up to 1.25 MGD and is expandable to 2.0 MGD. Approximately 650 customers are served by the Fort Chiswell wastewater system.

In July 1995 the county acquired the Austinville wastewater treatment plant and collection system, which is permitted for 20,000 GPD to meet current regulations. The plant accepts 8000 GPD, with peak flows approaching 20,000 GPD during periods of high rainfall.
OBJECTIVES AND STRATEGIES FOR PUBLIC WORKS

WATER AND SEWER FACILITIES

OBJECTIVE: Expand and improve water and sewer systems in the county.

STRATEGIES: Update the Comprehensive Water and Wastewater Study.

Plan for community facilities and services through the adoption of a Five-Year Capital Improvements Program that would schedule improvements based on priority of need and a projection of resources available.

Provide the necessary water, sewer, and other needed infrastructure to proposed industrial properties.

Ensure access to water, sewer, and other needed infrastructure at interstate interchanges in the county.

Extend and improve water and sewer lines within the designated growth areas of the county (Wytheville, Rural Retreat, and Fort Chiswell) and the community service areas where feasible.

Study the feasibility of providing public sewer facilities in Speedwell.
Economic Enablers
County Comprehensive Plan

OBJECTIVES AND STRATEGIES FOR UTILITIES

OBJECTIVE: Promote the provision, at relatively low impact to the county’s natural and cultural resources, of widely available, affordable, and reliable utilities, including telecommunications.

STRATEGIES: ... Ensure access to water, sewer, and other needed utilities infrastructure at interstate interchanges, at primary roads such as US 11, US 21, and US 52, and at any designated growth area identified in the Comprehensive Water and Wastewater Study where the county can anticipate economic growth.
Economic Enablers
County Comprehensive Plan

Exit 24 Area
From Plan to Reality
From Plan to Reality

Funding Sources

- Local
- USDA Rural Development
- Virginia Clean Water Revolving Loan Fund (DEQ)
- Virginia Department of Housing and Community Development
- Economic Development Sources
  - E.g., Tobacco Commission
From Plan to Reality
Getting started: Preliminary Engineering Report, EA
From Plan to Reality
Getting started: Preliminary Engineering Report

EXECUTIVE SUMMARY

The “Wythe County Water and Sewer Study” was prepared in 1995 by Anderson & Associates, Inc. It provided a summary of existing County wastewater systems and outlined future wastewater infrastructure throughout the County. The study recommended that wastewater service be provided to the Poplar Camp/Fosters Falls area during the 2005-2010 period.

The County wants to provide sewer service to the Exit 24 area for several reasons, including the following:

- A centralized wastewater system will be able to serve existing residents and businesses and eliminate existing onsite septic systems, including some that have been troublesome to permit and/or repair.
- Shorts Creek is listed as an impaired water by DEQ. As growth occurs in the area, a centralized wastewater system will better protect the watershed by eliminating the need for new individual septic and onsite systems.
- The existence of a centralized wastewater system will eliminate the potential for new onsite package treatment facilities that have been troublesome in other areas of the County.
- The Exit 24 area has significant potential for growth. Public water service is now available in much of the project area, which removes a significant restriction to commercial, residential, and/or industrial development. Centralized wastewater collection and treatment is needed to adequately support that growth in a way that will minimize negative environmental impacts to the area and Shorts Creek.
- Providing sewer service to this area is consistent with the County’s long-range plans as outlined in the 1995 “Wythe County Comprehensive Water & Wastewater Study”.

La raison d'être
From Plan to Reality
Political and Public Support

The Staff

Mr. & Mrs. J. Q. Public

The Board

Local governing body resolution

Debt service

Community Chest

Federal Grant Money

Clean Water State Revolving Fund
From Plan to Reality
Execution: Now the fun begins!

Local requirements

Funding Agency requirements

Regulatory requirements
From Plan to Reality
Execution: Now the fun begins!

Local requirements

• 9VAC25-840 – Erosion and Sediment Control Plan
  o Permit (> 10,000 SF of disturbance)

• Building Permits

![Building Permit Certificate](image)
From Plan to Reality
Execution: Now the fun begins!

Funding Agency requirements

- Virginia Clean Water Revolving Loan Fund (CWRF) Procedural Guidelines
  
  Allowability of Expenses
  Fund Disbursement and Loan Payment
  Financial Management
  Procurement
  Use of Equipment/Purchase of Materials
  Filing and Record Keeping
  Preliminary Engineering and Record Keeping
  Affirmative Action and Nondiscrimination Provisions
  Preconstruction Conference
  State Construction Oversight
  Payroll Review (Davis-Bacon)
  American Iron and Steel Requirements

- Other agencies have similar requirements, may have Agency specific requirements also.
From Plan to Reality
Execution: Now the fun begins!

Regulatory requirements

- 9VAC25-870
  - Registration Statement (> 1 acre of disturbance)
  - GM 15-2003 (DEQ Linear exemption)
  - Stormwater Management Plan
  - Stormwater Pollution Prevention Plan (SWPPP)
- Certificate to Construct
- Sludge Permit
- Certificate to Operate
- VPDES permit
## From Plan to Reality

### Real Life Example: Exit 24 Wastewater Improvements

<table>
<thead>
<tr>
<th>Month</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2013</td>
<td>Virginia CWRLF loan approval</td>
</tr>
<tr>
<td>Jan 2014</td>
<td>RFP Engineer Services</td>
</tr>
<tr>
<td>Jun 2014</td>
<td>VPDES Permit Application</td>
</tr>
<tr>
<td>Jul 2014</td>
<td>Engineering Services Agreement</td>
</tr>
<tr>
<td>Aug 2014</td>
<td>Sludge Permit</td>
</tr>
<tr>
<td>Sep 2014</td>
<td>VRA Funding Agreement</td>
</tr>
<tr>
<td>Oct 2014</td>
<td>VPDES Public Notice</td>
</tr>
<tr>
<td>Nov 2014</td>
<td>Engineering Services procurement review</td>
</tr>
<tr>
<td>Dec 2014</td>
<td>Environmental Assessment Public Notice</td>
</tr>
<tr>
<td>Jan 2015</td>
<td>Site investigation (soil borings)</td>
</tr>
<tr>
<td>Jan 2015</td>
<td>Environmental Assessment Public Hearing</td>
</tr>
<tr>
<td>Mar 2015</td>
<td>Site surveying (aerial topo)</td>
</tr>
<tr>
<td>Aug 2015</td>
<td>35% WWTP design</td>
</tr>
<tr>
<td>Sep 2015</td>
<td>35% Collection system design</td>
</tr>
<tr>
<td>Nov 2015</td>
<td>90% designs</td>
</tr>
</tbody>
</table>
From Plan to Reality
Real Life Example: Exit 24 Wastewater Improvements

Jan 2016     Joint Permit application submittal
Feb 2016     Real estate option agreements
Mar 2016     Nationwide 12 permit received
Apr 2016     Final plans/specs packages submittal to funding agency
May 2016     Final bid package review
May 2016     Certificate to construct application
May 2016     Certificate to construct
May 2016     Bid opening
Jun 2016     Statement of Environmental Review (SER) Public Comment Notice published
Jul 2016     Pre-construction meeting
Aug 2016     SER requirements satisfied
Aug 2016     Notice of Award
Aug 2016     Approved budget (included MRPD grant)
Aug 2016     DEQ certification to VRA
Sep 2016     MRPD grant award (additional project funds)
From Plan to Reality
Real Life Example: Exit 24 Wastewater Improvements

Sep 2016  Loan closing, Notices to Proceed

Change orders related to funding:
- deducts to meet bids.
- add backs w/ MRPD grant.

Dec 2016  DEQ decline to issue SW permit (linear exemption)

Jan – Jun 2016 (Construction Period)
- Changes to collection system: VDOT interstate corridor requirements.
- Additional easements identified:
  TCE w/ truck stop
  TCE, PUE along Lead Mines Road

Jun 2017  WWTP @ 80%
Collection system (line) @ 50%
Lift station @ 5%

Major Administrative Items

- AIS requirements
- Davis-Bacon
- Pay applications
- Disbursement requests
- Progress Meetings
- Project Inspection
- VDOT coordination
- New easements identified
- Appalachian Power coordination
From Plan to Reality

Real Life Example: Exit 24 Wastewater Improvements

The end is in sight: WWTP commissioning date Aug/Sep 2017.

Future expansion to 100,000 gpd

Initial capacity: 20,000 gpd
Exit 24 - The Future

“If you build it he will come.”
Shoeless Joe in *Field of Dreams*

“Its prime location puts [Wythe County] within a tank of gas of more than half the American population . . .”
Jeremy Farley, Wythe County Public Information Officer
The HUB of Southwest Virginia