



Berryville Town Council

MEETING AGENDA

Berryville-Clarke County Government Center

101 Chalmers Court, Second Floor

Main Meeting Room

Regular Session

September 14, 2021

7:00 PM

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13. Committee Updates

- Budget and Finance
- Community Development
- Personnel, Appointments, and Policy
- Public Safety
- Streets and Utilities

14. Closed Session

15. Adjourn

Town Council Agenda Item Report Summary
September 14, 2021

Item Title

Tree Board Street Tree Recommendations

Prepared By

Christy Dunkle

Background/History/General Information

The Berryville Tree Board has been tasked with making recommendations on street tree replacement in downtown Berryville. The trees were originally planted and maintained by Berryville Main Street. Several dead trees have been removed by the Town.

Staff contacted representatives from VDOT and Rappahannock Electric Cooperative and obtained documents regarding tree selection. Several small to medium street trees were discussed including serviceberry, redbud, and crepe myrtle.

The Tree Board did a walk around downtown at their regular meeting on August 4, 2021. The Tree Board identified 15 tree planting areas. They are recommending the removal of three trees and areas and adding two others as identified below:

- The consideration of two additional trees on Crow Street between Church Street and the entrance to NIK's on the south side of the street, either in planters or in sidewalk.
- The removal of trees and planting areas in front of 10 South Buckmarsh Street (dead), between the Circle K and the John H. Enders Fire and Rescue on the west side of South Buckmarsh, and adjacent to Mario's parking lot on North Buckmarsh (dead).
- Retain one tree and two planting areas on West Main Street.
- Retain the tree and planting area adjacent to the Hawthorne House on the west side of North Buckmarsh.
- Keep the tree planting areas in front of the former Battletown Pharmacy, Tea Cart, Berryville Treasures (currently no tree in the planting area), McKelway office, Jane's Lunch, Berryville Grille, Modern Mercantile, and the two adjacent to the Bank of Clarke County parking lot.

Findings/Current Activity

Planning staff met with Casey Trees director Mark Buscaino to discuss the current condition of the street trees. He recommended that we remove the grates, clean out the soil and add new soil and mulch to the grade of the sidewalk. Accordingly, public works staff will remove the grates and store them at public works.

A VDOT Land Use Permit will be required to replant trees in locations along Buckmarsh and Main Street. VDOT staff indicated they would prefer trees rather than containers. Crow Street is maintained by the Town and the width of the sidewalk in the area proposed would be appropriate for containers.

Financial Considerations

Two replacement trees and two new trees with containers are recommended by the Tree Board. As many of the existing hawthorns would remain, staff is recommending the same species be replanted in areas previously identified. Should two additional containers be purchased, discussion about the appropriate species can be determined. Approximate costs for two replacement trees, two large cement containers, and two new trees is \$1,900.

Schedule/Deadlines

Fall or spring tree planting would be appropriate. The removal of the grates and leveling the soil in the tree pits should occur in the fall due to trip hazards that may be created by the roots pushing up on the grates and for the general health of the trees.

Other Considerations

N/A

Recommendation

Discuss at the meeting.

Sample Motion

N/A

Attachments: street tree locations

September 14, 2021

Proposed Amendment to the Schedule of Water and
Sewer Fees and Charges

Public Hearing

September 14, 2021 Report

The attached public hearing notice was published twice in the *Winchester Star*.

July 13, 2021 Report

History

The Town maintains a general fund and two enterprise funds. The water and the sewer enterprise funds operate in a manner that is very similar to a private business. These funds must operate in a manner that meets capital and operating expenses with the revenues available from user fees (monthly customer bills), availability fees (paid for new or enlarged system connections), borrowing, or grants.

In 2019 an engineering firm completed a utility rate study (Study) that identified water and sewer system needs over the next two decades and provided the Town Council with a schedule of recommended fee and rate increases that should be considered over the subsequent five-year period to provide sufficient income to meet system needs.

The Council adjusted water and sewer fees in 2019 and 2020.

The newly adopted FY2022 Budget anticipated income from adjusted fees (effective in November 2021). The attached amended fee schedule was used in the development of the FY2022 Budget.

Highlights of the schedule adjustments include:

Water

An increase of \$5.21 in the monthly administrative fee charge

A 2% increase in availability fees

Sewer

An increase of \$2.40 in the monthly administrative fee charge

A 2% increase in availability fees

Requested Action

Staff requests that the Council approve the amended Schedule of Water and Sewer Fees and Charges.

Attachments

- Public Hearing Notice
- Draft Schedule of Water and Sewer Fees and Charges
- Utility Rate Study Town of Berryville July 2019

Sample Motion

I move that the Council of the Town of Berryville approve the attached Schedule of Water and Sewer Fees and Charges and that the schedule become effective November 18, 2021.

**BERRYVILLE TOWN COUNCIL
PUBLIC HEARING NOTICE**

The Berryville Town Council will hold the following public hearing at 7:00 p.m., or as soon after as this matter may be heard, on **Tuesday, September 14, 2021**, in the Main Meeting Room, Second Floor, of the Berryville-Clarke County Government Center, 101 Chalmers Court, Berryville, Virginia to consider the following:

Proposed changes to the Schedule of Water and Sewer Fees and Charges

Proposed changes to the Schedule of Water and Sewer Fees and Charges include increasing:

Water administrative and facilities fee from \$7.13 to \$12.34.

Sewer administrative and facilities fee from \$4.82 to \$ 7.22.

Water and sewer availability fees by approximately 2%.

Per linear foot camera inspection fee from \$2.50 to \$3.00.

Hydrant meter deposit from \$1,200 to \$1,500.

Required account deposits to incorporate increase in administrative and facilities fees.

Proposed changes also include the establishment of a hydrant flow test fee.

No change in water and sewer user fee rates is proposed.

Copies of materials may be examined at:

- Town of Berryville Business Office, Berryville Clarke County Government Center, 101 Chalmers Court, Berryville, Virginia during regular business hours and
- the Town's website (www.berryvilleva.gov).

Information may also be obtained by calling the Town Business Office at 540/955-1099.

Any person desiring to be heard regarding the above matter should appear at the appointed time and place. Written copies of statements at public hearings are requested but not required.

The Town of Berryville does not discriminate against disabled people in admission or access to its programs and activities. Accommodations will be made for disabled people upon prior request.

By order of the Town Council
Keith R. Dalton, Town Manager

ADVERTISE: *Winchester Star* on August 31, 2021 & September 7, 2021

INVOICE: Town of Berryville
101 Chalmers Court, Suite A
Berryville, VA 22611

CONTACT: Paul at 955-1102 or townclerk@berryvilleva.gov

TOWN OF BERRYVILLE
SCHEDULE OF WATER AND SEWER FEES AND CHARGES

~~Effective November 19, 2020~~

Proposed to be effective November 18, 2021

I. USER FEES

A. WATER

1. Within corporate limits or the limits of an approved annexation area: \$8.15 per 1,000 gallons of usage. Minimum charge \$5.00 per month for usage under 1,000 gallons during billing period.
2. Other: \$10.18 per 1,000 gallons of usage. Minimum charge \$6.25 per month for usage under 1,000 gallons during billing period.

B. SEWER

1. Within corporate limits or the limits of an approved annexation area: \$17.27 per 1,000 gallons of usage. Minimum charge \$15.00 per month for usage under 1,000 gallons during billing period.
2. Other: \$21.58 per 1,000 gallons of usage. Minimum charge \$18.75 per month for usage under 1,000 gallons during billing period.

II. ADMINISTRATIVE AND FACILITIES FEES AND DEPOSITS

A. ADMINISTRATIVE AND FACILITIES FEES

Monthly Administrative and Facilities Fees, charged with usage:

Water ~~\$7.13~~ 12.34

Sewer ~~\$4.82~~ 7.22

Late Fee: 10% of bill amount

Service Disconnection/Reconnection Fee: \$50

Returned Check/ACH Fee: \$50

B. DEPOSITS

Residential: individually metered single-family units, town homes, and duplexes: \$240 255

Residential: multi-family with master meter: ~~\$185~~ 200 per unit

Business/Commercial excluding restaurants and laundries: \$240 255

Restaurant: \$835 850*

Laundry: \$4,560 4,575*

Institutional: \$1,580 1,595*

Industrial: \$5,600 5,615*

*Town Manager may increase or decrease on the basis of actual usage.

Note: Town Manager may establish reasonable deposit amounts for use types not anticipated by this schedule.

III. AVAILABILITY FEES

A. WATER

Meter Size (Inches)	Demand Ratio	Avail. Fee (Corp. Limits or Annex. Area)	Avail. Fee (Other)	Meter Cost
5/8	1	\$ 13,840.00	\$ 17,300.00	Meter Fee
3/4	1.5	\$ 20,760.00	\$ 25,950.00	Meter Fee
1	2.5	\$ 34,600.00	\$ 43,250.00	Meter Fee
1.5	4.375	\$ 60,550.00	\$ 75,688.00	Meter Fee
2	8	\$ 110,720.00	\$ 138,400.00	Meter Fee
3	16	\$ 221,144.00	\$ 276,800.00	Meter Fee
4	25	\$ 346,000.00	\$ 432,500.00	Meter Fee
6	50	\$ 692,000.00	\$ 865,000.00	Meter Fee

Greater than 6", Demand Ratio (AWWA M22) multiplied by fee for Demand Ratio 1.

Meter Size (Inches)	Demand Ratio	Avail. Fee (Corp. Limits or Annex. Area)	Avail. Fee (Other)	Meter Cost
5/8	1	\$ 14,118	\$ 17,648	Meter Fee
3/4	1.5	\$ 21,177	\$ 26,472	Meter Fee
1	2.5	\$ 35,295	\$ 44,120	Meter Fee
1.5	4.375	\$ 61,766	\$ 77,210	Meter Fee
2	8	\$ 112,944	\$ 141,184	Meter Fee
3	16	\$ 225,888	\$ 282,368	Meter Fee
4	25	\$ 352,950	\$ 441,200	Meter Fee
6	50	\$ 705,900	\$ 882,400	Meter Fee

Greater than 6", Demand Ratio (AWWA M22) multiplied by fee for Demand Ratio 1.

Notes:

(a) Multi-family residences are defined as any master-metered group of apartment, townhouse, condominium, or other residential units with each unit having separate kitchen facilities.

(b) In cases in which a master meter serves multi-family residences or a combination of multi-family and commercial units, the applicant will pay a fee based on the higher of A) an amount derived by multiplying the unit charge of \$11,072 .8 by the applicable water availability fee for demand ratio 1 for a multi-family residence times the total number of residential and commercial units to be served by a single meter, or B) an amount based on the meter size as specified above.

(c) Meter fee is calculated by adding the cost of the meter and a 30% (of meter cost) handling fee.

B. SEWER

Meter Size (Inches)	Demand Ratio	Avail. Fee (Corp. Limits or Annex. Area)	Avail. Fee (Other)
5/8	1	\$ 14,865.00	\$ 18,581.00
3/4	1.5	\$ 22,298.00	\$ 27,872.00
1	2.5	\$ 37,163.00	\$ 46,453.00
1.5	4.375	\$ 64,960.00	\$ 81,200.00
2	8	\$ 118,920.00	\$ 148,650.00
3	16	\$ 237,84.00	\$ 297,300.00
4	25	\$ 371,625.00	\$ 464,531.00
6	50	\$ 743,250.00	\$ 929,050.00

Greater than 6", Demand Ratio (AWWA M22) multiplied by fee for Demand Ratio 1.

Meter Size (Inches)	Demand Ratio	Avail. Fee (Corp. Limits or Annex. Area)	Avail. Fee (Other)
5/8	1	\$ 15,162	\$ 18,952
3/4	1.5	\$ 22,743	\$ 28,428
1	2.5	\$ 37,905	\$ 47,380
1.5	4.375	\$ 66,334	\$ 82,915
2	8	\$ 121,296	\$ 151,616
3	16	\$ 242,592	\$ 303,232
4	25	\$ 379,050	\$ 473,800
6	50	\$ 758,100	\$ 947,600

Greater than 6", Demand Ratio (AWWA M22) multiplied by fee for Demand Ratio 1.

IV. LATERAL OR CONNECTION FEES

Connection to the Town's water distribution and/or sewer collection system may be completed only if the following conditions are met:

- Party applying to connect to the system agrees to assume all costs associated with connection to the systems, including excavation, taps, vaults, traffic control, restoration (including pavement), testing, inspections, etc.
- Contractor responsible for completing work has been vetted and approved by the Town.

- Plans for the work, including restoration, have been approved by the Town.
- Required surety has been approved and provided to the Town.
- Required insurance coverage is in place and documentation thereof provided to the Town.
- Required permits have been issued by the Town, Virginia Department of Transportation, or other applicable agency.

V. INSPECTIONS

A. Sanitary Sewer Camera Service and Storm Sewer Camera Inspection Service

1. Mains and Laterals Over 4 Inches in Diameter

Mobilization Fee: \$300

Camera Fee: ~~\$2.50~~ 3.00 per linear foot

2. 4-Inch Laterals

Laterals Under 50 Feet in Length: \$150

Laterals 50 Feet in Length or Greater: \$150 plus ~~\$2.50~~ 3.00 per linear foot

B. Inspections

Town staff: \$65 per hour (1 hour minimum for any inspection then billed at ½ hr. increments thereafter)

Licensed professional engineer or approved third-party inspector: Cost

C. Hydrant Flow Tests

\$65 per hour (1 hour minimum for any test then billed at ½ hr. increments thereafter) plus cost of water (includes water and sewer charges)

Notes:

Cleaning of lines will be required prior to camera use: Line cleaning is the responsibility of the applicant. If lines are not clean and camera crew must remobilize later to perform the inspection, a second mobilization fee will be charged.

Hydrant flow tests: Hydrant flow tests must be scheduled with the Director of Public Works no less than three work days in advance of test. Contractor will supply gauges and will be responsible for recording results. Town personnel will operate hydrant.

VI. SIGNIFICANT INDUSTRIAL USER FEES

Sewer system discharge permit: \$500

VII. WATER METER TESTING

5/8" meter: \$100

All other meters: \$100 + cost

Note: Fee is refunded if meter is found to be over-registering.

VIII. HYDRANT METERS

Nonrefundable account establishment fee: \$50

Meter deposit: ~~\$1,200~~ **1,500 (deposit refunded upon return of undamaged meter)**

Note: Usage metered through hydrant meters will be billed for both water and sewer user fees.

IX. UNAUTHORIZED USE OF SERVICE

For unauthorized water withdrawals from fire hydrants or any other part of the Town water system, or when a customer willfully takes steps to reactivate service after service has been disconnected by the Town because of nonpayment of any charge owed to the Town, and the Town must take action to discontinue service again by removal of the meter or by any other necessary measures, a \$250 charge for unauthorized use of services will be imposed. This charge will be in addition to any other charge for water and sewer services owed to the Town, and in addition to any legal remedies the Town may pursue for unauthorized use of service.

Approved by Town Council on September 8, 2020. **EXPECTED on or about September 14, 2021.**

Utility Rate Study
Town of Berryville, Virginia
Utility Rate Study
Pennoni Associates, Inc., Winchester VA
July 2019



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1. Introduction

The Town of Berryville operates a water system to supply, treat, and distribute water for human consumption and 5*other uses and operates a wastewater system to collect and treat sewage. Town billing data for the period September 2017 through August 2018 would conclude there were an average 1,515 homes served water and 208 other water accounts during that period. Most of these same accounts are served both water and wastewater, but the Town reports that as of September 2018 there were 45 water-only accounts, including 20 residential, six commercial, and three industrial accounts inside the Town limits, with the remaining 16 water-only accounts being outside the Town limits including 12 residential, two commercial, and two institutional accounts. In order to continue to operate this system adequately and provide the level of service expected by these customers, the water and wastewater systems will need to maintain adequate financing.

In order to maintain adequate funding for daily operations, maintenance and renewal of assets, and meet the increasingly stringent regulatory requirements, the Town is undertaking an important study to forecast future service demands, perform an initial evaluation of its water and wastewater assets, review its financial condition, and provide options for water and wastewater rate setting to provide sufficient capital to maintain its assets and meet customer and regulatory requirements. This report summarizes the findings of this study.

According to the American Water Works Association of Denver, Colorado in a Manual of Practice for Developing Rates for Small Systems, several underlying principles are suggested:

- A. That water utilities provide sufficient revenue for annual operations and maintenance expenses, capital costs and debt service, and working capital and reserves. *This study addresses all these issues.*
- B. Water utilities should account for its funds separate from other governmental entity operations. *The Town has achieved this principle through establishing and maintaining a Water Fund and a Sewer Fund separate from the General Fund.*
- C. That water systems adopt a uniform system of accounts for accounting and management controls. *The Town has developed such a system.*
- D. Financial reporting should meet requirements of legislative, judicial, or regulatory bodies. *This requirement is audited annually by the Town through a Certified Public Accountant.*
- E. Water rate schedules should be designed to distribute the cost of water service equitably among each function and class of service. *This study and report follow this principle; where segregation of data for this purpose is not available, assumptions are used based on industry norms.*
- F. Water utilities should maintain asset records with sufficient information to monitor and manage the physical condition of infrastructure and should support planned and preventive maintenance programs and budgets adequate to maintain and rehabilitate/renew assets at levels of service consistent with good utility practice. *This study initiates a structure to provide asset listing and condition based upon basic data to include age, size, material specifications, and engineering judgment reflecting known maintenance history and past design work. The rate structure proposed by this study incorporates judgment on the future need to replace existing assets and is a starting point in identifying large financial impact where more detailed analyses beyond this study may be appropriate to continue to optimize costs of asset performance and reliability.*

Background on Water System

The Town supplies its water through an intake facility on the Shenandoah River which receives and screens river water and then pumps the untreated ("raw") water to the Berryville Water Treatment Facility. The Treatment Facility treats the water to excel beyond federal and state drinking water standards through a Neptune Microfloc package system built in 1984 that includes conventional filtration to remove particles, after which the water is disinfected and pumped through a high service pumping station to the Town's transmission and distribution system. The water supply, treatment, and pumping system is permitted by the Virginia Department of Health for a capacity of 864,000 gallons per day, and the water intake and pumping and water treatment facility can achieve that capacity. The high service pump station is limited to 754,000 gallons per day as a result of internal constraints, thereby this limitation becomes the "choking" point on how much treated water can be delivered into the distribution system.

From a review of Town water production records between 2013 and 2018, the monthly average daily water pumped into the distribution system varied from 261,000 gallons per day in April 2018 to 394,000 gallons per day in April 2014. For the period between September 2017 through August 2018, the annual average daily volume of water pumped to the distribution system was 325,000 gallons per day. During that same one-year period, billed consumption averaged 282,000 gallons per day. From this data one would conclude that 13.2% of the treated water pumped to the distribution system is not metered and billed, referred to in the industry as the non-revenue water rate. All water distribution systems have a component of non-revenue water which can be contributed from numerous sources, including water use from a fire hydrant, leaks from water system assets including water main breaks, water theft, and under-registration of water consumed by meters not accurately calibrated. The water industry sets a standard of striving for non-revenue water below 10%, and above 15% is a "flag" for the need of significant improvement. The Town of Berryville falls in an adequate range but can still strive to improve water accountability. A key place to start is accurate meter registration. It is noted the Town plans to replace the water meters in its system in 2022 and the performance of this action is favorably recommended in this study.

There are also expected water "losses" between the quantity of water filtered or purified and the quantity of water pumped into the distribution system. The largest uses in this category include essential backwashing of the water filters and clean "make-up" water for diluting chemicals, as well as other water used in the treatment process. Plant production records between September 2017 and August 2018 suggest that an average 10.5% of water treated is used within the treatment process, therefore, to pump 325,000 gallons per day into the distribution system, a total of 363,000 gallons per day is treated and filtered.

Based on operational records reported monthly to the Virginia Department of Health and the data distributed by the Town through its annual consumer confidence reports, its treated water is currently meeting all quality drinking water standards of federal and state regulations.

The water transmission and distribution systems consist of an interconnected network of water mains, most within public street rights-of-way, within two pressure zones, and include two elevated water tanks, one ground storage tank, and a booster pump station. The two pressure zones are identified as the 758 Zone and the 808 Zone, where 758 and 808 represent the static head elevations of the two zones in reference to mean sea level. Most of the water distribution system and service connections are on the 758 Zone, with the 808 Zone serving the northwest corner of the system near Route 7 West where the Town's natural ground elevations are highest. One elevated tank and one ground storage tank are located in the 758 Zone, and a second elevated tank serves to maintain water pressure in the 808 Zone as water demand in that zone fluctuates. All treated water at the water plant is pumped into the 758 Zone, a separately located booster pump station transfers water from the 758 Zone to the 808 Zone.

More detailed information on the water system assets is provided under the Evaluation of Assets chapter of this report.

Background on Wastewater System

The Town collects wastewater through a system of underground pipes sloped to allow flow by gravity to the wastewater treatment plant, supplemented by four wastewater pump stations that pump or lift sewage from isolated low points through a "force main" back into the gravity system.

The Berryville Wastewater Treatment Plant is a 700,000 gallons per day (monthly average) state-of-the art facility constructed in 2010 that consists of 4-Stage Bardenpho Bioreactor Basins and a Membrane Bioreactor for advanced nutrient removal to meet stringent nutrient discharge limits for Chesapeake Bay watersheds. The facility also includes a flow equalization tank of 0.7 million gallons to hold incoming peak sewer flows and allow the Bioreactors to operate optimally at a steady rate. Berryville is consistently meeting its stringent effluent limits and is a member of the Virginia Nutrient Credit Exchange Association whereby nutrient removal in excess of the facility's allocation can be sold on an exchange for a modest amount of revenue. Most importantly, this membership also allows the Town to purchase credits at the member rates should circumstances ever be necessary for the Town to maintain regulatory compliance.

Metered sales records from the Town between September 2017 and August 2018 indicate that an average 279,000 gallons of wastewater per day was registered for billing purposes.

2. Water and Wastewater Demand Projections

This chapter of the report summarizes the review of historical water and wastewater system demand, including treatment plant metering and reporting data, customer billing data, and reported growth trends. A long-term growth projection is provided in 5-, 10-, 15- and 20-year intervals based upon information provided by the Town of Berryville's Planning and Zoning Department. This chapter also discusses capacities of water and wastewater system components and the abilities of these capacities to meet growth needs.

This study reviewed development information from the Town's Department of Planning and Zoning, including recent development activity and forecasted ultimate growth in water and wastewater use through build-out of undeveloped land by zoning sub areas. Table 2-1 summarizes recent development activity, and Table 2-2 summarizes growth in demand by potential long-term build-out. Potential quantities in additional water demand from build-out in gallons per day are taken directly from the Town's Planning and Zoning projections and suggest the very long-term potential that the Town's metered water consumption could increase from the present 283,000 gallons per day annual average to up to as high as 816,000 gallons per day. This data also suggests that although current consumption from outside Town limits is a very small percentage, a significant amount of future growth to water and wastewater demand could come from property presently outside of the Town's corporate limits. The Town has a defined Annexation Area and may intend to annex much of this property at some future date, but to the extent future service increases beyond the Town limits, ratemaking may need to consider more closely the equity of charges to outside vs. inside customers.

Table 2-1

Recent Commercial Activity

Source: Town of Berryville Department of Planning and Zoning, October 15, 2018

Date of Approval	Planning Area	Development	Data from Capacity of Waterworks: 12 VAC 5-590-690	
			VDH Criteria	Capacity Added (gpd)
January 25, 2017	Sub Area 7	McDonald's (assumes 60 seats)	Restaurant - 50 gpd/seat	3,000
August 9, 2017	Sub Area 6	67-bed assisted care	Nursing Home - 200 gpd/bed	13,400
October 24, 2018	Sub Area 6A	120 age-income restricted apartments	Residential - 100 per unit	12,000
Total Capacity Added (gpd):				28,400

Note: Capacity is how VDH looks at what excess capacity the water system needs to assure service to a specific new project at the time of application. It may be conservative and therefore not reflective of long-term consumption and revenue.

Table 2-2

Future Activity - Long-Term Build-Out

Source: Town of Berryville Department of Planning and Zoning, October 15, 2018

	Total Build-Out Flow Added (gpd)	Build-Out Flow Added by User Class				Town Limits	Comments
		Residential Flow (gpd)	Commercial Flow (gpd)	Institutional Flow (gpd)	Industrial Flow (gpd)		
Sub Areas 1 and 2	189,700	170,730		18,970		Outside	Zoned to allow Institutional but forecasted likely mostly residential. Assume 90% Institutional; 10% Residential
Sub Area 6A	24,000	14,400		9,600		Inside	Mostly residential; includes 120 income restricted apartments; limited small commercial
Sub Areas 6 and 7	182,800		182,800			Inside	Business Commercial, includes grocery store and bank
Sub Area 12B	7,500		7,500			Outside	Business Park
Sub Area 19A	11,000		11,000			Inside	Business Park
Sub Area 27A	24,850	24,850				Partial	Residential - Hermitage V
Sub Area 9	47,600	47,600				Inside	Residential - Includes 22,050 gpd for Fellowship Square; also includes Shenandoah Crossing
Sub Areas 13, 14, 15	45,300	45,300				Outside	Identified by Town as likely Residential

Totals						
Inside Town Limits	277,800	74,400	193,800	9,600		-
Outside Town Limits	255,000	228,500	7,500	19,000		-
Totals	532,800	302,900	201,300	28,600		-

Historical growth trends and qualified population projections should be strongly considered in forecasting future growth in water and wastewater demands over a 20 to 30-year horizon. The best sources of information in Virginia on population trends and growth projections are the U. S. Census Bureau, Virginia Employment Commission and The Weldon Cooper Center at the University of Virginia. Table 2-3 summarizes historical population trends for both the Town of Berryville and Clarke County, from census information reported by *World Population Review*. Also shown is Weldon Cooper Center for Clarke County (The Weldon Cooper Center does not report data for Towns < 5,000 population). The data reflects “up and down” patterns of growth typical for actual historical data over the past 57 years, with higher growth in the 1980s and the 2000s. Recent growth averaged over several years fall into a range of 0.28% to 1.25% per year.

Table 2-3
Berryville and Clarke County Population

Source 1: *World Population Review: Reporting Claims Using U S Census Data and Census Estimates*

Source 2: *University of Virginia Weldon Cooper Center, Demographics Research Group (2017), Virginia Population Projections. Retrieved from https://demographics_coopercenter.org/virginia-population-projection*

Year	Population			Average Annual Growth		
	Town Population	County Population		Town	County	
	Source 1	Source 1	Source 2		Source 1	Source 2
1960			7,942			
1970			8,102			0.20%
1980			9,965			2.09%
1990	3,097	12,101	12,101			1.96%
2000	2,963	Not Provided	12,652	-0.44%		0.45%
2010	4,179	14,011	14,034	3.50%		1.04%
2011	4,222	14,187	14,211	1.03%	1.26%	1.26%
2012	4,237	14,242	14,276	0.36%	0.39%	0.46%
2013	4,246	14,250	14,148	0.21%	0.06%	-0.90%
2014	4,264	14,320	14,323	0.42%	0.49%	1.24%
2015	4,266	14,255	14,206	0.05%	-0.45%	-0.82%
2016	4,286	14,322	14,240	0.47%	0.47%	0.24%
2017	4,338	14,508	14,312	1.21%	1.30%	0.51%
Total 1990 to 2017				1.25%	0.67%	0.62%
Total 2000 to 2017				2.27%	Not Available	0.73%
Total 2010 to 2017				0.54%	0.50%	0.28%

Table 2-4 provides future population growth projections published by the Virginia Employment Commission and The Weldon Cooper Center for Clarke County (projections on Town of Berryville were not found within the data published by these agencies). The computation of average annual growth rates over periods of 20 to 30 years from these projections are highly consistent, varying between 0.42% per year to 0.47% per year. The Town of Berryville Planning and Zoning Department reports that in recent years growth within the Town's utility service area has been observed to be "slightly" higher than Clarke County. For the purpose of this rate study, it will be assumed that the growth of demand for water and wastewater within the Town's systems will be forecasted as 0.50% per year.

Table 2-4

Forecasted Growth Rate - Clarke County

Source 1: Town of Berryville Planning and Zoning, October 15, 2018,

Quoted from Clarke County Community Profile at Virginia Employment Commission

Source 2: University of Virginia Weldon Cooper Center, Demographics

Research Group (2017), Virginia Population Projections. Retrieved from

https://demographics_coopercenter.org/virginia-population-projection

	Population		Annual Average Growth Rate	
	Source 1	Source 2	Source 1	Source 2
2010	14,034	14,034		
2015		14,206		0.24%
2020	14,337		0.21%	
2025		14,801		0.41%
2030	15,266		0.63%	
2035		15,615		0.54%
2040	15,965		0.45%	
2045		16,315		0.44%

Average Rate 2010 - 2030	0.42%	
Average Rate 2010 - 2040	0.43%	
Average Rate 2015 - 2035		0.47%
Average Rate 2015 - 2045		0.46%

Table 2-5 uses this 0.50% per year average demand to forecast water and sewer metered customer consumption demands over the next 20 years. Current demand is segregated by customer class and represented as inside or outside the Town's limits based on customer billing data provided by the Town. Forecast growth is assigned to customer class and inside or outside Town limits based on a straight-line projection from current class of use toward build-out using the current classification of land use for future development provided by the Town's Planning and Zoning Department. As noted previously in this report, a greater amount of the future growth is projected on land that is presently outside Town limits.

Table 2-5
Forecasted Future Average Day Billed Consumption for Town of Berryville

Customer Class	Current Annual Average Daily Billed		Forecasted Annual Average Daily Billed Consumption (MGD)							
			2025		2030		2035		2040	
	Inside Town Limits	Outside Town Limits	Inside Town Limits	Currently Outside Town Limits	Inside Town Limits	Currently Outside Town Limits	Inside Town Limits	Currently Outside Town Limits	Inside Town Limits	Currently Outside Town Limits
Water Service										
SF Residential	0.169	0.002	0.170	0.005	0.171	0.008	0.172	0.011	0.173	0.014
MF Residential	0.015	0.000	0.015	0.000	0.015	0.001	0.016	0.001	0.016	0.002
Commercial	0.022	0.000	0.025	0.000	0.028	0.000	0.032	0.000	0.035	0.000
Institutional	0.031	0.013	0.031	0.013	0.031	0.014	0.031	0.014	0.032	0.014
Industrial	0.030	0.000	0.030	0.000	0.030	0.000	0.030	0.000	0.030	0.000
Totals	0.267	0.015	0.271	0.018	0.276	0.023	0.281	0.026	0.285	0.030
	0.282		0.289		0.299		0.307		0.316	
Wastewater Service										
SF Residential	0.167	0.000	0.168	0.003	0.169	0.006	0.170	0.009	0.171	0.012
MF Residential	0.015	0.000	0.015	0.000	0.015	0.001	0.016	0.001	0.016	0.002
Commercial	0.021	0.000	0.024	0.000	0.027	0.000	0.031	0.000	0.034	0.000
Institutional	0.032	0.014	0.032	0.014	0.032	0.015	0.032	0.015	0.033	0.015
Industrial	0.030	0.000	0.030	0.000	0.030	0.000	0.030	0.000	0.030	0.000
Totals	0.265	0.014	0.269	0.017	0.273	0.022	0.279	0.025	0.284	0.029
	0.279		0.286		0.295		0.304		0.313	

An important part of capital planning is an understanding if the capacity of the utility system can meet projected future demands. The projected 2040 average day customer metered consumption of 315,000 gallons per day for water and 313,000 gallons per day for wastewater are both well within the current capacities for the treatment facilities (864,000 gallons per day water treatment and 700,000 gallons per day wastewater treatment) and further provide adequate excess capacity to meet expected peak demands. The Town is presently updating its analysis of the full capacity of the water distribution system through a calibrated computer model and it is recommended the Town consider a similar updated analysis of its sewer collection system.

3. Evaluation of Assets

Water and wastewater utilities are capital intensive. Expensive underground pipelines, pumping stations, storage tanks, river intake facilities, and treatment facilities require significant funding for construction, operation and maintenance, and for adequate repair, renewal or replacement as facilities age. Without proper assets and asset care, the utility will fail to continuously provide a reliable level of service. Community citizens expect this high level of service to be maintained 24 hours per day, 7 days per week, and every day of the calendar year. Operation and maintenance should be planned, executed and documented, and a condition of the assets should be regularly assessed.

The Town of Berryville is to be commended for initiating an asset management program through this study to provide an initial assessment of the condition of the assets of the water and wastewater systems. The scope of this work includes relying upon a review of existing available information provided by the Town together with some engineering judgment from Pennoni's Senior Engineer who has performed previous inspection and design work for the Town. The scope of this study did not include a visual inspection of the assets or a detailed assessment. The review did include review of the Town's fixed asset data and available information regarding initial construction, material, age, and reported significant improvements made after initial construction. Data on underground water distribution and sewer collection system assets were obtained from the Town's water and wastewater data within the Clarke County GIS database. Expected service life was estimated from engineering judgment using experience within the water and wastewater industry based on basic types of material or design, understanding of the quality of manufacture at time of installation, maintenance history available, and any other known related factors. This study then provides a budget that assumes the full replacement of the asset once the estimated remaining life is complete. This evaluation is considered a useful guide to preparing an initial financial estimate to maintain the reliability of aging assets, but beyond this study it is recommended that a more detailed condition assessment be considered, particularly as assets approach the time of expected replacement, to confirm the appropriate actions that are optimal in the actual expenditure of funds. Sometimes full replacement is the optimal solution, whereas other times some significant repair or partial replacement that extends the life of the asset can be more cost-effective over the long-term. The optimal solution comes through later detailed assessment.

Water System

The assets of the Berryville water system generally function adequately to meet the system demand and level of service with limited interruptions. Small local interruptions are sometimes necessary to isolate small areas of the system for repair of water main breaks, but large-scale interruptions are minimal. Like many water systems across the United States, some of the water system assets are aging at or near the expected service life. Table 3-1 provides a 20-Year replacement schedule for water system assets estimated to reach the end of life within the next 20 years in their present condition. The assets in this table have significant above-ground structures, referred to as vertical assets. Table 3-2 provides a separate 20-Year replacement schedule for underground water main pipe and appurtenances referred to as horizontal assets. The combination of vertical and horizontal assets provides the complete fixed assets of the water system.

Tables 3-1 and 3-2 are summarized from an Excel spreadsheet with the summary listing only those assets expected to reach end of life within the next 20 years, based on available information. The larger spreadsheet provides a listing of all water system vertical and horizontal assets, along with estimated remaining service life, date of replacement, and estimated cost of replacement in 2019=\$. The spreadsheet is being provided separately in electronic form to the Town of Berryville, providing a way that these spreadsheets become a living document to be amended as further conditions are assessed and adjustment to the schedules are made.

Table 3-1
Vertical Assets of the Berryville Water System - 20-Year Replacement
Schedule

	Type of Asset	Estimated Replacement Year	Budgeted Replacement Cost (2019=\$)
Shenandoah River Intake	Equipment	2026	\$ 520,000
	Land	2026	\$ 50,000
Raw Water Pumping Station	Equipment	2026	\$ 340,000
Berryville Water Treatment Plant	Building	2026	\$ 2,500,000
	Equipment	2026	\$ 13,000,000
Finished Water Pumping Station	Equipment	2019	\$ 260,000
Booster Pump Station to Zone 808	Building	2032	\$ 250,000
	Equipment	2032	\$ 715,000
			\$ 17,635,000

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patterns for faster leak detection, better customer service, and better water system planning, and though they cost more initially they can lead to cost savings in the longer run.

Through a "budget" level review of water meter options it was concluded that \$400,000 is sufficient to cover the capital cost of replacing all water meters in the Town's system with meters performing an equal function to the present, however, \$600,000 would be a more appropriate budget if the Town intends to also contract the cost of installation. Option 1 in Table 3-2 summarizes this option.

Option 2 describes a "smart" meter option. In order to provide the capability for all new meters to transmit meter reading by an electronic signal, an additional \$350,000 to \$400,000 is recommended to be budgeted depending on whether the transmission is a fixed polling system that can read all meters nearly continuously, or transmission is to a mobile vehicle with local polling capability. With the further addition of software and personnel training and licensing to provide customer service and analytical capability, it would be suggested that a total budget of up to \$1,200,000 be considered.

Wastewater System

Similar to the water system assets, all the wastewater system assets have been identified on an Excel spreadsheet, that includes an estimated service life and replacement costs in 2019=\$. Table 3-3 summarizes vertical assets and Table 3-4 summarizes horizontal assets expected to reach end of life within 20 years. The Berryville Wastewater Treatment Plant is less than 10 years old and generally expected to be in very good condition, but the advanced filtering membranes are expected to be replaced every 10 years, at a pre-purchased cost of \$1,120,000 (2019=\$), and some plant process equipment will reach end of life within the next 20 years. Several horizontal assets, including aging concrete gravity sewer pipe, aging cast iron force main, and up to 275 older manholes are shown for replacement within 20 years. Total replacement cost for end life assets within 20 years is estimated to be \$11.3 million, or an average of near \$565,000 per year. This compares to a capital improvement investment by the Town in its FY 2018-19 budget of \$300,225, of which \$15,000 was funded by reserves.

Table 3-3
Vertical Assets of the Berryville Wastewater System - 20-Year Replacement
Schedule

	Type of Asset	Estimated Replacement Year	Budgeted Replacement Cost (2019=\$)
Lift Station 1	Building	2021	\$ 75,000
	Equipment		\$ 130,000
Lift Station 2	Building	2022	\$ 75,000
	Equipment		\$ 130,000
Lift Station 3	Equipment	2030	\$ 260,000
Lift Station 4	Equipment	2030	\$ 260,000
Lift Station 5	Equipment	2030	\$ 130,000
Lift Station 6	Equipment	2030	\$ 325,000
Berryville Wastewater Treatment Plant	Membranes	2023	\$ 1,120,000
	Equipment	2029	\$ 150,000
	Membranes	2033	\$ 1,120,000
	Equipment	2034	\$ 1,950,000
			\$ 5,725,000

Table 3-4

Horizontal Assets of the Berryville Wastewater System - 20-Year Replacement Schedule

	Diameter (in)	Total Length (linear feet) or Quantity (each)	Budgeted Replacement Year	Budgeted Replacement Cost (2019-\$)	Comments
PVC Sewer Gravity Main	6	1000	2025	\$ 124,000	To be replaced with 8" PVC
Concrete Gravity Sewer Main	4	500	2026	\$ 62,000	To be replaced with 8" PVC
	8	15000	2026	\$ 1,853,000	To be replaced with 8" PVC
		4000	2026	\$ 494,000	To be replaced with 8" PVC
		3000	2026	\$ 371,000	To be replaced with 8" PVC
		1000	2026	\$ 124,000	To be replaced with 8" PVC
Concrete Gravity Sewer Main (Lined)	4	1000	2035	\$ 124,000	To be replaced with 8" PVC
	8	3000	2026	\$ 371,000	To be replaced with 8" PVC
		2000	2026	\$ 124,000	To be replaced with 8" PVC
		2000	2026	\$ 247,000	To be replaced with 8" PVC
		1000	2035	\$ 247,000	To be replaced with 8" PVC
Sanitary Sewer Manholes		225	2026	\$ 900,000	
		50	2035	\$ 200,000	
Cast Iron Sanitary Sewer Force Main	8	2500	2035	\$ 334,000	
				\$ 5,575,000	

4. Revenue Requirements and Future Rates

A very important component of utility rate setting is to understand the operating and capital renewal goals of the Town for its utility systems, and perform the following: (1) analyze existing budget and audit data to thoroughly understand existing costs; (2) develop revenues and costs under existing rates for a test year or normalized year valued as typical and average for the Town without anomalies such as weather that may skew costs or revenues during unusual periods; then (3) use the test year to predict future financial performance under the existing rates and establish the amount of the need for additional revenue. A further part of developing utility rates is public acceptance, which in part can be understood by comparing the Town's existing rates to nearby communities similar in characteristics to the Town. This chapter of the report begins with a comparison of rates with other communities, addresses water availability fees, then presents the results of the financial review and quantifies the need for additional revenue to meet the Town's objectives. These objectives include implementing a prudent replacement program for assets at the end of service life as addressed in Chapter 3.

Comparison of Rates with Other Communities

Utility rates must generate sufficient financial capital to maintain water and sewer system assets to a reliable level of performance that meets community expectations. To the extent consistent with this goal, the rates themselves should attempt to be acceptable to the community and should be fair and reasonable. An important part of rate consideration is to make comparisons with the utility rates and rate structure of other nearby communities that demographically and geographically similar to the Town of Berryville. For comparison purposes, the following eight communities were selected for this study --- In Virginia: Frederick County Sanitation Authority (Frederick Water); Town of Front Royal; Town of Luray; Town of Purcellville; Town of Round Hill; and City of Winchester. In West Virginia: Charles Town Utility Board and City of Martinsburg.

Similar to the current Town of Berryville rates, each of the eight communities has a minimum charge for a customer account per billing cycle with a consumption allowance, and a volumetric charge for consumption above the minimum allowance. The Town of Round Hill has a flat volumetric charge that remains the same for each additional 1,000 gallons of consumption, like Berryville, but the other seven communities have tiered volumetric rates where the rate per 1,000 gallons changes as consumption moves from one block to the next block. Four of the tiered rates are declining, and three are inclining. Four of the eight communities charge higher rates to customers outside of the corporate limits of the city or town providing the service.

All eight communities, like Berryville, require a system development charge (sometimes called "availability fee", "capital cost fee", or "facility fee") for new connections to the system, to help defray the costs of providing the higher system capacity required for the new service. Seven of the eight communities determine the fee for the new connection based upon the capacity of the water meter needed for the service, like Berryville. Charles Town uses a schedule listing types of facilities (e.g., restaurant, office building, etc.) and size of the development to determine the fee. System Development Charges (Town of Berryville calls "Availability Fee") are often based on water meter size and AWWA declares this an acceptable method. Some would argue that a schedule of facilities is more accurate, but implementing that approach comes with higher administrative costs and is rarely used by smaller communities.

Since fee structures are designed differently, the best means to compare the cost of water and sewer service between multiple communities is by selecting specific values of monthly metered consumption and comparing the cost in each community for that particular volume of use. Table 4-1, and Figures 4-1 and 4-2 compare the Town of Berryville to each of the eight communities for monthly water and sewer charges for a metered consumption of 3,000 gallons per month, 10,000 gallons per month, and 20,000 gallons per month.

Table 4-1
Comparison of Water and Sewer Charges for Selected Monthly Consumption
Based on Rate Schedules Published on Internet as of February 2019

	3,000 Gallons Per Month			10,000 Gallons Per Month			20,000 Gallons Per Month		
	Water	Sewer	Total	Water	Sewer	Total	Water	Sewer	Total
Town of Berryville VA	\$ 25.20	\$ 51.00	\$ 76.20	\$ 84.00	\$ 170.00	\$ 254.00	\$ 168.00	\$ 340.00	\$ 508.00
Charles Town Utility Board WV	30.99	38.26	69.25	103.30	99.79	203.09	191.20	187.69	378.89
Frederick Water VA	30.41	51.64	82.05	60.65	87.83	148.48	103.85	139.53	243.38
Town of Front Royal VA	29.76	48.51	78.27	89.33	145.88	235.21	174.43	284.98	459.41
Town of Luray VA	35.67	47.24	82.91	72.07	96.03	168.10	125.07	167.13	292.20
City of Martinsburg WV	23.32	30.13	53.45	73.16	94.46	167.62	144.36	186.36	330.72
Town of Purcellville VA	34.41	61.47	95.88	90.50	169.90	260.40	204.40	324.80	529.20
Town of Round Hill VA	24.90	28.83	53.73	83.00	96.10	179.10	166.00	192.20	358.20
City of Winchester VA	45.58	34.89	80.47	90.24	116.30	206.54	154.04	232.60	386.64

Figure 4-1: Comparison of Water Charges/Month (\$)

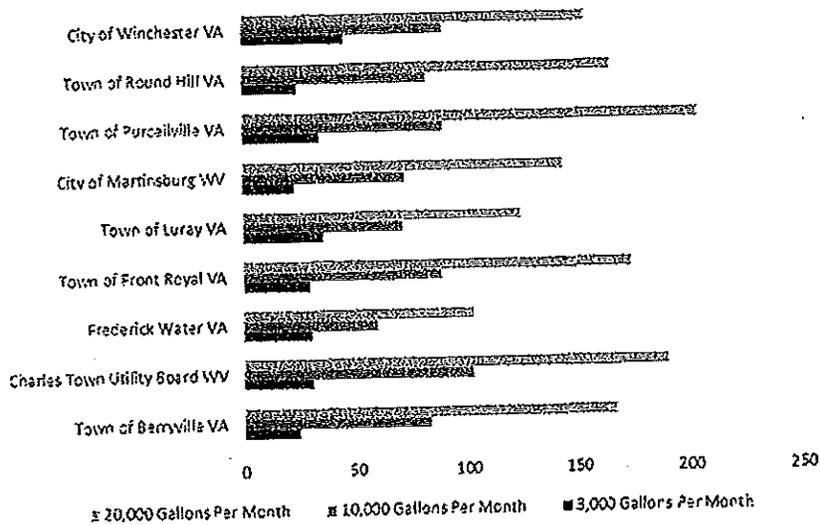
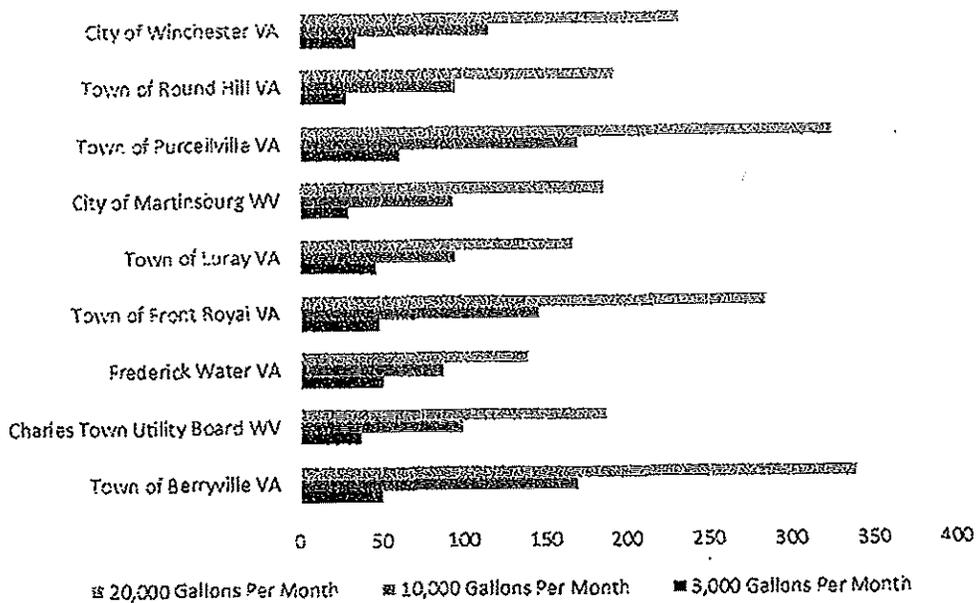


Figure 4-2: Comparison of Sewer Charges/Month (\$)



At a consumption of 3,000 gallons per month, which is slightly above the median residential water bill, the Town of Berryville has the third lowest water rates and the third highest sewer rates of the nine communities shown in Table 4-1. The total water and sewer bill at 3,000 gallons per month use is fourth of nine from the lowest, or near the median. At a consumption of 10,000 gallons per month, Berryville's water rates are the fourth highest of nine, and the sewer rates are the highest, with the total bill the second highest. At 20,000 gallons per month, Berryville remains near the median for water service and highest for sewer service, and second highest overall. This comparison would suggest that the Town of Berryville has very competitive rates at 3,000 gallons per month consumption but becomes less competitive based on the higher sewer charges for customers whose use approaches or exceeds 10,000 gallons per month.

Table 4-2 shows the distribution of water consumption by number of accounts within each major customer class for the Town of Berryville, from billing data averaged over a one-year period between September 2017 and August 2018. Customer classes shown include Residential both within and outside the Town limits, Commercial both within and outside the Town limits, and Industrial. Within this table Multi-Family and Institutional customers are shown as a part of the Commercial class. Within the one-year period as defined above, all Industrial customers were inside the Town limits. Most of the Town customers are inside residential. Looking more closely at the Residential – Inside Town class, 60% of these customers use 3,000 gallons per month or less, and 90% use 6,000 customers or less. So, while the data suggests the Town's rates become less competitive at consumption of 10,000 gallons per month and higher, these higher rates affect only a small number of the highest consumers of water and sewer service.

Table 4-2

Town of Berryville - Distribution of Water Consumption by Account for Typical Month

Source: Town of Berryville Utility Billing System - Averaged from Meter Reading and Billing Data from September 2017 through September 2018

Metered Consumption (1000 gallons)	Residential - Inside Town Limits		Residential - Outside Town Limits		Commercial ¹ - Inside Town Limits		Commercial - Outside Town Limits		Industrial ²	
	No. of Accounts	Percent of Accounts Consuming Less Than or Equal to	No. of Accounts	Percent of Accounts Consuming Less Than or Equal to	No. of Accounts	Percent of Accounts Consuming Less Than or Equal to	No. of Accounts	Percent of Accounts Consuming Less Than or Equal to	No. of Accounts	Percent of Accounts Consuming Less Than or Equal to
-	92	6.1%	1	7.7%	39	21.4%	2	11.8%	3	25.0%
1	209	20.0%	3	30.8%	38	42.3%	0	11.8%	2	41.7%
2	312	40.7%	3	53.8%	19	52.7%	1	17.6%	1	50.0%
3	296	60.4%	2	69.2%	13	59.9%	1	23.5%	1	58.3%
4	223	75.2%	2	84.6%	9	64.8%	1	29.4%	0	58.3%
5	147	84.9%	1	92.3%	7	68.7%	1	35.3%	0	58.3%
6	89	90.8%	0	92.3%	6	72.0%	1	41.2%	1	66.7%
7	53	94.4%	0	92.3%	6	75.3%	1	47.1%	0	66.7%
8	34	96.6%	0	92.3%	3	76.9%	1	52.9%	0	66.7%
9	20	97.9%	0	92.3%	4	79.1%	1	58.8%	0	66.7%
10	12	98.7%	0	92.3%	3	80.8%	1	64.7%	0	66.7%
11 - 20	16	99.8%	1	100.0%	16	89.6%	2	76.5%	1	75.0%
21 - 50	2	99.9%	0	100.0%	10	95.1%	2	88.2%	1	83.3%
51 - 100	1	100.0%	0	100.0%	5	97.8%	1	94.1%	0	83.3%
Greater Than 100	0	100.0%	0	100.0%	4	100.0%	1	100.0%	2	100.0%

Notes:

¹For purposes of this table, accounts in billing system identified as Multi-Family and Institutional are grouped with Commercial.

²There were no industrial accounts in the billing system identified as Outside Town Limits

With respect to Availability Fees, the Town of Berryville is at the median by comparison with the other eight communities for the water utility (for an equivalent residential unit four communities charge higher fees and four charge lower fees) but is the highest of all nine communities with respect to wastewater fees. Table 4-3 depicts this comparison.

Table 4-3

Comparison of System Development Charges¹ (Availability Fee) for New Service Connection Equivalent to One Residential Unit (5/8-inch Water Meter)

	Water	Sewer	Total
Town of Berryville VA	\$ 5,250.00	\$ 22,750.00	\$ 28,000.00
Charles Town Utility Board WV	2,576.00	1,127.00	3,703.00
Frederick Water VA	14,115.00	2,461.00	16,576.00
Town of Front Royal VA	4,340.00	9,750.00	14,090.00
Town of Luray VA	3,320.00	5,940.00	9,260.00
City of Martinsburg WV	1,301.00	2,260.00	3,561.00
Town of Purcellville VA	25,754.00	21,600.00	47,354.00
Town of Round Hill VA	8,197.23	12,676.23	20,873.46
City of Winchester VA	5,300.00	7,200.00	12,500.00

¹Separate Fees for cost of service lateral and meter/meter box not included

When considering the future need to raise additional revenue, the Town should also consider what actions other communities are likely to take. One of the eight communities surveyed, the City of Winchester, has published its proposed rates through FY 2022-23. Winchester proposed annual increases over the next four years compounding to a total of 34%, or an average of 7.5% per year. Studies published nationally by organizations such as the American Water Works Association suggest that water and sewer rates are increasing an average of about 4% per year nationally, in response to new regulations, growth, and aging infrastructure.

Water System Availability Fees

The Town's Availability Fees, referenced generically by the American Water Works Associations (AWWA) as System Development Charges, represent the costs of providing the additional systemwide capacity to serve new customers. The laws of the Commonwealth of Virginia permit these charges but require that the charges are "fair and reasonable". AWWA provides discussion in its manual of practice on Principles of Water Rates, Fees, and Charges that offer additional guidance toward what the industry considers fair and reasonable, but also defers water utilities specifically to its legal counsel regarding specific questions of legal interpretation. The proposal offered in this report regarding Availability Fees follows guidance in the AWWA manual but it is also strongly recommended that the Town review this proposal with the Town Attorney for an opinion on the appropriate application of the law to the specific and unique circumstances of the Town's water and wastewater systems before any action is taken regarding the proposal herein or any other proposal.

AWWA suggests there should be a rational nexus between Availability Fees and the reasonable expected added costs to a particular water system to provide expanded capacity for new service to its system. AWWA goes on to list several factors to consider in providing that a "proportionate share be borne by new development." Three methods are defined: a "buy-in" method, an incremental cost method, and a combined cost method. The "buy-in" method is the best and fairest approach for a community like Berryville that has sufficient capacity already provided by existing customers for capacity expansion over a reasonable period, the incremental method works best for a utility at or near existing capacity and facing the need for a capital program that would not be necessary except to expand capacity, and the combined method is best for communities where some functions of its system have extra capacity and other functions need capital improvements to expand.

From the review of assets summarized in the previous chapter, the Town of Berryville has available capacity in all major functional aspects to provide additional capacity to and beyond 2040. From Table 2-5, the future forecast for annual average daily billed water consumption for the Town in 2040 is 0.315 million gallons per day, or 315,000 gallons per day. The existing water system for the Town of Berryville has a river intake and water treatment capacity of 864,000 gallons per day and a raw water pumping station capacity of 786,000 gallons per day, and a treatment water pumping station capacity of 754,000 gallons per day. Though the capacity of pumping and treatment facilities must also consider non-revenue water uses, water plant uses, and peak daily capacity needs, as shown in Table 4-4, the existing system capacities remain sufficient to provide future needs. It is also understood that the water distribution system has excess capacity, which should be confirmed by updated calibration and analysis of water system modeling, to confirm the specific capacity available.

Table 4-4
Capacity of Water System Functions

Demand Factors:

<i>Assumed Losses in Raw Water Transmission</i>	2%
<i>Water Supplied and Treated but Not Pumped to Transmission (%)</i>	10.5%
<i>Water Supplied and Treated but Not Metered to Customer (%)</i>	13.3%
<i>Maximum Day to Average Day Ratio</i>	1.6
<i>Annual Growth Rate</i>	0.5%

	Capacity (MGD)	Demand Factor	Average Current Monthly Metered Consumption (MGD)	Capacity Used by Existing Customers (MGD)	Capacity Available for New Customers (MGD)	% of Capacity Available	Current Capacity Forecasted Available in Future Years Based Upon 0.5% Growth Per Year			
							2030	2040	2050	2060
Water Supply	0.786	2.04		0.576	0.210	26.7%	22.6%	18.6%	14.5%	10.1%
Water Treatment	0.864	2.00		0.565	0.299	34.6%	30.9%	27.4%	23.7%	19.8%
Water Transmission Pumping	0.754	1.81	0.282	0.511	0.243	32.2%	28.4%	24.7%	20.9%	16.9%

Given the Town of Berryville system has reasonable excess capacity and is not planning capital improvements for increasing its existing capacity except for upsizing on three minor projects replacing water distribution mains, the "buy-in" method is the proper method for looking at Availability Fees. This study constructs that method though the listing of assets summarized in chapter 3 of this report and valuing them based on the current replacement cost. AWWA accepts this method and refers to it as "Replacement Cost New".

The value obtained from this method is then divided by the number of equivalent residential units (ERUs) in the system to determine a cost per ERU. The Town's billing system separates customers into classes, and by evaluating the single-family residential class through billing data between September 2017 through August 2018, which was an average and typical year, average consumption per account was 113 gallons per day inside the Town limits and 123 gallons per day outside the Town limits. As stated previously, water system assets also need to account for peaking factors and unmetered water in developing system capacity to serve existing and new customers, and using measured or reasonable assumptions for these added factors, it is reasonable to conclude that the water and wastewater systems must provide a capacity of 230 gallons per day for each single-family residence, which is also a 5/8-inch meter connection as an equivalent residential unit. Based on current system capacity, we would conclude that the utility systems have 3,320 capacity units at a 5/8-inch meter size, and the estimated cost of providing system capacity per equivalent residential unit (a 5/8-inch meter) is approximately \$12,100 for the water system and \$13,100 for the wastewater system. The Town should consider its policy objectives, including comparative rates with other communities, and consult with legal advice, in considering if the Town desires to amend its current fees by the amount identified above.

This study also evaluated the water consumption of Multiple-Family residential units as compared to Single-Family residential units, based on data from the Town regarding the number of Multiple-Family units within each billed account. It was concluded from that evaluation that with respect to the Town of Berryville, consumption per residential unit for Multi-Family is about 80% of Single-Family. The Town's current Availability Fee Schedule uses 90%, and it is recommended that the schedule be adjusted to 80%.

In the event the Town wishes to adjust its Availability Fees by the adjustment calculated above, the current and proposed fees for the 5/8-inch meter are shown in Table 4-5. The fees for other meter sizes, like the Town's current Availability Fee structure, can be derived by applying the same multiplication factors as are used for the current fees.

Table 4-5
Existing and Proposed Availability Fees (Meter Charges and Administrative Fees Not Included)

Water Meter Size	Water		Sewer	
	Current Availability Fee	Proposed Availability Fee	Current Availability Fee	Proposed Availability Fee
Single Family Residential: 5/8-inch	\$ 5,250	\$ 12,100	\$ 22,750	\$ 13,100
Townhouse/Duplex: 5/8-inch	5,250	12,100	22,750	13,100
Multi-Family Per Unit	4,725	9,700	20,475	10,500
3/4-inch	7,825	18,000	34,125	20,000
1-inch	13,125	30,300	56,875	33,000
1-1/2-inch	22,970	52,900	99,535	57,000
2-inch	42,000	96,800	182,000	105,000
3-inch	84,000	193,600	364,000	210,000
4-inch	131,250	302,500	568,750	328,000
6-inch	262,500	605,000	1,137,500	655,000

Development of Multiple Year Flow of Funds and Determination of Revenue Requirements

The two core pieces of the scope of this rate study are developing the asset tables with condition assessment and a replacement schedule (summarized in Chapter 3) and the determination of future revenue requirements to maintain operations and implement the asset renewal. The first step in determining future revenue requirements is to determine the revenues and expenses under current rates and current consumption for a typical or average fiscal year, which AWWA refers as a "test year". From the test year, escalating factors are then used to account for future growth in consumption from new connections, expected changes over time in consumption patterns, inflation, salary increases, and other anticipating factors that will increase costs or revenues (at current rates).

In order to develop a test year, this study reviewed six adopted budgets provided by the Town for the Water Fund and Sewer Fund from FY 2014 through FY 2019 at the detailed line-item level, identifying trends as well as anomalies, in order to assess a reasonable test year value. Where expenses or revenues were showing a reasonable and progressive upward trend, more value was placed in the final year as indicative of a test year, but where a line-item showed a haphazard or declining trend, and there was no other explanation of the changes over time, six-year averages were identified for the test year.

The review also included operating and non-operating revenues and operating expenses by line-items reported in the audited financial statements for FY 2013 through FY 2017 (the audit for FY 2018 was not available), and trends from the audited statements were compared to the budgeted forecast for the same line-item or function. In some cases, the audited actual revenues and expenses closely tracked the budgeted amounts, but in many cases audited actual expenses were 10% to 20% below the budgeted amounts. This phenomenon is not unusual, as it is natural in the day-to-day world to manage operations with the overall budget serving as a "not-to-exceed" amount except under extraordinary circumstances. For purposes of developing a test year, audited trends were matched closely with budgeted trends, and the test year was adjusted accordingly, as it is desired that the test year be as true an indication of actual expenditures as is feasible as a base in forecasting future financial performance. Finally, expenses were placed into broader categories. The test year was developed on a cash basis, typical of rate studies performed for most local government agencies.

Table 4-6 shows the test year identified for both the water fund and the sewer (wastewater) fund, in 2019=\$.

Table 4-6
Town of Berryville - Test Year for Revenue and Expense Forecasting

	Water System	Wastewater System
<u>Operating Revenues</u>		
Water Service at Existing Rates	850,000	-
Wastewater Service at Existing Rates	-	1,660,000
Other Fees and Charges	33,000	2,000
<i>Total Operating Revenues</i>	883,000	1,662,000
<u>Operating Expenses</u>		
Wages and Fringe Benefits	(344,000)	(522,000)
Power	(58,000)	(135,000)
Chemicals	(40,000)	(90,000)
Repairs and Maintenance	(136,000)	(141,000)
Other Materials and Supplies	(37,000)	(22,000)
Other Purchases	(56,000)	(84,000)
<i>Total Operating Expenses</i>	(671,000)	(994,000)
<u>Non-Operating Revenues</u>		
Interest on Investments	6,000	9,000
Availability Fees (Existing Rates)	33,000	143,000
Grants and Other Funds	-	-
<i>Non-Operating Revenues</i>	39,000	152,000

With the test year in place, forecasts for revenues (at existing rates) and expenses for future years were developed using the following escalation factors:

- Growth in metered sales = 0.5% per year;
- Increases in salaries and benefits = 3% per year
- Increases in other expenses = 2% per year, except that expenses varying with meter sales (chemicals and electricity) reflect both the 2% per unit cost increase and the 0.5% volume increase = 2.5% per year
- When new debt is incurred it is assumed the terms of a new loan will be 30 years at an interest rate of 4% with uniform annual principle and interest payments

Table 4-7 shows a five-year forecast for the water system as a flow of funds using the test year as a base with the escalation factors above. For capital outlay or contributions, the existing Town of Berryville 2018-23 Capital Improvements Program (CIP) adopted by the Town Council in 2018 was used. As reflected by that CIP, an issuance of new debt with a principal of \$1.75 million is shown in fiscal year 2022.

Table 4-7
Water System Current Year Plus Five-Year Flow of Funds with Existing Capital Improvement Plan at Existing Rates

	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Operating Revenues						
Water Service at Existing Rates	850,000	854,000	858,000	862,000	866,000	870,000
Other Fees and Charges	33,000	33,000	33,000	33,000	33,000	33,000
Total Operating Revenues	883,000	887,000	891,000	895,000	899,000	903,000
Operating Expenses						
Wages and Fringe Benefits	(344,000)	(354,000)	(365,000)	(376,000)	(387,000)	(399,000)
Power	(58,000)	(59,000)	(60,000)	(62,000)	(64,000)	(66,000)
Chemicals	(40,000)	(41,000)	(42,000)	(43,000)	(44,000)	(45,000)
Repairs and Maintenance	(136,000)	(139,000)	(142,000)	(145,000)	(148,000)	(151,000)
Other Materials and Supplies	(37,000)	(38,000)	(39,000)	(40,000)	(41,000)	(42,000)
Other Purchases	(56,000)	(57,000)	(58,000)	(59,000)	(60,000)	(61,000)
Total Operating Expenses	(671,000)	(688,000)	(706,000)	(725,000)	(744,000)	(764,000)
Net Operating Revenue	212,000	199,000	185,000	170,000	155,000	139,000
Non-Operating Revenues						
Interest on Investments	6,000	6,000	6,000	6,000	6,000	6,000
Availability Fees (Existing Rates)	33,000	37,000	37,000	37,000	37,000	37,000
Grants and Other Funds	-	-	-	-	-	-
Non-Operating Revenues	39,000	43,000	43,000	43,000	43,000	43,000
Total Revenue Minus Operating Expenses (Net Revenue)	251,000	242,000	228,000	213,000	198,000	182,000
Debt Service						
Payment on Outstanding Bonds	-	-	-	-	-	-
Payment on Proposed Bonds	-	-	-	(35,000)	(129,000)	(129,000)
Total Debt Service	-	-	-	(35,000)	(129,000)	(129,000)
Debt Service Coverage (Net Revenue/Total Debt Service) <i>(Minimum 1.5 Recommended)</i>	NA	NA	NA	6.1	1.5	1.4
Existing CIP Contribution to Capital Expense	(501,000)	(215,000)	(200,000)	(1,750,000)	(120,000)	-
Sale of Bonds	-	-	-	1,750,000	-	-

The end of year balance shows a deficit for 2019 (expected and planned as set aside reserves were programmed for some capital expenses) and a small deficit for 2023, with small surpluses in the other years. Overall, through the end of fiscal year 2024, forecasted revenues fall \$15,000 short of meeting forecasted expenses, which is well below 1% of the total expenses for the period. Only one need is identified which would require further action. In 2024, two years following the forecasted sale of \$1.75 million in new debt, the debt service coverage, which is a ratio of net revenues to debt expenses, falls to 1.4, slightly below the 1.5 minimum recommended as a good financial practice. The coverage ratio could be corrected by an increase in water rates in 2024 by 2%, which would also correct the \$15,000 overall deficit for the 2019-2024 period.

Table 4-8 provided a similar analysis for the wastewater system. Payments on an existing VRA Loan for the new wastewater treatment plant are shown in this table, but no new debt was programmed into the adopted CIP through 2023. This forecast shows one year in deficit, but all other years in surplus, with an overall surplus for the period of \$42,000.

Table 4-8
Wastewater System Current Year Plus Five-Year Flow of Funds with Existing Capital Improvement Plan at Existing Rates

	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Operating Revenues						
Wastewater Service at Existing Rates	1,660,000	1,668,000	1,676,000	1,684,000	1,692,000	1,700,000
Other Fees and Charges	2,000	2,000	2,000	2,000	2,000	2,000
Total Operating Revenues	1,662,000	1,670,000	1,678,000	1,686,000	1,694,000	1,702,000
Operating Expenses						
Wages and Fringe Benefits	(522,000)	(538,000)	(554,000)	(571,000)	(588,000)	(606,000)
Power	(135,000)	(138,000)	(141,000)	(145,000)	(149,000)	(153,000)
Chemicals	(90,000)	(92,000)	(94,000)	(96,000)	(98,000)	(100,000)
Repairs and Maintenance	(141,000)	(144,000)	(147,000)	(150,000)	(153,000)	(156,000)
Other Materials and Supplies	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)	(22,000)
Other Purchases	(84,000)	(86,000)	(88,000)	(90,000)	(92,000)	(94,000)
Total Operating Expenses	(994,000)	(1,020,000)	(1,046,000)	(1,074,000)	(1,102,000)	(1,131,000)
Net Operating Revenue	668,000	650,000	632,000	612,000	592,000	571,000
Non-Operating Revenues						
Interest on Investments	9,000	9,000	9,000	9,000	9,000	9,000
Availability Fees (Existing Rates)	143,000	159,000	159,000	159,000	159,000	159,000
Grants and Other Funds	-	-	-	-	-	-
Non-Operating Revenues	152,000	168,000	168,000	168,000	168,000	168,000
Total Revenue Minus Operating Expenses (Net Revenue)	820,000	818,000	800,000	780,000	760,000	739,000
Debt Service						
Payment on Outstanding Bonds	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)
Payment on Proposed Bonds	-	-	-	-	-	-
Total Debt Service	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)
Debt Service Coverage (Net Revenue/Total Debt Service) <i>(Minimum 1.5 Recommended)</i>	1.7	1.7	1.7	1.7	1.6	1.6
Existing CIP Contribution to Capital Expense	(300,000)	(255,000)	(240,000)	(810,000)	(250,000)	-
End of Year Balance (Surplus/Deficit)	50,000	93,000	90,000	(500,000)	40,000	269,000

The overall financial performance in Tables 4-7 and 4-8 looks good, but the existing CIP behind this performance does not include the asset replacement program developed in Chapter 3 of this report. The pathway portrayed in these two tables would continue to postpone the renewal of aging assets, which would ultimately lead to a failure of assets, including critical assets that may result in significant consequences to public health, the environment, or interruptions in metered sales and financial performance. In short, though appealing in the short-term, the performance shown in Tables 4-7 and 4-8 is not sustainable in the long-term. The Town recognized this shortfall in requesting that an evaluation of assets be conducted as a part of this study.

Tables 4-9 and 4-10 produce a similar multi-year view of water system financial performance but is different from Table 4-7 in reflecting the asset capital replacement program from Chapter 3 as the Capital Improvement Program instead of the currently adopted one. An additional escalation factor was added: the asset replacement tables in Chapter 3 provide estimates for all projects in 2019=\$, these estimates are escalated in Tables 4-9 and 4-10 by 2% per year for every year

after 2019. Further, inasmuch as the asset replacement program shows a large expenditure in 2026 which would require the building of additional financial reserves in earlier years, Tables 4-9 and 4-10 are extended to forecast performance through 2027. A line is added to Operating Revenues to identify additional revenue to be derived by increasing water rates, and a line at the bottom of the Tables shows the increase as a percentage of the rates in place before each increase. The objective in these tables were to deliver the asset replacement program developed in Chapter 3 for all years through 2027, maintain uniform annual percentage increases of water rate revenue optimized to produce the lowest percentage increase that maintains positive reserves and maintains adequate debt coverage (ratio = 1.5 or greater). In order to achieve each of those objectives, an iterative process ensued to determine the optimal balance of capital reserves and bond funds to be used to meet the large capital expenditures forecasted in 2026. The 2026 expenditures include replacement of the water treatment plant, raw water pumping station, and the intake on the Shenandoah River.

To achieve the entire asset replacement program, significant uniform annual rate increases are required. Table 4-9 is based upon Option 1 for water meter replacements, budgeted at \$600,000 in FY 2022 using available water capital reserves, and Table 4-10 is based upon Option 2 for water meter replacements, upgrading to "Smart Meters" in FY 2022 at a budget of \$1,200,000 using debt financing. Table 4-9 concludes that annual water revenue increases of 9.6% are required through 2027, whereas in Table 4-10 annual water revenue increases of 10.1% are required.

Table 4-11 produces a forecast for the wastewater system using the asset replacement schedule, which also shows bond funding for a significant capital expenditure programmed for 2026. The 2026 wastewater expenditures are shown for replacement of end-of-life concrete sewer mains, cast iron force mains, and aging sanitary sewer manholes. The wastewater treatment plant is relatively new and does not require significant capital replacement, other than the anticipated replacement of tertiary membranes which have already been factored into the Town's maintenance and collection of financial reserves. The uniform annual rate increase for sewer is 2.4%.

Separate from this report, the Town of Berryville will receive the actual Excel spreadsheets that include the data in Tables 4-9 through 4-11, allowing the Town to make further assumptions and look at multiple "what-if" scenarios.

For a Town customer at the 60th percentile using 3,000 gallons per month, the current water and sewer bill would equal \$76.20 per month. If increases of 10.1% for water and 2.4% for wastewater were adopted for one year, assuming consumption remains unchanged, the total bill would increase to \$79.98, or an additional 5.0% overall. If the same percentage increases were adopted in a second year, the overall bill would increase to \$84.03, or 5.0%. In summary, the impact on the total bill would be about 5% per year.

Table 4-9
Water System Flow of Funds - Asset Replacement Plan Option 1 with Equal Annual Water Rate Increase

	2019	2020	2021	2022	2023	2024	2025	2026	2027
Operating Revenues									
Water Service at Existing Rates	850,000	854,000	858,000	862,000	866,000	870,000	874,000	878,000	882,000
Water Service from Increased Rates	-	82,000	173,000	274,000	385,000	508,000	644,000	794,000	960,000
Other Fees and Charges	33,000	33,000	33,000	33,000	33,000	33,000	33,000	33,000	33,000
Total Operating Revenues	883,000	969,000	1,064,000	1,169,000	1,284,000	1,411,000	1,551,000	1,705,000	1,875,000
Operating Expenses									
Wages and Fringe Benefits	(344,000)	(354,000)	(365,000)	(376,000)	(387,000)	(399,000)	(411,000)	(423,000)	(436,000)
Power	(58,000)	(59,000)	(60,000)	(61,000)	(62,000)	(63,000)	(64,000)	(65,000)	(66,000)
Chemicals	(40,000)	(41,000)	(42,000)	(43,000)	(44,000)	(45,000)	(46,000)	(47,000)	(48,000)
Repairs and Maintenance	(136,000)	(139,000)	(142,000)	(145,000)	(148,000)	(151,000)	(154,000)	(157,000)	(160,000)
Other Materials and Supplies	(37,000)	(38,000)	(39,000)	(40,000)	(41,000)	(42,000)	(43,000)	(44,000)	(45,000)
Other Purchases	(56,000)	(57,000)	(58,000)	(59,000)	(60,000)	(61,000)	(62,000)	(63,000)	(64,000)
Total Operating Expenses	(671,000)	(688,000)	(705,000)	(723,000)	(744,000)	(764,000)	(784,000)	(804,000)	(825,000)
Net Operating Revenue	212,000	281,000	359,000	444,000	540,000	647,000	767,000	901,000	1,050,000
Non-Operating Revenues									
Interest on Investments	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Availability Fees (Proposed Rates)	33,000	84,700	84,700	84,700	84,700	84,700	84,700	84,700	84,700
Grants and Other Funds	-	-	-	-	-	-	-	-	-
Total Revenue Minus Operating Expenses (Net Revenue)	251,000	371,700	448,700	534,700	630,700	737,700	857,700	991,700	1,140,700
Debt Service									
Payment on Outstanding Bonds	-	-	-	-	-	-	-	-	-
Payment on Proposed Bonds	-	-	-	-	-	-	-	(272,000)	(786,000)
Total Debt Service	-	(272,000)	(786,000)						
Debt Service Coverage (Net Revenue/Total Debt Service):	NA	3.6	1.5						
Minimum 1.5 Recommended									
Capital Contributions and Expenses									
Capital Expense Need (from Asset Tables)	(501,000)	-	(31,000)	(741,000)	(32,000)	(861,000)	(413,000)	(16,528,000)	-
"Pay-Go" Contribution to Capital Expense	501,000	-	31,000	741,000	32,000	861,000	413,000	2,928,000	-
Contribution of Bond Sale to Capital Expense	-	-	-	-	-	-	-	13,600,000	-
Contribution from Grants/ Other Outside Capital Revenue	-	-	-	-	-	-	-	-	-
Net Balance	-								
Capital Reserve Balances									
Prior Year End Capital Reserves	1,987,141	1,737,141	2,108,841	2,526,541	2,918,941	2,918,941	2,795,641	3,240,341	1,032,041
"Pay-Go" Contribution to Capital Expense	(501,000)	-	(31,000)	(741,000)	(32,000)	(861,000)	(413,000)	(2,928,000)	-
Addition of Current Year Net Revenues Less Debt Service Payments	251,000	371,700	448,700	534,700	630,700	737,700	857,700	991,700	354,700
New Capital Reserve Balance	1,737,141	2,108,841	2,526,541	2,320,241	2,918,941	2,795,641	3,240,341	1,032,041	1,386,741
Capital Reserves Restricted by Debt Indenture	-	-	-	-	-	-	-	(944,000)	(944,000)
Capital Reserves Available	1,737,141	2,108,841	2,526,541	2,320,241	2,918,941	2,795,641	3,240,341	88,041	442,741
Percent Rate Increase/(Decrease)									
		9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%	9.6%

Table 4-10
Water System Flow of Funds - Asset Replacement Plan Option 2 with Equal Annual Water Rate Increase

	2019	2020	2021	2022	2023	2024	2025	2026	2027
Operating Revenues									
Water Service at Existing Rates	850,000	854,000	858,000	862,000	866,000	870,000	874,000	878,000	882,000
Water Service from Increased Rates	-	86,000	182,000	289,000	408,000	540,000	686,000	848,000	1,028,000
Other Fees and Charges	33,000	33,000	33,000	33,000	33,000	33,000	33,000	33,000	33,000
Total Operating Revenues	883,000	973,000	1,073,000	1,184,000	1,307,000	1,443,000	1,593,000	1,759,000	1,943,000
Operating Expenses									
Wages and Fringe Benefits	(344,000)	(354,000)	(365,000)	(376,000)	(387,000)	(399,000)	(411,000)	(423,000)	(436,000)
Power	(58,000)	(59,000)	(60,000)	(62,000)	(64,000)	(66,000)	(68,000)	(70,000)	(72,000)
Chemicals	(40,000)	(41,000)	(42,000)	(43,000)	(44,000)	(45,000)	(46,000)	(47,000)	(48,000)
Repairs and Maintenance	(136,000)	(139,000)	(142,000)	(145,000)	(148,000)	(151,000)	(154,000)	(157,000)	(160,000)
Other Materials and Supplies	(37,000)	(38,000)	(39,000)	(40,000)	(41,000)	(42,000)	(43,000)	(44,000)	(45,000)
Other Purchases	(56,000)	(57,000)	(58,000)	(59,000)	(60,000)	(61,000)	(62,000)	(63,000)	(64,000)
Total Operating Expenses	(671,000)	(688,000)	(706,000)	(725,000)	(744,000)	(764,000)	(784,000)	(804,000)	(825,000)
Net Operating Revenue	212,000	285,000	367,000	459,000	563,000	679,000	809,000	955,000	1,118,000
Non-Operating Revenues									
Interest on Investments	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Availability Fees (Proposed Rates)	33,000	84,700	84,700	84,700	84,700	84,700	84,700	84,700	84,700
Grants and Other Funds	-	-	-	-	-	-	-	-	-
Total Revenue Minus Operating Expenses (Net Revenue)	251,000	375,700	457,700	549,700	653,700	769,700	899,700	1,045,700	1,208,700
Debt Service									
Payment on Outstanding Bonds	-	-	-	(24,000)	(69,000)	(69,000)	(69,000)	(192,604)	(827,000)
Payment on Proposed Bonds	-	-	-	(24,000)	(69,000)	(69,000)	(69,000)	(192,604)	(827,000)
Total Debt Service	-	-	-	(48,000)	(138,000)	(138,000)	(138,000)	(385,208)	(1,654,000)
Debt Service Coverage (Net Revenue/Total Debt Service):	NA	NA	NA	22.9	9.5	11.2	13.0	5.4	1.5
Minimum 1.5 Recommended	NA	NA	NA	1.5	1.5	1.5	1.5	1.5	1.5
Capital Contributions and Expenses									
Capital Expense Need (from Asset Tables)	(501,000)	-	(31,000)	(1,484,000)	(32,000)	(861,000)	(413,000)	(16,528,000)	-
"Pay-Go" Contribution to Capital Expense	501,000	-	31,000	284,000	32,000	861,000	413,000	3,428,000	-
Contribution of Bond Sale to Capital Expense	-	-	-	1,200,000	-	-	-	13,100,000	-
Contribution from Grants/ Other Outside Capital Revenue	-	-	-	-	-	-	-	-	-
Net Balance	-								
Capital Reserve Balances									
Prior Year End Capital Reserves	1,987,441	1,737,141	2,112,841	2,539,541	2,781,241	3,333,941	3,173,641	3,591,341	1,016,437
"Pay-Go" Contribution to Capital Expense	(501,000)	-	(31,000)	(284,000)	(32,000)	(861,000)	(413,000)	(3,428,000)	-
Addition of Current Year Net Revenues Less Debt Service Payments	251,000	375,700	457,700	549,700	653,700	769,700	899,700	1,045,700	1,208,700
New Capital Reserve Balance	1,737,441	2,112,841	2,539,541	2,781,241	3,333,941	3,173,641	3,591,341	1,016,437	1,398,137
Capital Reserves Restricted by Debt Indenture	-	-	-	(83,000)	(83,000)	(83,000)	(83,000)	(992,000)	(992,000)
Capital Reserves Available	1,737,441	2,112,841	2,539,541	2,698,241	3,250,941	3,090,641	3,508,341	24,437	406,137

**Table 4-11
Wastewater System Flow of Funds - Asset Replacement Plan with Equal Annual Water Rate Increase**

	2019	2020	2021	2022	2023	2024	2025	2026	2027
Operating Revenues									
Wastewater Service at Existing Rates	1,660,000	1,668,000	1,676,000	1,684,000	1,692,000	1,700,000	1,709,000	1,718,000	1,727,000
Wastewater Service from Increased Rates	-	40,000	82,000	125,000	170,000	216,000	263,000	311,000	361,000
Other Fees and Charges	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Total Operating Revenues	1,662,000	1,710,000	1,760,000	1,811,000	1,864,000	1,918,000	1,974,000	2,031,000	2,090,000
Operating Expenses									
Wages and Fringe Benefits	(522,000)	(538,000)	(554,000)	(571,000)	(588,000)	(605,000)	(624,000)	(643,000)	(662,000)
Power	(135,000)	(138,000)	(141,000)	(145,000)	(149,000)	(153,000)	(157,000)	(161,000)	(165,000)
Chemicals	(90,000)	(92,000)	(94,000)	(96,000)	(98,000)	(100,000)	(103,000)	(106,000)	(109,000)
Repairs and Maintenance	(141,000)	(144,000)	(147,000)	(150,000)	(153,000)	(156,000)	(159,000)	(162,000)	(165,000)
Other Materials and Supplies	(23,000)	(23,000)	(23,000)	(23,000)	(23,000)	(23,000)	(23,000)	(23,000)	(23,000)
Other Purchases	(84,000)	(85,000)	(86,000)	(90,000)	(92,000)	(94,000)	(96,000)	(98,000)	(100,000)
Total Operating Expenses	(995,000)	(1,021,000)	(1,047,000)	(1,075,000)	(1,103,000)	(1,132,000)	(1,162,000)	(1,193,000)	(1,224,000)
Net Operating Revenue	667,000	689,000	713,000	736,000	761,000	786,000	812,000	838,000	866,000
Non-Operating Revenues									
Interest on Investments	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000
Availability Fees (Existing Rates)	143,000	52,000	92,000	92,000	92,000	92,000	92,000	92,000	92,000
Grants and Other Funds	-	-	-	-	-	-	-	-	-
Total Revenue Minus Operating Expenses (Net Revenue)	819,000	790,000	814,000	837,000	862,000	887,000	913,000	939,000	967,000
Debt Service									
Payment on Outstanding Bonds	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)
Payment on Proposed Bonds	-	-	-	-	-	-	-	(66,000)	(191,000)
Total Debt Service	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(536,000)	(661,000)
Debt Service Coverage (Net Revenue/Total Debt Service); Minimum 1.5 Recommended	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.8	1.5
Capital Contributions and Expenses									
Capital Expense Need (from Asset Tables)	(200,000)	-	(284,000)	(274,000)	(1,436,000)	(360,000)	(699,000)	(5,925,000)	(35,000)
"Pay-Go" Contribution to Capital Expense	200,000	-	284,000	274,000	1,436,000	360,000	699,000	2,623,000	35,000
Contribution of Bond Sale to Capital Expense	-	-	-	-	-	-	-	3,300,000	-
Contribution from Grants/ Other Outside Capital Revenue	-	-	-	-	-	-	-	-	-
Net Balance	-	-	-	-	-	-	-	-	-
Capital Reserve Balances									
Prior Year End Capital Reserves	3,705,161	3,854,161	4,174,161	4,234,161	4,327,161	3,283,161	3,340,161	3,084,161	864,161
"Pay-Go" Contribution to Capital Expense	(200,000)	-	(284,000)	(274,000)	(1,436,000)	(360,000)	(699,000)	(2,623,000)	(35,000)
Addition of Current Year Net Revenues Less Debt Service Payments	349,000	320,000	344,000	367,000	392,000	417,000	443,000	403,000	305,000
New Capital Reserve Balance	3,854,161	4,174,161	4,234,161	4,327,161	3,283,161	3,340,161	3,084,161	864,161	1,135,161
Capital Reserves Restricted by Debt Indenture	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(470,000)	(699,000)	(699,000)
Capital Reserves Available	3,384,161	3,704,161	3,764,161	3,857,161	2,813,161	2,870,161	2,614,161	165,161	436,161
Percent Rate Increase/(Decrease)		2.4%							

Review of Adequacy of Financial Reserves

The Town of Berryville provided a calculation of its financial reserves as of September 30, 2018 for purposes of this study and asked that they be evaluated for adequacy. The Town reported "liquid accounts" with \$665,425 from the Water Fund and \$2,726,742 for the Sewer Fund. The Town also reported it has a "CIP Account" with \$1,987,141 from the Water Fund and \$3,235,161 from the Sewer Fund. Some of the funds in the CIP Account were designated for a particular future project and other funds were represented as "Capital Reserve", "Unencumbered", or "VRA Reserve". Future projects included Clearwell Expansion, Membrane Replacement, Water Line Improvements, Sewer Collection System Rehabilitation, SCADA, Equipment Repair Reserve, Water Plant Building Maintenance, and Utility Rate Study. Designating capital reserve funds to future projects can be a useful internal management tool to guide in assuring future needs are adequate but can be reviewed in the future and revised and are not binding on the Town. From the information reviewed in the analysis of financial reserves, the only funds binding on the Town from parties outside the Town were the VRA Reserve and Membrane Replacement. It is not necessary to evaluate the condition of financial reserves at the project level, and this review combined the funds into simpler categories of operating reserves (which represents the "liquid accounts") and capital reserves (which represents the CIP Account).

Two conditions are recommended for consideration in maintaining operating reserves: a minimum operating reserve for short-term cash flow, and a "rate stabilization" reserve for unanticipated conditions. For operating cash flow, best practices suggest a minimum of "60-days cash" and preferably "90-days cash". As 90 days represents approximately three months or one-fourth of a year, the minimum required for this reserve is derived by computing 25% of the projected annual expenditures. Rate stabilization can provide a cushion for events such as a significant emergency repair, an emergency declaration, a drought, or other similar unanticipated conditions that dramatically increase expenses and/or decrease revenues. The rate stabilization is calculated as 20% of operating revenues for the year. To identify the necessary minimum operating reserves, the cash flow reserve and the rate stabilization reserve are added.

The Town of Berryville presently conforms to best management practices and maintains adequate operating reserves and it is forecasted that by maintaining current levels, operating reserves will be adequate through 2027 based on the flow of funds predicted in Tables 4-10 and 4-11. Table 4-12 illustrates the adequacy of operating reserves both for the Water and Wastewater systems.

An analysis of the capital reserves is included as a part of Tables 4-10 and 4-11 and the use of such reserves are critical to the identification of additional revenue requirements. *The Town's current capital reserve levels are strong, and the Town should be commended for its excellent fiscal discipline in developing strong reserves and the tools to manage them appropriately for future capital expenses.* In the Flow of Funds shown in Tables 4-10 and 4-11, reserves are used toward funding of major capital expenditures in the year 2026 together with acquiring a loan or bonds to optimize financial performance that yields the benefits of the asset program. The Town's capital reserves in its Sewer Fund are especially useful to keep down the increases in rates required to meet revenue requirements. Table 4-10 shows a slow building of additional capital reserves in anticipation of the revenue required in 2026 to hold down the amount of funds borrowed and meet debt coverage requirements without large spikes in water rate increases.

Table 4-12
Analysis of Operating Reserves

	2019	2020	2021	2022	2023	2024	2025	2026	2027
WATER									
<i>Minimum Recommended:</i>									
Minimum Operating Reserve by Policy (90 days cash)	(168,000)	(172,000)	(177,000)	(181,000)	(186,000)	(191,000)	(196,000)	(201,000)	(206,000)
Minimum Rate Stabilization Reserve (20% of Operating Revenues)	(177,000)	(195,000)	(215,000)	(237,000)	(261,000)	(289,000)	(319,000)	(352,000)	(389,000)
Total as Minimum Required	(345,000)	(367,000)	(392,000)	(418,000)	(447,000)	(480,000)	(515,000)	(553,000)	(595,000)
<i>Operating Reserves Available</i>									
Operating Cash Balance Beginning of Year	665,000	665,000	665,000	665,000	665,000	665,000	665,000	665,000	665,000
Budgeted Use During Year	-	-	-	-	-	-	-	-	-
Operating Cash Balance End of Year	665,000	665,000	665,000	665,000	665,000	665,000	665,000	665,000	665,000
Operating Cash Reserve Surplus/(Deficit)	320,000	298,000	273,000	247,000	218,000	185,000	150,000	112,000	70,000
WASTEWATER									
<i>Minimum Recommended:</i>									
Minimum Operating Reserve by Policy (90 days cash)	(249,000)	(255,000)	(262,000)	(269,000)	(276,000)	(283,000)	(291,000)	(298,000)	(306,000)
Minimum Rate Stabilization Reserve (20% of Operating Revenues)	(332,000)	(342,000)	(351,000)	(361,000)	(371,000)	(382,000)	(392,000)	(403,000)	(415,000)
Total as Minimum Required	(581,000)	(597,000)	(613,000)	(630,000)	(647,000)	(665,000)	(683,000)	(701,000)	(721,000)
<i>Operating Reserves Available</i>									
Operating Cash Balance Beginning of Year	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000
Budgeted Use During Year	-	-	-	-	-	-	-	-	-
Operating Cash Balance End of Year	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000	2,727,000
Operating Cash Reserve Surplus/(Deficit)	2,146,000	2,130,000	2,114,000	2,097,000	2,080,000	2,062,000	2,044,000	2,026,000	2,006,000

5. Future Rate Design Options and Recommendations for Meeting Additional Revenue Requirements

The Town of Berryville is taking an important step in total management and sustainability of the assets of its water and wastewater system through an analysis of the age and general condition of the assets, with a schedule for replacing assets at the expected end of their service life. Further, this report has developed a schedule for replacing those assets in which the service life will come due within the next 20 years and has provided a financial analysis through the year 2027 of the revenues that would be required to achieve the asset replacement scheduled within those years, including obtaining a loan in 2026.

This analysis should be viewed as a starting point for further discussion and may inform but not fully represent the final decisions made by the Town over the next 8 to 10 years. First, the analysis in this report assumes that the only source of revenue for this asset program will be local water and wastewater revenues from fee increases. Every effort should be made to find other potential sources of revenue, possibly in the form of grants or below-market interest rates on loans, even though the market for grant opportunities is very difficult. A few years ago, the Town was successful in obtaining an interest-free loan from the Virginia Resource Authority toward financing a new wastewater treatment plant and was also able to take advantage of grants from the Virginia Water Quality Improvement Fund.

Second, the asset evaluation described in this report should be a starting point for further steps toward sustainable asset management, with the ultimate goal of optimizing expenses for asset renewal and reliability. It is recommended that a next step be a more detailed asset evaluation of large projects scheduled for replacement within the next 10 years. These projects include the water treatment plant, raw water pumping station, and river intake facility for the water system, and the replacement of aging concrete and cast-iron pipe and aging manholes in the wastewater system. The goal of a detailed evaluation would be to identify if there are any strategies whereby assets could be modified or extended to increase their service life at less overall life-cycle cost than the replacement of the asset. For the water plant and the intake and pumping facilities, this would be accomplished through a detailed engineering study well beyond the scope of this study. Its conclusions could better inform the Town as to the optimal strategy for long-term asset performance. For the wastewater system, it is suggested that a sewer system evaluation survey using closed circuit cameras and physical manhole inspections be conducted in an engineering study to determine if alternative renewal strategies may be more cost-effective. Numerous "in-situ" strategies today provide lining systems without excavation and replacement that could provide extended service life.

For all discussions within this Chapter 5 regarding rate designs, it is assumed that Water Meter Option 2 is selected for the asset replacement schedule.

Even though additional engineering studies may refine the asset management program developed by this study, which may then refine the financial strategy, it is very clear that the Town of Berryville has aging water and wastewater assets that will require capital expenditures within the next 5 to 10 years and beyond, and these expenditures will require greater revenues than the Town is currently collecting. There are numerous directions in which the Town Council and management could choose to initiate the collection of revenues that will ultimately be required. This report suggests one strategy as implementing the changes in the Town's water and wastewater rates identified by the analysis herein (increase overall operating revenue by 10.1% for water per year and 2.4% for wastewater per year) for a 5-year period while conducting the additional engineering studies recommended to refine the asset management program. It will require several months to perform these engineering studies, and once they are completed, to the extent the recommendations modify the revenue requirements, the water and wastewater rates can be revisited and modified as appropriate.

Rate Design Options

Several different forms or rate designs are accepted within the water industry and used to obtain sufficient revenue to meet future operating and capital needs. The specific design selected by any given community is a choice reflective of the community's strategic plan, vision and goals as much or more than any technical or management need for the water and wastewater utility. Different rate designs can produce the same amount of overall annual revenue, each satisfying the utility's need. The difference between rate designs is in the weight that different classes of customers carry in providing that revenue, based on the size, class, or volume of use by the customer.

Three different types of rate designs are the most commonly used and each is evaluated in this Chapter. The three designs include: (1) Flat Rates; (2) Declining Rates; and (3) Inclining Rates. The methodologies for calculating each of these types of rate design are well accepted and defined by AWWA. For each type of rate design a minimum charge can be overlaid; for purposes of comparing rate designs the discussion of minimum charge is postponed until a later part of this Chapter.

Flat Rates describes a condition where one rate is set per unit of consumption (the Town uses 1,000 gallons as a unit of consumption) and applies to each and every unit registered without respect to the size of the customer or the amount of water or wastewater service used. The Town presently uses this design. For example, the current Town water rate is \$8.40 per 1,000 gallons. A customer using 3,000 gallons or 3 units in a month pays \$8.40 for each unit, for a total of \$25.20 – the customer pays the same amount for each unit. Likewise, a customer using 100,000 gallons or 100 units still pays the same for each unit, including an added \$8.40 for the last 1,000 gallons consumed.

Declining Rates describe a condition where the unit cost of water declines with a greater number of units consumed within a billing cycle and is commonly provided in three to four blocks of consumption. An example would be that a customer pays \$10 each 1,000 gallons for the first 4,000 gallons, then pays \$9 per 1,000 gallons for the next 4,000 gallons, etc. Inclining Rates describe the opposite condition, where the unit cost of water increases for higher consumption within a billing cycle.

Each rate design has its own advantages as well as disadvantages, which may or may not be in harmony with the community goals, thereby a public policy choice. Advantages of Flat Rates include the ease of use and understanding, and a strong appearance of fairness in that each unit of consumption costs the same. Declining Rates have an advantage of reflecting the reality that customers using higher quantities of water through larger meters, including commercial, institutional and industrial accounts, more often than not use water at a more steady rate with lower peaks than smaller (residential) customers, and higher peaks require greater utility system capacity and higher costs to manage. Declining Rates also signal as public policy an encouragement for the growth and development of new business that can produce jobs in the community but require larger volumes of water. Inclining Rates, properly designed, speak to the sustainability of water and encouragement of conservation practice, and if they are successful in reducing consumption can be financially favorable to utilities nearing system capacity by postponing the need for system expansion. The caution with Inclining Rates is that they must apply only within a relatively homogeneous customer class. Comparing water use of one single-family residence to another single-family residence is fairly homogeneous, whereas comparing water use by a single-family residence to water consumed through one meter and account serving a 100-unit hotel can never be homogeneous.

To overcome this caution with Inclining Rates, this report suggests its use only within the residential class, applied as water and wastewater use per residential unit.

Flat Rate Design Option for the Town of Berryville Revenue Needs

All Rate Designs provided in this section of the report are targeted to achieve the forecasted annual revenue requirements shown in Table 4-10 (Water) and Table 4-11 (Wastewater) and provide funding for the schedule of asset replacements shown in Chapter 3. The Flat Rate Design is the simplest, once the total operating revenues required for a given year and the forecasted total consumption are both determined, the expected total consumption is simply divided into the total revenue needed. Table 4-10 and Table 4-11 provide both the revenue needed and consumption anticipated (as a percent of growth from the "test year"). The Flat Rate Design for a 5-Year period for the Town of Berryville is provided in Table 5-1.

Table 5-1
Flat Rate Design for Town of Berryville Water and Wastewater Rates

	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
WATER						
Per 1,000 gallons of usage	\$ 8.40	\$ 9.26	\$ 10.20	\$ 11.24	\$ 12.39	\$ 13.65
SEWER						
Per 1,000 gallons of usage	\$ 17.00	\$ 17.39	\$ 17.79	\$ 18.20	\$ 18.62	\$ 19.05

Declining Rate Design Option for the Town of Berryville Revenue Needs

The design of the Declining Rate Option followed the guidelines and recommendations published in Manual of Practice M1 published by AWWA. The Base-Extra Capacity Method was chosen and a distribution of water consumption by customer class and account was provided through billing data by the Town of Berryville. Billing data from the 12-month period of September 2017 through August 2018 was chosen. Customer classes evaluated included Residential, Commercial, Institutional, and Industrial. When it was determined that Commercial and Institutional were similar, these two classes were combined into one. The Industrial class was retained separately though it was noted that this database is much smaller as the Town of Berryville has a limited number of Industrial accounts. As is typical of most utilities, the Town of Berryville did not have real-time data on maximum day and maximum hour peak uses for individual customer classes, accordingly these peak conditions were assumed from examples provided in the AWWA Manual as typical.

Table 5-2 provides the results of the Declining Rate Design. By comparison to the Flat Rates in Table 5-1, customers will pay more for the first 3,000 gallons of water under declining rates, but for larger customers the cost of water decreases as use increases. Most residential customers, which is a significant percentage of the Town's accounts, will pay more per month for water under Declining Rates than Flat Rates, and most Commercial, Institutional and Industrial customers will pay less.

Table 5-2

Declining Block Rate Design for Town of Berryville Water and Wastewater Rates.

	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
WATER						
First 6,000 gallons of usage	\$ 8.40	\$ 10.24	\$ 11.28	\$ 12.44	\$ 13.70	\$ 15.10
Next 8,000 gallons of usage	\$ 8.40	\$ 8.54	\$ 9.41	\$ 10.37	\$ 11.43	\$ 12.59
Next 46,000 gallons of usage	\$ 8.40	\$ 7.53	\$ 8.30	\$ 9.14	\$ 10.08	\$ 11.11
Usage beyond 60,000 gallons	\$ 8.40	\$ 6.18	\$ 6.81	\$ 7.51	\$ 8.27	\$ 9.11

SEWER

First 6,000 gallons of usage	\$ 17.00	\$ 18.20	\$ 18.62	\$ 19.05	\$ 19.48	\$ 19.93
Next 8,000 gallons of usage	\$ 17.00	\$ 15.70	\$ 16.06	\$ 16.43	\$ 16.81	\$ 17.20
Next 46,000 gallons of usage	\$ 17.00	\$ 15.10	\$ 15.45	\$ 15.80	\$ 16.17	\$ 16.54
Usage beyond 60,000 gallons	\$ 17.00	\$ 11.95	\$ 12.22	\$ 12.51	\$ 12.79	\$ 13.09

Note: Usage is as measured within a single billing cycle. Billing is monthly. All rates are cost per 1,000 gallons.

Inclining Rate Design Option for the Town of Berryville Revenue Needs

The design of the Inclining Rate Option followed the guidelines and recommendations published in Manual of Practice M1 published by AWWA. First and foremost, AWWA recommends this type design apply only to a homogeneous class of customers of similar size and required usage patterns. As a result, inclining rates are rarely used within the water industries for customer classes other than residential. A review of the Town's commercial, institutional, and industrial accounts confirms that these customers are of varying sizes and usage patterns (e.g., a commercial laundry will by nature of its business have a very different water use pattern compared to a retail store. For simplicity of administration of the rate design, Inclining Rates proposed to the Town of Berryville will apply only to residential customers, and other classes of customers will be charged Flat Rates.

Multiple-Family accounts may be billed as Residential Customers, provided the Rate Table is applied as per dwelling unit. This does require the Town to maintain within its billing records the number of dwelling units applied to a single account, and a billing system that is able to calculate an individual account rate table using the adopted rates applied to multiple dwelling units; some billing systems require program modification for this calculation to occur. As an example, assume an Inclining Rate Block is adopted as \$8.95 per 1,000 gallons for the first 3,000 gallons then \$9.86 per 1,000 gallons for the next 3,000 gallons used per dwelling unit. Then assume a meter is read and 5,000 gallons is consumed in a billing cycle. If that meter were attached to a single-family dwelling, \$8.95 would apply to the first 3,000 gallons and \$9.86 to the next 2,000 gallons. However, if that meter were attached to a triplex serving three separate dwellings, \$8.95 would apply to all 5,000 gallons as the first 3,000 gallons per unit is 3,000 x 3 equals the first 9,000 gallons on the meter.

Further, on occasion water piping within a Multiple-Family complex may be looped to serve multiple buildings and include fire protection, connected to the multiple system through two or more meters. If such situations exist within the Town, it may be necessary to combine multiple meters into a single account for billing purposes and define how billing is adjusted when there is water use for fire protection.

The principle behind Inclining Rates is that among users of similar size and usage patterns, a customer who chooses to use more water places a higher burden on the cost of peak capacity of the water and wastewater system than a customer who conserves and uses less water. AWWA methodology allows a degree of flexibility in how this peaking capacity is charged. For this study, only the depreciation cost of the replacement of the future assets is weighted based on water use, in increments of 3,000-gallon blocks, to establish the inclining rates.

There is a financial risk in converting from Flat Rates to Inclining Rates that is extremely difficult to measure as foresight. The risk is that residential customers presently using higher volumes of water (e.g., irrigation of lawns) may reduce consumption to avoid the charges in the higher blocks. This may be a desirable outcome from the standpoint of sustainability, but it can also mean lower actual operating revenues than forecasted. Some attempt to plan for this possibility has been built into the design of rates in this report, as it was assumed that residential customers now using greater than 6,000 gallons per month per dwelling will reduce consumption by 5% under the Inclining Rates. If Inclining Rates are adopted, this trend should be monitored, and rates adjusted if needed.

Table 5-3 provides the results of the Inclining Rate Table design.

Table 5-3
Inclining Block Rate Design for Town of Berryville Water and Wastewater Rates

Residential Customers Only - Usage is per dwelling unit within a single monthly billing cycle

	Current	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
WATER						
First 3,000 gallons of usage	\$ 8.40	\$ 8.95	\$ 9.86	\$ 10.87	\$ 11.98	\$ 13.20
Next 3,000 gallons of usage	\$ 8.40	\$ 9.75	\$ 10.74	\$ 11.84	\$ 13.05	\$ 14.38
Next 3,000 gallons of usage	\$ 8.40	\$ 11.35	\$ 12.51	\$ 13.78	\$ 15.19	\$ 16.74
Usage beyond 9,000 gallons	\$ 8.40	\$ 14.85	\$ 16.36	\$ 18.03	\$ 19.87	\$ 21.90

SEWER						
First 3,000 gallons of usage	\$ 17.00	\$ 17.15	\$ 17.54	\$ 17.95	\$ 18.36	\$ 18.78
Next 3,000 gallons of usage	\$ 17.00	\$ 18.10	\$ 18.52	\$ 18.94	\$ 19.38	\$ 19.82
Next 3,000 gallons of usage	\$ 17.00	\$ 19.40	\$ 19.85	\$ 20.30	\$ 20.77	\$ 21.25
Usage beyond 9,000 gallons	\$ 17.00	\$ 23.00	\$ 23.53	\$ 24.07	\$ 24.62	\$ 25.19

Commercial, Institutional and Industrial Customers

WATER						
Per 1,000 gallons of usage	\$ 8.40	\$ 9.26	\$ 10.20	\$ 11.24	\$ 12.39	\$ 13.65

SEWER						
Per 1,000 gallons of usage	\$ 17.00	\$ 17.39	\$ 17.79	\$ 18.20	\$ 18.62	\$ 19.05

Note: Multiple-Family accounts use Residential Customers table with rates calculated per dwelling unit

Discussion Regarding Rate Design Options

Three different rate designs have been provided above, each of which are designed to achieve the same revenue requirements. Each design serves a different purpose, and the purposes are embedded in community goals and public policy. In that sense there is no right or wrong answer as long as the objectives of each design are understood and the rate design that is adopted is in harmony with community goals. This discussion does not attempt to make a firm recommendation as to which option the Town Council should adopt but does make a few observations as suggestions toward the Council's deliberation.

- The Town's current Flat Rates are very competitive with nearby communities for accounts with 3,000 gallons per month or less water use, but its fees are higher than most nearby communities at higher levels of consumption. A shift to Inclining Rates will increase that effect with respect to residential customers. A shift to Declining Rates will reduce that effect.

- Inclining Rates work best for a water or wastewater system that is approaching its capacity and facing major capital costs to expand its infrastructure that can be delayed through conservation – if revenue declines as a result of Inclining Rates, it can be offset by a reduced short-term capital improvement program. This structure does not work as well for a utility with plenty of excess capacity in its infrastructure but facing a need for renewal of end of life assets. Revenue is needed for renewal without respect to reductions in consumption, thereby lower consumption requires higher rates in an attempt to retain the needed revenue, and customers who expect to pay less as a reward for conservation can be frustrated.
- The Town of Berryville average consumption per residential unit is 113 gallons per day. This quantity is lower than current averages in published statistics throughout North America, indicating that some reasonable level of conservation is already a part of the fabric in the community. Approximately 60% of single dwelling households in the Town use 3,000 gallons per month or less.
- Trends within the water industry today are moving in the direction of Flat Rates to Inclining Rates and away from Declining Rates. Most communities used Declining Rates in the 1960s through 1980s, but many moved away from this design in a greater promotion of sustainability and conservation. Interestingly, Declining Rates are still a part of a majority of the nearby communities surveyed as part of this study.
- Flat Rates are the simplest and easiest to administer. Greater complexity can make customer understandability and satisfaction more complex and can increase the risk of billing errors.

Through its review of data as a part of this study, Pennoni did not identify any compelling reasons to recommend that the Town of Berryville shift its rate design from the current Flat Rates to either the Declining or Inclining Rate structures. At the same time, each of the rate structures presented in this Chapter represent fair and reasonable approaches with acceptable and proven methods to obtain the revenue the Town requires to effectively maintain and replace its assets to maintain an acceptable level of service to the community. Most important is that the rate design selected be aligned with the strategic vision and goals of the community.

Review of Minimum Charge in the Current Rate Structure

Expenses for water and wastewater operations can be segregated into two-types: expenses that are variable with the quantity of water or wastewater conveyed and treated, and expenses that are fixed without respect to quantity of flow or treatment. General administrative costs are considered fixed costs as are some of the costs of operation and maintenance. For the most part, personnel costs in operation and maintenance are considered fixed costs. By example, an appropriately certified treatment plant operator is required by permitting to be on-site to operate most water treatment and wastewater treatment facilities when the facilities are in operation. Except for extraordinary circumstances, the number of personnel on-site do not vary with flow.

AWWA rate methodology endorses a strategy whereby water and wastewater utilities can establish a minimum charge per account in order to assure that all customers are contributing reasonably to the fixed costs of the utility regardless of metered consumption. Many utilities, including the Town of Berryville and the utilities represented in the comparative analysis performed in this study, include a minimum charge per bill as well as a charge per unit volume of water or wastewater service provided. This study included a review of the Town of Berryville's current minimum charges of \$5.00 per bill for water service and \$15.00 per bill for wastewater service.

To conduct this review, operating expenses for the "test year" were reviewed at a budget summary level to identify a percentage of expenses to be labeled as "fixed". Fixed costs included all general administration expenses, all personnel wages and fringe benefits, and select operating costs that included 20% of electricity costs (representing demand and customer components of electric rates), permit, fees and laboratory testing costs, Miss Utility costs, and professional services costs. If only general administrative expenses are considered, a fixed cost would be \$3.00 per bill for water and \$3.00 per bill for wastewater service. If operating personnel and select operating costs are added, fixed costs could be as high as \$13.75 per bill for water service and \$30.25 per bill for wastewater service.

There are two widely accepted practices for applying fixed costs in utility bills. One method is to establish a specific fixed cost for every bill that is added to a variable cost based on consumption, with the bill being the sum of a fixed cost and a variable cost. The second method is to calculate all bills based on the variable cost (\$ per 1000 gallons), and then apply the unit of consumption times the variable cost as the bill except when this calculation is below the minimum amount, in which case the minimum applies. The Town presently uses the second method, with a minimum charge, and in the comparative analysis it was identified that other nearby communities' trend toward the second method as well. When using the second method, the minimum bill is generally set higher than the fixed cost calculation, recognizing that within the minimum amount is an allowance for some consumption within the variable costs.

In reviewing the Town of Berryville's accounts, this study recommends that the Town retain the current method of a minimum charge that includes an allowance for consumption, but further recommends that the minimum charge be increased from the current \$5.00 for water and \$15.00 for wastewater to an amount equivalent to the first 2,000 gallons of consumption. This increased allowance is a very reasonable and good fit when considering all administrative and operating fixed costs as defined above. For simplicity, the minimum charge equivalent to 2,000 gallons of consumption could apply to whichever rate design the Town selected.

If the Town were to prefer a fixed cost per bill separate from consumption allowance, this study would suggest that fixed amount be set at \$3.00 per bill for water and \$3.00 per bill for wastewater, considering only the general administrative costs. A fixed charge as high as \$13.75 per bill for water and \$30.25 for wastewater is not recommended, as it would result in an unintended significant increase in cost to customers using between 2,000 gallons and 4,000 gallons per month, which represents 51% of the customer base.

Rates for Customers Outside Town Limits

The Town of Berryville currently does not include a surcharge for customers who are outside of the Town's corporate limits, but such practice is allowed both by AWWA's defined practices and under laws of the Commonwealth of Virginia, and many municipalities in the Commonwealth of Virginia do adopt this surcharge. The legal test is that such surcharges be fair and reasonable. The Town has a very limited number of customers outside the Town's limits, but review of the billing data on these limited accounts within the residential category does show about 10% higher consumption than per dwelling consumption for accounts within the Town. Furthermore, it is known within the industry that suburban residential areas have larger lots on average and higher peak water use as a ratio to average consumption compared to in-town lots and residences. Finally, AWWA suggest that a rate of return should be considered by the Town for outside Town customers, similar to how a private sector water utility may expect a return for its investors, as property owners outside the Town are not contributing to tax revenues and ultimately it is the Town and its residences who bear the burden for the risks and consequences of risk failure should they occur in operating an water and wastewater utility.

Considering all these factors, it would be reasonable for the Town to consider a 25% surcharge on all accounts outside the Town's corporate limits as a part of monthly billing. This surcharge would apply to the rate calculated by whatever rate design the Town Council chooses and would apply to every class of customer.

The 25% surcharge could also apply to Availability Fees for a new service approved outside the Town's corporate limits, if there are no current plans to annex the property in the foreseeable future. Since Availability Fees are a one-time "buy-in" for a new customer proposed to be added to the system for the long-term, the Town should consider waiving the surcharge on the Availability Fee for new customers within the proposed Annexation Area, although surcharges would apply to monthly billing until the month when the property served effectively becomes a part of the Town limits.

"Crystal Balling" the Future of Water and Wastewater Regulations

The advance of federal and state regulations regarding drinking water and water discharge to streams and rivers has made a dramatic impact on the quality of both public health and the environment over the past 50 years, starting with the passage of the federal Clean Water Act and the Safe Drinking Water Act in the 1970s as well as the creation of the Environmental Protection Agency. At the same time, the emerging regulatory environment has often created a significant challenge to long-term financial planning for water and wastewater utilities. As advancement in public health and the environment has occurred, new issues were often discovered, and the public interest in quick results has produced new regulations, often requiring significant capital improvement, with a short timeline for implementation and compliance. A case-in-point is the development of wastewater regulations and impact on wastewater treatment facilities, with primary treatment in the 1960s growing to secondary treatment in the 1980s, advanced ammonia removal in the 1990s, and enhanced nitrogen and phosphorus removal in the 2000s to the present. Although developing a "crystal ball" for future regulations can be very tricky and speculative, it has become a part of today's rate studies.

There are no specific changes in capital improvement planning currently being recommended to the Town of Berryville based on anticipating future recommendations, but this section of the report does discuss some trends that the Town should keep in its vision. One is a trend toward requiring utilities to adopt and maintain asset management programs as a condition in federal and state revolving fund low-interest financing, and even some trends toward making asset management a regulatory requirement in permitting. The Evaluation of Assets in this report makes a strong effort in this direction, but today's discussion within the water industry is moving toward asset management as a continuing program integrating maintenance and performance in contrast to a study performed periodically. This report recommends efforts toward asset renewal and maintenance, which is aligned with this regulatory trend.

Another trend to watch is the development of new drinking water regulations that may result from EPA's Contaminant Candidate List and Regulatory determinations, an ongoing process of regulating new contaminants incorporated into the Safe Drinking Water Act. One current topic of significant conversation is perfluoroalkyl and polyfluoroalkyl substances, expected to be regulated at the federal level within the next two years. These substances are not known to be in the Town's water supply but is an area of awareness, as special removal technology is required. Other organic compounds and a class of "emerging contaminants" that include by-products of endocrines or personal care products are on the EPA's current Candidate List. EPA published its Candidate Lists at <https://www.epa.gov/ccl/basic-information-ccl-and-regulatory-determination>.

On the wastewater side, clean water regulations in Virginia have seen significant changes within the past 15 years, largely as a result of the public goal of "cleaning up" the Chesapeake Bay. Nitrogen and phosphorus allocations were established for most wastewater plants in Virginia in 2005, including the Town's facility, and significant capital expenditures have been required to address these regulations. EPA adopted a Total Maximum Daily Load (TMDL) standard for the Chesapeake Bay in 2010, and is under an ongoing review presently, but most expectations are that there will not be significant changes, if any, in wastewater plant allocations within the Potomac/Shenandoah river basin. The Town of Berryville constructed a new wastewater treatment plant about 2010 and is in compliance with the current nitrogen and phosphorus standards.

The Virginia Division of Environmental Quality (DEQ) has recently proposed new ammonia standards for wastewater treatment plants, but the Town's current advanced facility should meet the ammonia criteria. Other current DREQ initiatives have focused more on stormwater.

Similar to the Contaminant List for Drinking Water, the federal Clean Water Act requires a Tri-Annual Review for Clean Water in which states report to EPA on the health of the nation's rivers and invite public comment, and the Clean Water Act has provisions for developing TMDL's for rivers that are not meeting designated use standards. These processes bear watching to be abreast as early as possible if trends develop that may affect local capital needs.

Town Council Agenda Item Report Summary
September 14, 2021

Item Title

Public Information Meeting
East Fairfax Street and West Fairfax Street Sidewalk Grants –
Transportation Alternatives Program

Prepared By
Christy Dunkle

Background/History/General Information

Planning staff submitted two grant requests to VDOT for projects on Fairfax Street in early 2021. The Town was notified that both preliminary applications had been approved to move into the final round for funding consideration. The Transportation Alternative Program (TAP) is an 80/20 match, with the Town responsible for a 20% of the total cost. Two previous requests, one for a gap in funding for the Safe Routes to School project at Johnson-Williams Middle School and the other for sidewalk connectivity on Mosby Boulevard, have been completed and funded, respectively.

Fairfax Street is identified as the collector road for the northeast quadrant of the Town in the comprehensive plan and Berryville Area Plan. The new portion of the street was completed as a part of the Fellowship Square development and Fairfax Street opened from First Street to North Buckmarsh Street in December of 2020. The extension of the sidewalk on both East and West Fairfax Streets will allow residents to safely access downtown and North Buckmarsh Street and points beyond.

The deadline for the final grant applications is Friday, October 1, 2021. Items required for the final submission include completion of the final application, public information meeting, resolution of support, and any letters of support deemed necessary. Planning staff has requested letters of support from the Northern Shenandoah Valley Regional Commission and Clarke County.

East Fairfax Street

The proposed sidewalk on the south side of East Fairfax Street is located within the existing 60' public right of way (please see photos in this staff report). The sidewalk is approximately 330 linear feet and would front 12 townhouses. There are currently no sidewalks on either side of East Fairfax Street between Page Street and the new development. The addition of this facility would include detectable warning surfaces on accessible ramps, the addition of crosswalks at the intersection of Page and East Fairfax Street, and ADA-compliant five-foot sidewalks.

West Fairfax Street

In the mid-2000's, elected officials held a public meeting to discuss improvements on West Fairfax Street including the addition of a sidewalk on the north side of the street, curb and gutter on both sides of the street, and storm water management facilities. When the development application for Fellowship Square was withdrawn, no further action was taken.

West Fairfax runs from North Church Street west to North Buckmarsh Street (US 340). As referenced above, previous efforts had been discussed to allow for a sidewalk on the north side of the street. The proposed plan for this area includes:

- Curb and gutter on both sides of the street
- Sidewalk on the north side of the street
- Right of way acquisition of approximately 12'
- Retention of on-street parking
- Storm water improvements

Planning staff has been working with Pennoni Engineering on preliminary design and consideration for future storm water drainage and detention for proposed West Fairfax Street improvements.

Findings/Current Activity

Two residents inquired about the West Fairfax improvements as of the writing of this staff report. One requested additional information which staff emailed to him and the other asked about compensation for right of way acquisition.

Financial Considerations

Below are the cost estimates and matching funds. Detailed cost estimates for the preliminary engineering, right of way, and construction phases are included in this staff report.

	Total	VDOT Match (80%)	Town Match (20%)
East Fairfax Street	\$99,221.00	\$79,377.00	\$19,844.00
West Fairfax Street	\$1,301,875.00	\$1,041,500.00	\$260,375.00

Schedule/Deadlines

The deadline for submission of the final application is Friday, October 1, 2021.

Other Considerations

N/A

Recommendation

Adopt the resolutions as presented.

Sample Motions

Please note there are two resolutions to adopt.

I move that the Council of the Town of Berryville adopt the attached resolution for **East Fairfax Street** and direct Planning staff to submit the final grant application by October 1, 2021.

I move that the Council of the Town of Berryville adopt the attached resolution for **West Fairfax Street** and direct Planning staff to submit the final grant application by October 1, 2021.

Attachments:

- East Fairfax Improvement Plan
- East Fairfax Street Estimate
- East Fairfax photos
- West Fairfax Street Improvement Plan
- West Fairfax Street Estimate
- Public information meeting notice (published on Tuesday, August 31 and Tuesday, September 7, 2021)
- Adjacent property owner notice mailed August 27, 2021
- Resolutions for East and West Fairfax Street improvements

Cost Estimate - Application Template

East Fairfax Street

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION
PE Phase				
Design / Engineering				\$0.00
Environmental (+contingency)				\$4,514.00
Survey				\$0.00
Advanced Right of Way (Appraisals, Plats, etc.)				\$0.00
Sub-Total:				\$4,514.00
Administration				\$1,000.00
VDOT PE Oversight				\$1,000.00
PE Phase Total Cost:				\$6,514.00
RW Phase				
Land Acquisition				\$0.00
Legal Fees (Attorney, Recording, etc.)				\$0.00
Sub-Total:				\$0.00
Utility Coordination				\$0.00
Utility Relocation				\$0.00
Sub-Total:				\$0.00
Administration				\$0.00
VDOT RW Oversight				\$0.00
Sub-Total:				\$0.00
RW Phase Total Cost:				\$0.00
CN Phase				
Mobilization	1.00	LS	5,000.00	\$5,000.00
Demolition				
Remove Existing Concrete Sidewalk	12.00	EA	500.00	\$6,000.00
Remove 54" Triple Silver Maple	1.00	EA	5,000.00	\$5,000.00
Remove Ornamental Tree	1.00	EA	1,200.00	\$1,200.00
Remove & Replace Rose Bush	1.00	EA	500.00	\$500.00
Remove 15" Gum Tree	1.00	EA	1,500.00	\$1,500.00
Sidewalk				
4" Concrete Sidewalk w/4" aggregate	181.00	SY	75.00	\$13,575.00
CG-12 with Detectable Warning Surface	3.00	SY	1,500.00	\$4,500.00
Lamp post relocation	2.00	each	500.00	\$1,000.00
Pavement Markings	800.00	LF	4.00	\$3,200.00
Seeding	1.00	EA	1,800.00	\$1,800.00
Safety fence	350.00	LF	2.00	\$700.00
Sub-Total:				\$43,975.00
Contingencies				\$32,732.00
Construction Management				\$2,500.00
Inspection				\$2,500.00
Materials Testing				\$2,500.00
Sub-Total:				\$40,232.00
Administration				\$5,000.00
VDOT CN Oversight				\$3,500.00
Sub-Total:				\$8,500.00
CN Phase Total Cost:				\$92,707.00
PROJECT TOTAL COST				\$99,221.00

May 2021

Fairfax Street looking east from the Fellowship Square development toward Page Street.



East Fairfax Street looking west into the Fellowship Square development.



Cost Estimate - Application Template

West Fairfax Street

ITEM DESCRIPTION	QUANTITY		UNIT	UNIT PRICE	EXTENSION
PE Phase					
Design / Engineering	1		L.S.	80,000.00	\$80,000.00
Environmental	1		L.S.	10,000.00	\$10,000.00
Survey	1		L.S.	10,000.00	\$10,000.00
Advanced Right of Way (Appraisals, Plats, etc.)	1		L.S.	15,000.00	\$15,000.00
Sub-Total:					\$115,000.00
Administration w/ contingency					\$40,088.00
VDOT PE Oversight					\$4,500.00
PE Phase Total Cost:					\$159,588.00
RW Phase					
Land Acquisition - incl survey plat and deed & corner	14		EA	7,500.00	\$105,000.00
Legal Fees (Attorney, Recording, etc.)	14		EA	1,000.00	\$14,000.00
Sub-Total:					\$119,000.00
Utility Coordination	1		L.S.		\$0.00
Utility Relocation	1		L.S.		\$0.00
Sub-Total:					\$0.00
Administration w/ contingency					\$39,615.00
VDOT RW Oversight					\$6,000.00
Sub-Total:					\$45,615.00
RW Phase Total Cost:					\$164,615.00
CN Phase					
Demolition					
Mill and Remove Existing Roadbed	1900		SY	65.00	\$123,500.00
Relocate Overhead Utility Poles	8		EA	6,500.00	\$52,000.00
Relocate existing Water meters	7		EA	1,200.00	\$8,400.00
Construction					
Mobilization	1		LS	8,750.00	\$8,750.00
Survey construction stakeout	1		EA	12,500.00	\$12,500.00
Aggregate	1120		SY	23.00	\$25,760.00
Sidewalk	292		SY	75.00	\$21,900.00
Curb and Gutter	1312		LF	25.00	\$32,800.00
Drop Inlet	9		EA	5,052.00	\$45,468.00
Nutrient Credit Purchase for SWM water Quality	2		EA	25,000.00	\$37,500.00
Asphalt 2" Surface Coat	3516	2	SY	5.49	\$38,606.00
Asphalt 3" Base Coat	1330	3	SY	5.49	\$21,905.00
Storm Manholes	2		EA	3,750.00	\$7,500.00
ES-1 2 18"	1		EA	565.00	\$565.00
ES-1 1 24"	2		EA	755.00	\$1,510.00
18" RCP	510		LF	50.00	\$25,500.00
24" RCP	156		LF	67.50	\$10,530.00
Driveway Restoration	16		EA	1,000.00	\$16,000.00
HC Ramps	6		EA	550.00	\$3,300.00
Stop Signs	4		EA	375.00	\$1,500.00
Street Name Signs	3		EA	375.00	\$1,125.00
Sub-Total:					\$496,619.00

Contingencies					\$326,053.00
Construction Management					\$45,000.00
Inspection					\$25,000.00
Materials Testing					\$15,000.00
Sub-Total:					\$411,053.00
Administration					\$35,000.00
VDOT CN Oversight					\$35,000.00
Sub-Total:					\$70,000.00
CN Phase Total Cost:					\$977,672.00
PROJECT TOTAL COST					\$1,301,875.00

**BERRYVILLE TOWN COUNCIL
PUBLIC INFORMATION MEETING NOTICE**

The Berryville Town Council will hold the following public information meeting at 7:00 p.m., or as soon after as this matter may be heard, on Tuesday, September 14, 2021, in the Main Meeting Room, Second Floor, of the Berryville-Clarke County Government Center, 101 Chalmers Court, Berryville, Virginia to consider the following:

The Council of the Town of Berryville will take public comment on the submission of two applications to the Virginia Department of Transportation's Transportation Alternatives Program in order to fund the construction of a new sidewalk on the south side of East Fairfax Street between Page Street and the Fellowship Square development and sidewalk and associated improvements on West Fairfax Street between North Church Street and North Buckmarsh Street (US 340).

Copies of materials pertinent to these items may be examined at the Town of Berryville Business Office, Berryville-Clarke County Government Center, 101 Chalmers Court, Berryville, Virginia, during regular business hours, holidays excepted. Additional information may be obtained by calling the Town Business Office at (540) 955-1099.

Any person desiring to be heard regarding the above matter should appear at the appointed time and place. Written copies of statements at public hearings are requested but not required.

The Town of Berryville does not discriminate against disabled people in admission or access to its programs and activities. Accommodations will be made for disabled people upon prior request.

By order of the Town Council
Keith R. Dalton, Town Manager

Berryville – Clarke County
Government Center
101 Chalmers Court, Suite A
Berryville, VA 22611



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BERRYVILLE
EST. 1798 *Genuine* VIRGINIA

**BERRYVILLE TOWN COUNCIL
NOTICE TO ADJACENT PROPERTY OWNERS
PUBLIC INFORMATION MEETING**

The Berryville Town Council will hold the following public information meeting at 7:00 p.m., or as soon after as this matter may be heard, on Tuesday, September 14, 2021, in the Main Meeting Room, Second Floor, of the Berryville/Clarke County Government Center, 101 Chalmers Court, Berryville, Virginia to consider the following:

The Council of the Town of Berryville will take public comment on the submission of two applications to the Virginia Department of Transportation's Transportation Alternatives Program in order to fund the construction of a new sidewalk on the south side of East Fairfax Street between Page Street and the Fellowship Square development and sidewalk and associated improvements on West Fairfax Street between North Church Street and North Buckmarsh Street (US 340).

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By Order of the Berryville Town Council,
Keith R. Dalton, Town Manager

Harry Lee Arnold, Jr.
Mayor

Erecka L. Gibson
Recorder

Council Members

Donna Marie McDonald
Ward 1

Diane Harrison
Ward 2

Grant Mazzarino
Ward 3

Kara C. Rodriguez
Ward 4

Keith R. Dalton
Town Manager

Berryville – Clarke County
Government Center
101 Chalmers Court, Suite A
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BERRYVILLE
EST. 1798 *Genuine* VIRGINIA

RESOLUTION OF GOVERNING BODY OF THE TOWN OF BERRYVILLE

A RESOLUTION: IN SUPPORT OF THE VDOT TRANSPORTATION ALTERNATIVES PROGRAM GRANT FOR SIDEWALK INSTALLATION ON EAST FAIRFAX STREET

WHEREAS, the Council of the Town of Berryville ("Council") will be requesting Transportation Alternatives Program (TAP) grant funding in order to fund the construction of a new sidewalk on the south side of East Fairfax Street between Page Street and the Fellowship Square development; and

WHEREAS, Council has identified the need for pedestrian connectivity along Fairfax Street to accommodate safe pedestrian access by residents of new and existing multi- and single-family residential development; and

WHEREAS, Council has committed to provide the 20% match and provide future maintenance and upkeep of the completed project.

NOW, THEREFORE BE IT RESOLVED that the Council of the Town of Berryville, Virginia hereby supports the Transportation Alternatives Program grant application for the installation of sidewalk on the south side of East Fairfax Street between Page Street and the Fellowship Square development.

Passed this 14th day of September, 2021.

Attest: _____ By: Harry Lee Arnold, Jr., Mayor

CERTIFICATION

I hereby certify that the above resolution was duly adopted by the Council of the Town of Berryville, in a duly assembled meeting on the 14th day of September, 2021.

Erecka L. Gibson, Recorder

Harry Lee Arnold, Jr.
Mayor

Erecka L. Gibson
Recorder

Council Members

Donna Marie McDonald
Ward 1

Diane Harrison
Ward 2

Grant Mazzarino
Ward 3

Kara C. Rodriguez
Ward 4

Keith R. Dalton
Town Manager

Berryville – Clarke County
Government Center
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BERRYVILLE
EST. 1798 *Genuine* VIRGINIA

RESOLUTION OF GOVERNING BODY OF THE TOWN OF BERRYVILLE

A RESOLUTION: IN SUPPORT OF THE VDOT TRANSPORTATION ALTERNATIVES PROGRAM GRANT FOR SIDEWALK AND ADDITIONAL FACILITIES INSTALLATION ON WEST FAIRFAX STREET.

WHEREAS, the Council of the Town of Berryville ("Council") will be requesting Transportation Alternatives Program (TAP) grant funding in order to fund the construction of sidewalk and associated improvements on West Fairfax Street between North Church Street and North Buckmarsh Street (US 340); and

WHEREAS, Council has identified the need for pedestrian connectivity along Fairfax Street to accommodate safe pedestrian access by residents of new and existing multi- and single-family residential development; and

WHEREAS, Council has committed to provide the 20% match and provide future maintenance and upkeep of the completed project.

NOW, THEREFORE BE IT RESOLVED that the Council of the Town of Berryville, Virginia hereby supports the Transportation Alternatives Program grant application for the installation of a sidewalk and associated improvements and on West Fairfax Street.

Passed this 14th day of September, 2021.

Attest: _____ By: Harry Lee Arnold, Jr., Mayor

CERTIFICATION

I hereby certify that the above resolution was duly adopted by the Council of the Town of Berryville, in a duly assembled meeting on the 14th day of September, 2021.

Erecka L. Gibson, Recorder

Harry Lee Arnold, Jr.
Mayor

Erecka L. Gibson
Recorder

Council Members

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Ward 1

Diane Harrison
Ward 2

Grant Mazzarino
Ward 3

Kara C. Rodriguez
Ward 4

Keith R. Dalton
Town Manager

**Berryville Town Council Item Report Summary
September 14, 2021**

Item Title

Consent Agenda - Approval of Minutes

Prepared By

Paul Culp, Town Clerk

Background/History/General Information

A consent agenda is a tool utilized by the Town Council for grouping routine business and reports into one agenda item.

Any Council member may, as a matter of privilege, remove an item from the consent agenda and have it replaced with another agenda item.

Findings/Current Activity

The consent agenda comprises two items to be considered for approval:

Minutes of the 07.13.2021 Town Council regular meeting
Minutes of the 08.24.2021 meeting of the Streets and Utilities Committee

Financial Considerations

None.

Schedule/Deadlines

None.

Other Considerations

None.

Attachments

1. Consent Agenda September

Recommendation

Approval.

Sample Motion

I move that the Council of the Town of Berryville approve the consent agenda.

MINUTES
BERRYVILLE TOWN COUNCIL
Berryville-Clarke County Government Center
Regular Meeting
July 13, 2021
7:00 p.m.

Town Council: Present—Harry Lee Arnold, Jr., Mayor; Erecka L. Gibson, Recorder; Donna McDonald; Diane Harrison; Kara Rodriguez. Participating via telephone—Grant Mazzarino

Staff: Present--Keith Dalton, Town Manager; Christy Dunkle, Community Development Director; Chief Neal White, Berryville Police Department; Paul Culp, Town Clerk; Cynthia Poulin, Finance Clerk

Press: Mickey Powell, *The Winchester Star*.

1. Call to Order

Mayor Arnold called the meeting to order at 7:00 p.m.

2. Pledge of Allegiance

3. Approval of Agenda

Ms. Rodriguez moved that the Council of the Town of Berryville, with a quorum present in the Main Meeting Room of the Berryville-Clarke County Government Center, approve remote participation via telephone by Council member Grant Mazzarino at the meeting as he was unable to attend in person because of work conflict. The motion passed by unanimous voice vote.

Recorder Gibson moved to approve the agenda as presented. The motion passed by unanimous voice vote.

4. Presentations/Awards/Recognitions

The mayor asked the clerk to read aloud the **attached** resolution honoring the Clarke County High School girls' soccer team for winning the state championship and the boys' team for winning the region title and a berth in the state championship tournament.

Ms. Rodriguez moved to approve the resolution. The motion passed by unanimous voice vote.

Mayor Arnold recognized the presence of Matt Bass of the Clarke County Board of Supervisors.

5. Public Hearing: Adoption of the Town of Berryville American Rescue Plan Act of 2021 Implementation Plan

Mr. Dalton noted that the Town was supposed to receive a total of approximately \$4.5 million in funding under ARPA and that allocation had been discussed in work sessions on April 5 and June 22, with some changes being made to the draft implementation plan since the latter meeting.

Ms. Rodriguez asked what changes in the plan pertained to utility account credits. Mr. Dalton explained that the Town's software provider had changed its position and concluded that a credit for usage would not be possible. Mr. Dalton said that the Town would instead provide a six-month moratorium on administrative fees.

Ms. Rodriguez asked how the Town would communicate to users regarding the cessation and eventual resumption of charges. Mr. Dalton said an insert of contrasting color would be included with bills and that the comment section of bills would also provide the starting and concluding dates of the moratorium.

Ms. Rodriguez asked about the cost of an eight-month pause compared with six months. Ms. Poulin said it would be \$240,000 versus \$169,000. Ms. Poulin and Ms. Harrison discussed when the six-month period would begin.

Berryville resident Corey Lucier asked what software difficulties would prevent a credit for usage. Mr. Dalton said the software provider had said this would create accounting problems in the absence of reprogramming that would not be possible within the necessary span of time.

Mayor Arnold opened and then closed the public hearing at 7:16, as no one addressed the meeting.

6. Discussion of Public Hearing Items

No discussion occurred.

Ms. Rodriguez moved that the Council of the Town of Berryville adopt the attached Town of Berryville American Rescue Plan Act of 2021 Implementation Plan and further moved that the Town Manager be directed to take steps necessary to effect and fulfill plan elements. The motion passed by unanimous voice vote.

7. Citizens' Forum

Mr. Lucier said that he and other residents with swimming pools had been adversely affected by high sewer fees related to the replacement of pool water at the beginning of the season and asked for the installation of separate meters not associated with the sewer system.

8. Consent Agenda

The consent agenda comprised the minutes of the June 8 Town Council regular meeting, the June 22 Town Council special session, and the June 28 meeting of the Community Development Committee.

Ms. McDonald moved to adopt the consent agenda as presented. The motion passed by unanimous voice vote.

9. Unfinished Business

None.

10. New Business

No new business came before the Council.

11. Council Member Reports

Mayor Arnold, Recorder Gibson, Ms. Harrison, Mr. Mazzarino, and Ms. Rodriguez had nothing to add.

Ms. McDonald said she had received multiple complaints about speeding from her Ward 1 constituents. She said she had asked the complainants to report the matter to Chief White. Mr. Dalton said staff would perform surveys to obtain further details.

12. Staff Reports

Public Works

Mr. Dalton said the Rockcroft project as planned is essentially complete, and briefly described work still to be performed on the mains.

Public Utilities

Nothing was added to the written report.

Police

Chief White said the Old Dominion Alcohol Safety Action Program Board and the Old Dominion Community Criminal Justice Board had requested that the Town Council reappoint him to both boards for an additional three-year term each, the Council having initially appointed him to those positions in 2018.

Recorder Gibson moved that the Council of the Town of Berryville appoint Neal White to a three-year term on the Old Dominion Alcohol Safety Action Program Board with such term to begin immediately. The motion passed by unanimous voice vote.

Chief White explained that five of the eight state psychiatric hospitals were being closed to new patients, which he described as a catastrophic failure of the state imposed on localities. He said it would have a deleterious effect on provision of mental health treatment for the community in general and that it also would result in persons with emergency custody orders being held in emergency rooms under guard by law enforcement officers who therefore would no longer be available for other duties. Chief White asked that the Council write to legislators about the matter. The consensus of the Council was that staff should prepare a letter for Mayor Arnold's signature.

Community Development

Ms. Dunkle updated the Council on the activities of the various boards associated with planning, and on construction in local subdivisions. She said parking problems in the Hermitage subdivision had been resolved, that work to get the Mosby Boulevard sidewalk underway was continuing, and that she was proceeding with Transportation Alternatives Program grants for sidewalk work on East and West Fairfax Streets.

Mr. Dalton noted an upcoming staff meeting with County officials to discuss annexation as described in recent meetings of the Council.

Administration and Finance

Ms. Poulin had nothing to add to her report.

Town Manager

Mr. Dalton said he and other staff members would be meeting later in the week with the Town engineer discuss projects to be pursued with funding from the American Rescue Plan Act.

Mr. Dalton directed the Council's attention to the portion of the agenda packet containing a draft of amendments to the schedule of water and sewer fees and charges. He said the monthly administrative fee charge would increase by \$5.21 for water and \$2.40 for sewer, with a 2 percent increase in availability fees for each. He said he had also clarified multi-family residence charges and had proposed an increase in the cost of camera inspections for mains and laterals.

Mr. Dalton asked the Council to have a public hearing in September on the proposed changes to water and sewer fees and charges.

Recorder Gibson moved that the Council of the Town of Berryville set a public hearing for its regular meeting in September to receive public comment on the **attached** draft Schedule of Water and Sewer Fees and Charges. The motion passed by unanimous voice vote.

13. Committee Updates

Budget and Finance

Recorder Gibson said the committee would meet on September 28 at 10:30 a.m.

Community Development

Ms. Rodriguez said the committee would next meet in October. She then resumed recent discussions of the proposed redesign of the Town website by referring to a PowerPoint presentation that provided statistics on the number and purpose of visits to the website.

Ms. Harrison showed the Council the template preferred by the committee and explained its advantages over the current one.

There was a discussion of the cost of hosting, of what proportion of the \$8,000 fee for the upgrade was associated with branding, and whether tech support would be included in the contract.

Ms. Gibson noted that the website had last been updated in 2016 and said the need for technological improvement was the most important justification for the redesign. Mr. Mazzarino noted that the website had been optimized for a browser that would soon be phased out altogether.

Personnel

Mayor Arnold said the committee would meet on September 28 at 9:00 a.m. to discuss vacancies on the Tree Board and Board of Zoning Appeals.

Public Safety

Ms. McDonald said the committee would next meet on September 28 at 2:00.

Streets and Utilities

Ms. Harrison said the committee would next meet on August 24 at 1:00 p.m.

14. Closed Session

Ms. Harrison moved that the Council of the Town of Berryville enter closed session in accordance with §2.2-3711-A-1 of the Code of Virginia, to discuss and evaluate the performance of a specific individual and to discuss prospective candidates for employment. The motion passed by unanimous voice vote.

The Council entered closed session at 7:58 p.m. and reconvened in open session at 9:37 p.m.

Ms. Rodriguez moved that the Council of the Town of Berryville adopt the attached resolution certifying it has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of The Virginia Freedom of Information Act. The motion passed by unanimous roll-call vote.

15. Other

No other business came before the Council.

16. Adjourn

The Council adjourned by unanimous voice vote on a motion by Recorder Gibson at 9:38 p.m.

Erecka L. Gibson, Recorder

Paul Culp, Town Clerk

BERRYVILLE TOWN COUNCIL SIGN-UP SHEET

Citizens' Forum

Tuesday, July 13, 2021

7:00 p.m.

Name: _____ Town of Berryville Resident?

<u>COREY WUCI ER</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No
_____	Yes	No

Berryville – Clarke County
Government Center
101 Chalmers Court, Suite A
Berryville, VA 22611



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www.berryvilleva.gov

BERRYVILLE
EST. 1798 *Genuine* VIRGINIA

RESOLUTION HONORING THE CLARKE COUNTY HIGH SCHOOL SOCCER PROGRAM

WHEREAS the Clarke County girls' and boys' soccer programs enjoyed outstanding seasons even by the high standards established throughout the history of both programs; and

WHEREAS the Clarke County girls' soccer team defeated Radford 4-0 in the 2021 Class 2 championship game for the third state title in its history and first since 2006; and

WHEREAS the Clarke County girls' soccer team posted a perfect 13-0 record on the season; and

WHEREAS the Clarke County boys' soccer team reached the 2021 state semifinals after winning its first Bull Run district regular season title since 2012; and

WHEREAS the Clarke County boys' soccer team earned its first state tournament berth since 2012 and its first region title since 2006; and

WHEREAS the Clarke County boys' soccer team outscored its opponents 98-10 *en route* to a record of 11 wins and one loss; and

WHEREAS the stellar performance of the Clarke County High School soccer programs constitutes a noteworthy achievement for the participants, parents, coaches, and support personnel; and

WHEREAS the success of the Clarke County High School soccer program brings honor to the Clarke County School system and to Clarke County as a whole;

NOW, THEREFORE, BE IT RESOLVED that the Council of the Town of Berryville commends and congratulates the Clarke County High School girls' and boys' soccer teams for their superlative accomplishments during the 2021 season.

By order of the Town Council on this thirteenth day of July 2021.

Harry Lee Arnold, Jr., Mayor

Erecka L. Gibson, Recorder

Harry Lee Arnold, Jr.
Mayor

Erecka L. Gibson
Recorder

Donna Marie McDonald
Ward 1

Council Members
Diane Harrison
Ward 2

Grant Mazzarino
Ward 3

Kara C. Rodriguez
Ward 4

Keith R. Dalton
Town Manager

**Town of Berryville
American Rescue Plan Act of 2021
Implementation Plan
ADOPTED _____**

I. Overview

The Town of Berryville is slated to receive \$4,534,986 as a result of the passage of the American Rescue Plan Act of 2021 (ARPA).

The Town is ~~expected to received~~ 50% of the funds (\$2,267,493) in the near term on June 30, 2021 and the remaining funds (\$2,267,493) a year after the first grant is provided.

The period of performance for this grant ends on December 31, 2026, but funds may only be used to cover eligible costs from March 3, 2021 through December 31, 2024 (NOTE: This information is taken from Department of the Treasury, Appendix C Award Terms and Conditions. Other guidance also provided by the Department of Treasury states that funds committed by December 31, 2024 must be spent by December 31 2026). Accordingly, the Town will likely expend ARPA funds in the following fiscal years:

- FY22
- FY23
- FY24
- FY25
- FY26
- FY27 (first half)

ARPA funds must be used to:

- respond to the COVID-19 pandemic and its negative effects in order to assist households, businesses, and non-profits;
- provide for premium or hazard pay for employees;
- address reduced government revenues; and
- make necessary investments in water, sewer, and broadband infrastructure.

II. Approach to properly expending ARPA funds

After review of applicable federal regulations (31 CFR Part 35, RIN 1505-AC77 Coronavirus State and Local Fiscal Recovery Funds, Department of the Treasury, Interim final rule) the Town Council has made findings

regarding community needs and determined how ARPA funds awarded to the Town will be expended.

The Council has made every effort to structure its American Rescue Plan Act of 2021 Implementation Plan (Plan) in a manner that complies with federal laws and regulations and meets the needs of the citizens of Berryville.

Categories of expenditure under the Plan include: response to the pandemic and its negative effects in order to assist households, businesses, and non-profits; provision of premium pay to employees; addressing reduction in revenues to the Town; making necessary investments in water and sewer infrastructure; and pay for administrative costs related to the implementation of the Plan and associated projects.

The Council will monitor the expenditure of funds to ensure that the requirements of the Plan are met. The Council reserves the right to amend the Plan at any time as it deems such amendments necessary. The Council will also provide oversight of Plan implementation and make changes to administrative determinations as it considers such changes necessary.

The Council hereby tasks the Town Manager with management and oversight and management of the Plan. The Council acknowledges that the Manager will develop and adopt regulations, procedures, forms, agreements, and the like that are necessary to fully implement the Plan. The Council acknowledges that the Manager has tasked the Treasurer with compliance with record keeping and reporting requirements under the Plan and ARPA.

The Manager will provide a report on ARPA and the Plan at each regular meeting of the Town Council and at other times as considered necessary by the Council or the Manager. The Manager will cause a page on the Town website to be created and maintained where the Plan and Town Council updates will be posted.

Appeals of determinations and decisions of the Manager made in accordance with the Plan shall be made in writing to the Council within 15 days of the determination or decision in question. Such appeals will be heard by the Council within 60 days of receipt of the appeal. The Council

will issue a written determination on the appeal within 90 days of receipt of the appeal.

III. Attachments

Appendix A

31 CFR Part 35, RIN 1505-AC77 Coronavirus State and Local Fiscal Recovery Funds, Department of the Treasury, Interim final rule

Appendix B

Cost Estimates, Category Expenditure Limits, and Implementation Schedules

Appendix C

Description of Central Business District

Appendix D

Non-prioritized list of necessary water, sewer, and stormwater infrastructure projects approved for consideration

IV. Response to the pandemic and its negative effects in order to assist households, businesses, and non-profits

a. Findings

The Council finds that the Town's utility customers experienced difficulties meeting the challenges of paying bills during the pandemic and that credits toward utility bills over a period of time will mitigate some of the negative effects of the COVID-19 pandemic.

The Council finds that the Town's central business district was negatively affected by COVID-19 pandemic. The Council also finds that directional signage directing traffic into the central business district and façade/signage/accessibility improvements to central business district business occupancies will support that district and mitigate some of the negative effects of the COVID-19 pandemic.

The Council finds that non-profit organizations that are located in Town or serve the citizens of Berryville were negatively

affected by the COVID-19 pandemic. The Council also finds that non-profits can, in some instances, best mitigate the negative effects of the COVID-19 pandemic. The Council also finds that John H. Enders Volunteer Fire Department Company and Rescue Squad is an essential part of the response to the COVID-19 pandemic. Accordingly, the Council has determined that grants should be provided to non-profits that serve the citizens of the Town.

The Council finds that the COVID-19 pandemic revealed weaknesses in local government's ability to communicate with and serve the needs of its citizens. The Council also finds that that the COVID-19 pandemic revealed weaknesses in local government's ability to support its essential employees during emergencies, thus revealing a weakness in how well local government can serve its citizens during time of crisis. Accordingly, the Council has determined that emergency communications, cleaning/disinfecting equipment and supplies, life-sustaining supplies for essential employees, and communications with the general public should be improved through the use of ARPA funds.

b. Proposed projects/expenditures

- i. Pay balance on delinquent water and sewer account delinquencies that were 60 days or more in arrears as of June 22, 2021.

Implementation

Qualified account delinquencies would be paid within 10 business days of receipt of first payment from federal government.

- ii. Credit each water and sewer account in the Town system an amount equal to cost of 1,000 gallons of usage (water and sewer) and monthly administrative and facilities fees for the following 6 months.

~~August 2021~~
~~September 2021~~
~~October 2021~~
~~November 2021~~

~~December 2021~~
~~January 2022~~

Implementation

Credits would be applied to all qualifying accounts after meters are read in a given billing period.

- iii. Complete a wayfinding sign project to direct traffic to points of interest in central business district.

Implementation

A wayfinding (VDOT program) sign package will be planned and installed and complementary signage will be planned and installed at public parking facilities and Rose Hill Park.

- iv. Provide reimbursement funds for qualifying improvements to eligible commercial buildings in the central business district.

Implementation

Reimbursements of up to \$12,500 will be offered to owners of commercial buildings in the central business district for:

- accessibility improvements (with primary focus on providing access into businesses),
- business sign replacement or refurbishment,
- building façade beautification and improvement, and
- site cleaning and beautification

- v. Provide grants for non-profits that assisted Berryville residents through the difficulties of the COVID-19 pandemic and those non-profits that serve the citizens of Berryville and were negatively affected by the COVID-19 pandemic.

Implementation

Grants would be provided to non-profits serving the citizens of Berryville.

Grants for the following non-profits would be provided in two cycles over two years. Each year of the two-year cycle, the following grants will be available:

John H. Enders Volunteer Fire Department Company and Rescue Squad will receive \$40,000. The grant funds must be used for equipment purchase or maintenance and training.

Barns of Rose Hill will receive \$20,000.* Grant funds must be used as follows:

One-half of the grant must be used to provide reduced-cost or no-cost programming to the community. Such programming must endeavor to support businesses within the Central Business District.

One-half of the grant must be used for building and property improvement or maintenance.

*Non-profit must demonstrate financial harm from COVID-19 pandemic and that such financial harm was not already addressed under the CARES Act.

Grants for housing assistance would be provided in three cycles over three years. Each year of the three-year cycle, the following grants will be available:

A non-profit (or non-profits) will receive \$40,000 for completion of necessary improvements to owner-occupied dwellings within the Town. Household income of owners

receiving assistance from non-profit may not exceed 80% of this community's adjusted medium income (AMI) for the last year information is available. Qualifying improvements include:

accessibility improvements,
sanitation improvements,
roof repair or replacement,
weatherization,
window repair or replacement,
site grading to divert water from dwelling foundation, and
property cleanup.

- vi. Purchase equipment and supplies to aid in pandemic and other disaster response.

Implementation

The Town of Berryville will purchase items such as: disinfection and cleaning equipment and supplies, personal protective equipment, and material and supplies to sustain employees when working through emergencies.

- vii. Improve emergency communications/response and improve communication with the residents of Town.

Implementation

The Town will purchase both portable and mobile radios for its Police Department, contract to have the Town's website rebuilt, and make improvements in Town/County emergency communications/response.

V. Provide premium pay to qualifying Town employees

a. Findings

The Council finds that all Town employees were relied on to maintain continuity of operations of essential infrastructure sectors that are critical to protect the health and well-being of the residents of Berryville.

The Council also finds that all employees working on-site (excludes teleworking) during the period of time in question were involved in essential work and eligible for premium pay.

b. Proposed projects/expenditures

Implementation

Premium pay of \$400 per month for the period of time from January 1, 2020 to May 31, 2021.

To qualify for this payment, employees must:
have been full-time regular employees or introductory employees during the subject period of time;
be in the employ of the Town as of August 1, 2021;
have worked (excluding remote work) at least fourteen days in a month for which leave is paid; and
have not received other hazard pay for the same period of time.

VI. Address reduction in revenues to Town

a. Findings

After review of the matter, the Council finds that the Town experienced no significant loss as a result of the COVID-19 pandemic.

b. Proposed projects/expenditures

No project/expenditure is expected under this category.

Implementation

No action will be taken.

VII. Complete necessary water and sewer infrastructure projects

a. Findings

The Council finds that the projects enumerated in Appendix D, as may be amended by the Council, are necessary infrastructure projects that may be completed with ARPA funds.

b. Proposed projects/expenditures

Projects enumerated in Appendix D will be completed as funds and administrative capacity permit:

Implementation

The Town Manager will take actions to plan, initiate, and have completed the projects enumerated in Appendix D within the limitations of the Town of Berryville Procurement Policy.

VIII. Pay for administrative costs related to the implementation of the Plan and associated projects

a. Findings

The Council finds that administrative costs associated with implementation of the Plan may be paid from ARPA funds.

b. Proposed projects/expenditures

The Council directs staff to track staff and contractor time that is expended to develop and implement the Plan and manage associated projects, and to provide for required record-keeping and reporting.

Implementation

The Town Manager will cause administrative costs to be tracked and charged against ARPA funds at the end of each month.

IX. Unexpended Funds

Funds remaining unspent for projects or programs enumerated in Sections IV (Response to the pandemic and its negative effects in order to assist households, businesses, and non-profits), V (Provide premium pay to qualifying Town employees), VI (Address reduction in revenues to Town), and VIII (Pay for administrative costs related to the implementation of the Plan and associated projects), may be utilized for programs and projects enumerated in Section VII (Complete necessary water and sewer infrastructure projects).

American Rescue Plan Act of 2021 Implementation Plan Tracking
4/6/21 Town Council Work Session
6/22/21 Town Council Work Session (public hearing set for 7/13/21)

DRAFT

Federal government guidance not included.

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Appendix B
Cost Estimates, Category Expenditure Limits, and
Implementation Schedules *7/17/21 Changes*

Response to the pandemic and its negative effects in order to assist,
households, businesses, and non - profits

Water and sewer bill accounts

Estimated cost of these actions:

- Payment of delinquent accounts	\$ 10,000.00
- Water and sewer account credits	\$ 1,169,100.00
- Total	\$ 1,179,100.00

Fiscal year (s)

FY22

Percentage of total federal grant
Funds used from first payment
Funds used from second payment
Funds remaining from first payment
Funds remaining from second payment

	3.73%
\$	1,179,100.00
\$	-
\$	1,088,898.00
\$	2,267,493.00

Signage

Estimated cost of these actions:

- Signage	\$ 140,000.00
- Total	\$ 140,000.00

Fiscal year (s)

FY22, FY23&FY24

Percentage of total federal grant
Funds used from first payment
Funds used from second payment
Funds remaining from first payment
Funds remaining from second payment

	3.00%
\$	60,000.00
\$	80,000.00
\$	2,028,393.00
\$	2,187,493.00

Improvements In Central Business District

Estimated cost of these actions	
- Facades, signs, accessibility	\$ 250,000.00
- Total	\$ 250,000.00

Fiscal year (s)	FY22, FY23&FY24
Percentage of total federal grant	5.50%
Funds used from first payment	\$ 125,000.00
Funds used from second payment	\$ 125,000.00
Funds remaining from first payment	\$ 1,903,393.00
Funds remaining from second payment	\$ 2,062,493.00

Non- Profits

Estimated cost of these actions	
- John H Enders FD	\$ 80,000.00
- Barns of Rose Hill	\$ 40,000.00
- Housing assistance	\$ 120,000.00
- Total	\$ 240,000.00

Fiscal year (s)	FY22, FY23 & FY24
Percentage of total federal grant	5.20%
Funds used from first payment	\$ 160,000.00
Funds used from second payment	\$ 80,000.00
Funds remaining from first payment	\$ 1,743,393.00
Funds remaining from second payment	\$ 1,982,493.00

Purchase of equipment and supplies

Estimated cost of these actions	
- Purchase of equipment, etc	\$ 25,000.00
- Total	\$ 25,000.00

Fiscal year (s)	FY22
Percentage of total federal grant	0.50%
Funds used from first payment	\$ 25,000.00
Funds used from second payment	\$ -
Funds remaining from first payment	\$ 1,718,393.00
Funds remaining from second payment	\$ 1,982,493.00

Improve Communications

Estimated cost of these actions

- Website	\$	8,000.00
- Radios	\$	60,000.00
- Other imp.	\$	60,000.00
- Total	\$	128,000.00

Fiscal year (s)

FY22 & FY23

Percentage of total federal grant		2.82%
Funds used from first payment	\$	128,000.00
Funds used from second payment	\$	-
Funds remaining from first payment	\$	1,590,393.00
Funds remaining from second payment	\$	1,982,493.00

Premium Pay

Estimated cost of these actions

- Provide premium pay	\$	172,000.00
- Total	\$	172,000.00

Fiscal year (s)

FY22

Percentage of total federal grant		3.70%
Funds used from first payment	\$	172,000.00
Funds used from second payment	\$	-
Funds remaining from first payment	\$	1,418,393.00
Funds remaining from second payment	\$	1,982,493.00

Address reduction in revenues to Town

Estimated cost of these actions

-	\$	-
- Total	\$	-

Fiscal year (s)

Percentage of total federal grant		
Funds used from first payment	\$	-
Funds used from second payment	\$	-
Funds remaining from first payment	\$	1,418,393.00
Funds remaining from second payment	\$	1,982,493.00

Complete necessary water and sewer infrastructure projects

Estimated cost of these actions

- Cost of the projects	\$ 3,077,986.00
- Total	\$ 3,077,986.00

Fiscal year (s)

FY22, FY23, FY24, FY25, FY26 & FY27

Percentage of total federal grant	67.90%
Funds used from first payment	\$ 1,278,898.00
Funds used from second payment	\$ 1,792,493.00
Funds remaining from first payment	\$ 140,000.00
Funds remaining from second payment	\$ 190,000.00

Pay for administrative costs

Estimated cost of these actions

- Administrative costs per FY (5.5)	\$ 60,000.00
- Total	\$ 330,000.00

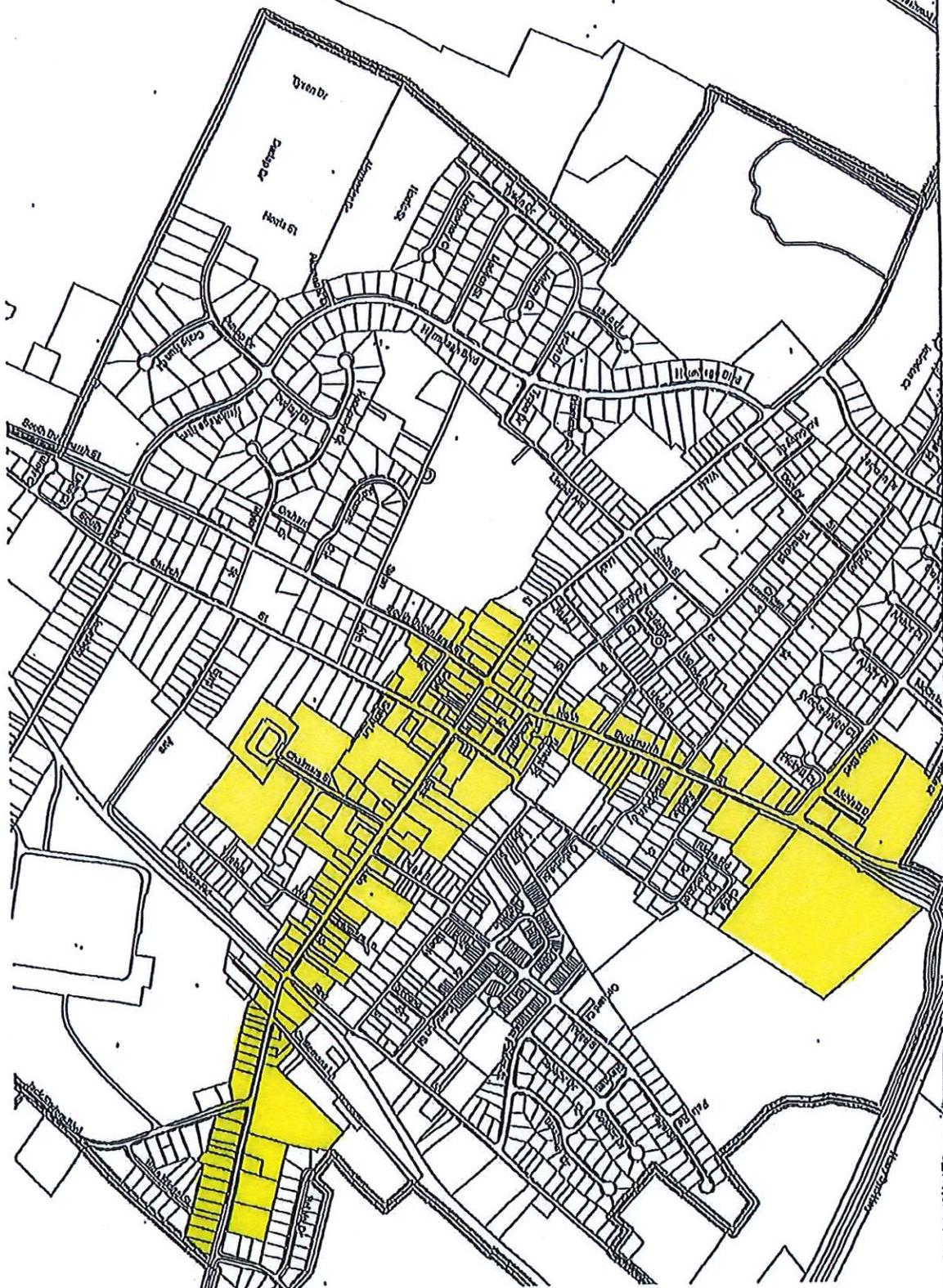
Fiscal year (s)

FY22, FY23, FY24, FY25, FY26 & FY27

Percentage of total federal grant	7.27%
Funds used from first payment	\$ 140,000.00
Funds used from second payment	\$ 190,000.00
Funds remaining from first payment	\$ -
Funds remaining from second payment	\$ -

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Appendix C
Description of Central Business District



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Appendix D
Necessary water and sewer (including stormwater)
infrastructure projects

7/17/21 Chinnick

The following is a list of projects that should be prioritized for completion as a part of the Plan.

Water and sewer

Purchase and install security improvements at water and sewer facilities

Osborne Street, North Church, Bundy Street water and sewer improvements

Purchase and install upgrades to the water and sewer system monitoring and communication network

Computer upgrades at Business Office, Water Treatment Plant, and Wastewater Treatment Plant

Water

Conduct a leak study on the water distribution system to identify problems and provide additional information regarding infrastructure projects that need to be completed and which projects should be prioritized over others

Josephine Street water system improvements

Replace water meter retrofilters/meter setters

Provide for bi-product stripping, aeration, and/or power venting in storage facilities

Booster building repairs (includes pump replacement, pump control, valve replacement, and ventilation)

Water treatment plant improvements (includes replacement of lagoon liners, replacement of pumps, repair of settling basins, eliminating river pump disconnects, and addressing erosion from road stormwater runoff at water intake)

Replace water meters

Rockcroft subdivision water improvements

Bel Voi Street water improvements, including water improvements through True Value property

Battletown Drive water improvements

Replace South Church Street water main from Taylor Street to Crow Street

Construct a water main in Crow Street connecting the mains in Buckmarsh and Church Streets

Acquire and deploy meter reading technology

Replace transmission main from WTP

Sanitary Sewer

Conduct an inflow and infiltration (I&I) study in sewer collection system to identify problems and provide additional information regarding infrastructure projects that need to be completed and which projects should be prioritized over others.

Create a sump pump/sewer system connection abatement program

Upgrade Hermitage sewer pump station and add emergency generator

Upgrade Berryville Glen sewer pump station and add emergency generator

Upgrade First Street (Boom Road) pump station and replace or overhaul emergency generator.

Water treatment plant improvements (including replacement of membranes, crane repair/replacement, elimination of blower disconnects, replacement/refurbishment of pumps, lagoon cleaning and repair

Rehabilitate manholes (may be identified as needing repair or replacement in I&I study)

Repair/replace sewer mains (may be identified as needing repair or replacement in I&I study)

Storm Sewer

Complete work to eliminate ponding on Virginia Avenue

Complete work to modify Jackson Drive pond to divert stormwater from Dorsey Street

Complete piping to convey stormwater from Academy Street Extended to a defined channel

Complete work to convey stormwater from the end of Ashby and Archer Courts to a defined channel

Complete work to convey stormwater from Dorsey and Treadwell Streets to the stormwater collection system in Main Street and upgrade the storm structure that conveys water from a point west of Smith Street to the Town Run at Lincoln Avenue

Improve storm structure in Main Street west of 36 and 37 East Main Street to convey stormwater to the Town Run at Chalmers Court

Address necessary maintenance of Town Run and its tributaries to ensure proper flow of stormwater

Modify stormwater management areas to improve performance

Repair or modify stormwater conduits under sidewalks to address blockages

Reconstruct bridge in Rose Hill Park to reduce restriction of Town Run

~~Complete work to improve stormwater management on Crow Street~~

TOWN OF BERRYVILLE
SCHEDULE OF WATER AND SEWER FEES AND CHARGES

~~Effective November 19, 2020~~

Proposed to be effective November 18, 2021

I. USER FEES

A. WATER

1. Within corporate limits or the limits of an approved annexation area: \$8.15 per 1,000 gallons of usage. Minimum charge \$5.00 per month for usage under 1,000 gallons during billing period.
2. Other: \$10.18 per 1,000 gallons of usage. Minimum charge \$6.25 per month for usage under 1,000 gallons during billing period.

B. SEWER

1. Within corporate limits or the limits of an approved annexation area: \$17.27 per 1,000 gallons of usage. Minimum charge \$15.00 per month for usage under 1,000 gallons during billing period.
2. Other: \$21.58 per 1,000 gallons of usage. Minimum charge \$18.75 per month for usage under 1,000 gallons during billing period.

II. ADMINISTRATIVE AND FACILITIES FEES AND DEPOSITS

A. ADMINISTRATIVE AND FACILITIES FEES

Monthly Administrative and Facilities Fees, charged with usage:

Water ~~\$7.13~~ 12.34

Sewer ~~\$4.82~~ 7.22

Late Fee: 10% of bill amount

Service Disconnection/Reconnection Fee: \$50

Returned Check/ACH Fee: \$50

B. DEPOSITS

Residential: individually metered single-family units, town homes, and duplexes: \$240 255

Residential: multi-family with master meter: \$185 200 per unit

Business/Commercial excluding restaurants and laundries: \$240 255

Restaurant: \$835 850*

Laundry: \$4,560 4,575*

Institutional: \$1,580 1,595*

Industrial: \$5,600 5,615*

*Town Manager may increase or decrease on the basis of actual usage.

Note: Town Manager may establish reasonable deposit amounts for use types not anticipated by this schedule.

III. AVAILABILITY FEES

A. WATER

Meter Size (Inches)	Demand Ratio	Avail. Fee (Corp. Limits or Annex. Area)	Avail. Fee (Other)	Meter Cost
5/8	1	\$ 13,840.00	\$ 17,300.00	Meter Fee
3/4	1.5	\$ 20,760.00	\$ 25,960.00	Meter Fee
1	2.5	\$ 34,600.00	\$ 43,250.00	Meter Fee
1.5	4.375	\$ 60,650.00	\$ 75,680.00	Meter Fee
2	8	\$ 140,720.00	\$ 138,400.00	Meter Fee
3	16	\$ 221,144.00	\$ 276,800.00	Meter Fee
4	25	\$ 346,000.00	\$ 432,500.00	Meter Fee
6	50	\$ 692,000.00	\$ 865,000.00	Meter Fee

Greater than 6", Demand Ratio (AWWA M22) multiplied by fee for Demand Ratio 1.

Meter Size (Inches)	Demand Ratio	Avail. Fee (Corp. Limits or Annex. Area)	Avail. Fee (Other)	Meter Cost
5/8	1	\$ 14,118	\$ 17,648	Meter Fee
3/4	1.5	\$ 21,177	\$ 26,472	Meter Fee
1	2.5	\$ 35,295	\$ 44,120	Meter Fee
1.5	4.375	\$ 61,766	\$ 77,210	Meter Fee
2	8	\$ 112,944	\$ 141,184	Meter Fee
3	16	\$ 225,888	\$ 282,368	Meter Fee
4	25	\$ 352,950	\$ 441,200	Meter Fee
6	50	\$ 705,900	\$ 882,400	Meter Fee

Greater than 6", Demand Ratio (AWWA M22) multiplied by fee for Demand Ratio 1.

Notes:

(a) Multi-family residences are defined as any master-metered group of apartment, townhouse, condominium, or other residential units with each unit having separate kitchen facilities.

(b) In cases in which a master meter serves multi-family residences or a combination of multi-family and commercial units, the applicant will pay a fee based on the higher of A) an amount derived by multiplying the unit charge of \$11,072.8 by the applicable water availability fee for demand ratio 1 for a multi-family residence times the total number of residential and commercial units to be served by a single meter, or B) an amount based on the meter size as specified above.

(c) Meter fee is calculated by adding the cost of the meter and a 30% (of meter cost) handling fee.

B. SEWER

Meter Size (Inches)	Demand Ratio	Avail. Fee (Corp. Limits or Annex. Area)	Avail. Fee (Other)
5/8	1	\$ 14,865.00	\$ 18,581.00
3/4	1.5	\$ 22,298.00	\$ 27,872.00
1	2.5	\$ 37,163.00	\$ 46,453.00
1.5	4.375	\$ 64,960.00	\$ 81,200.00
2	8	\$ 118,920.00	\$ 148,650.00
3	16	\$ 237,840.00	\$ 297,300.00
4	25	\$ 371,625.00	\$ 464,531.00
6	50	\$ 743,250.00	\$ 929,050.00

Greater than 6", Demand Ratio (AWWA M22) multiplied by fee for Demand Ratio 1.

Meter Size (Inches)	Demand Ratio	Avail. Fee (Corp. Limits or Annex. Area)	Avail. Fee (Other)
5/8	1	\$ 15,162	\$ 18,952
3/4	1.5	\$ 22,743	\$ 28,428
1	2.5	\$ 37,905	\$ 47,380
1.5	4.375	\$ 66,334	\$ 82,915
2	8	\$ 121,296	\$ 151,616
3	16	\$ 242,592	\$ 303,232
4	25	\$ 379,050	\$ 473,800
6	50	\$ 758,100	\$ 947,600

Greater than 6", Demand Ratio (AWWA M22) multiplied by fee for Demand Ratio 1.

IV. LATERAL OR CONNECTION FEES

Connection to the Town's water distribution and/or sewer collection system may be completed only if the following conditions are met:

- Party applying to connect to the system agrees to assume all costs associated with connection to the systems, including excavation, taps, vaults, traffic control, restoration (including pavement), testing, inspections, etc.
- Contractor responsible for completing work has been vetted and approved by the Town.

- Plans for the work, including restoration, have been approved by the Town.
- Required surety has been approved and provided to the Town.
- Required insurance coverage is in place and documentation thereof provided to the Town.
- Required permits have been issued by the Town, Virginia Department of Transportation, or other applicable agency.

V. INSPECTIONS

A. Sanitary Sewer Camera Service and Storm Sewer Camera Inspection Service

1. Mains and Laterals Over 4 Inches in Diameter

Mobilization Fee: \$300

Camera Fee: ~~\$2.50~~ 3.00 per linear foot

2. 4-Inch Laterals

Laterals Under 50 Feet in Length: \$150

Laterals 50 Feet in Length or Greater: \$150 plus ~~\$2.50~~ 3.00 per linear foot

B. Inspections

Town staff: \$65 per hour (1 hour minimum for any inspection then billed at ½ hr. increments thereafter)

Licensed professional engineer or approved third-party inspector: Cost

C. Hydrant Flow Tests

\$65 per hour (1 hour minimum for any test then billed at ½ hr. increments thereafter) plus cost of water (includes water and sewer charges)

Notes:

Cleaning of lines will be required prior to camera use; Line cleaning is the responsibility of the applicant. If lines are not clean and camera crew must remobilize later to perform the inspection, a second mobilization fee will be charged.

Hydrant flow tests: Hydrant flow tests must be scheduled with the Director of Public Works no less than three work days in advance of test. Contractor will supply gauges and will be responsible for recording results. Town personnel will operate hydrant.

VI. SIGNIFICANT INDUSTRIAL USER FEES

Sewer system discharge permit: \$500

VII. WATER METER TESTING

5/8" meter: \$100

All other meters: \$100 + cost

Note: Fee is refunded if meter is found to be over-registering.

VIII. HYDRANT METERS

Nonrefundable account establishment fee: \$50

Meter deposit: \$1,200 1,500 (deposit refunded upon return of undamaged meter)

Note: Usage metered through hydrant meters will be billed for both water and sewer user fees.

IX. UNAUTHORIZED USE OF SERVICE

For unauthorized water withdrawals from fire hydrants or any other part of the Town water system, or when a customer willfully takes steps to reactivate service after service has been disconnected by the Town because of nonpayment of any charge owed to the Town, and the Town must take action to discontinue service again by removal of the meter or by any other necessary measures, a \$250 charge for unauthorized use of services will be imposed. This charge will be in addition to any other charge for water and sewer services owed to the Town, and in addition to any legal remedies the Town may pursue for unauthorized use of service.

Approved by Town Council on September 8, 2020. EXPECTED on or about September 14, 2021.

Motion to Enter Closed Session

I move that the Council of the Town of Berryville enter closed session in accordance with §2.2-3711-A-1 of the Code of Virginia, to discuss the performance of a specific individual and to discuss prospective candidates for employment.

DATE: July 13, 2021

MOTION: Harrison

VOTE:

Aye: Unanimous voice vote.

Nay:

Absent/Abstain:

ATTEST: 

Erecka Gibson, Recorder

TOWN COUNCIL
MOTION
CLOSED SESSION RESOLUTION

DATE: July 13, 2021

MOTION BY: *Rodriguez*

SECOND BY:

I move that the Council of the Town of Berryville adopt the following resolution certifying it has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions of The Virginia Freedom of Information Act:

Resolution

WHEREAS, Section 2.2-3712.D of the Code of Virginia requires a certification by this Council that such closed meeting was conducted in conformity with Virginia law,

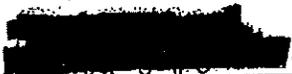
NOW, THEREFORE, BE IT RESOLVED that the Council hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Council.

VOTE:

Aye: *Unanimous roll-call vote.*

Nay:

Absent/Abstain:

ATTEST: 

Erecka Gibson, Recorder

BERRYVILLE TOWN COUNCIL STREETS AND UTILITIES COMMITTEE
Berryville-Clarke County Government Center
MINUTES
August 24, 2021

A meeting of the Berryville Town Council Streets and Utilities Committee was held on Tuesday, August 24, 2021 at 1:30 p.m. in the Berryville-Clarke County Government Center located at 101 Chalmers Court in Berryville, Virginia.

Member of the committee present: Diane Harrison, Chair; Kara Rodriguez

Staff present: Keith Dalton, Town Manager; Paul Culp, Town Clerk; Christy Dunkle, Community Development Director; Neil White, Chief of Police; David Tyrrell, Utilities Director

1. Call to Order

Ms. Harrison called the meeting to order at 1:30 p.m.

2. Approval of Agenda

The agenda was approved by consensus after Mr. Dalton asked to add a discussion of new construction standards for wastewater pumping stations and suggested a change in the order of items to accommodate a staff member who had been unavoidably delayed.

3. New Business

Mr. Dalton directed the committee's attention to a draft of the aforementioned construction standards. He said the new measures would help provide more efficient use of resources and improved conditions at the pumping stations and that he planned to present them to the full Town Council in September. Ms. Rodriguez asked whether a public hearing would be necessary, and Mr. Dalton said it would not be.

Ms. Harrison then addressed the agenda item related to complaints the Council had received about truck traffic on South Church Street and assorted other locations in town. There was a discussion of control measures including re-routing, signage, and the imposition of weight limits for restricting certain types of commercial traffic.

There was a discussion of enforcement procedure and police protocols.

Mr. Dalton said the Virginia Department of Transportation allows localities considerable latitude in regulating such matters on secondary streets but that it would be affected by control measures in some of the areas under discussion and that its expertise would be needed. He said he and Chief White would have further discussions and would involve VDOT, with a Council work session and

public hearing possibly resulting. Mr. Dalton said he would attempt to arrange one with VDOT in October.

There was a discussion of street lighting, particularly problem areas about which residents had contacted members of the Town Council. Mr. Dalton said he would prepare particular recommendations for discussion in the September 14 regular meeting.

Mr. Dalton then took up the agenda item on water/sewer billing related to pool filling. He noted that a petition had been circulated by a resident who had spoken during citizens' forum in the July meeting of the Council, and briefly described policies applied by certain other municipalities to residents who use large quantities of water for swimming pools or irrigation. He noted complexities that arise as consequences of those policies, including excessing expenditure of staff time on the reading of separate meters.

Ms. Rodriguez expressed concern about staff time and revenue loss associated with such a policy. Ms. Harrison noted that persons with swimming pools would incur considerable expense in filling those pools, whether via tanker truck or Town water. She said revenue must be raised and that residents who do not own pools should not be made to supply an unfair share. She said the Council had held public hearings on utility rates and the structure thereof and that no one had expressed concern about the cost of pool filling.

Mr. Dalton said the cost of establishing new measures would have to be passed along to users of the system.

The committee agreed to mention the present discussion in the September meeting of the full Council, when a public hearing on utility rates would occur.

4. Unfinished Business

Mr. Dalton briefly updated the committee on the status of projects being undertaken with funding from the American Rescue Plan Act, including a leak study for the water system; sanitary sewer study; assorted projects on Osborne, Bundy, Josephine, and North Church Streets and Ridge Road; water meter replacement; computer replacement in the administrative department; acquisition of new radios for the police department; upgrades to the Hermitage pump station; alleviation of draining problems on Virginia Avenue and in the Northwest Quadrant; and updates to the Town website.

Ms. Rodriguez said she had not seen many recycling totes in use and asked whether it would be possible to communicate further with residents regarding the availability of upgraded containers. Mr. Dalton said he was planning to suggest that ARPA funding be applied to a variety of communications initiatives and that a newsletter or something of that nature could be developed to provide the public with more information about the Town's recycling program.

Ms. Dunkle provided updates on the impending overhaul of the Town website; the Mosby Boulevard sidewalk grant and other grants associated with development; and street trees. She said she was doing research on the annexation the Council had decided to pursue.

5. Other

The committee agreed to meet again on October 26 at 1:30 p.m.

6. Closed Session

None.

7. Adjournment

The meeting adjourned by consensus at 2:59 p.m.

Report of the Department of Public Works September 7, 2021

Water

We experienced several water related problems last month. A leak developed on the lateral pipe that supplies water to a 124 North Church Street. We excavated to repair the break and found the lateral pipe was in poor condition and needed to be replaced from main to the meter setter. We replaced the lateral with ¾ CTS poly pipe and restored the service back to normal.

We encountered a problem with the meter setter for 325 West Main Street. The operating key would not shut off the water supply. We excavated to the lateral pipe and froze the line and replaced the setter and restored the service back to normal.

Three crucial water main valves located near Berryville Graphics were in poor condition and needed replaced. Replacing the valves was going to require a water interruption to a large area including Berryville Graphics. We delivered water interruption notices to all the customers we felt would be affected by the shutdown. We met with Graphics personnel and correlated our shutdown with them to lessen the impact for their daily operations.

Fluid Conservation Technology is in the process of conducting a water leak survey throughout our water distribution system. They have finished the low side of our system and only found two very minimal leaks. They are scheduled to return this week to finish the survey.

General Information

Phase V Hermitage Subdivision is progressing at a moderate rate. The developer is planning to get 28 lots ready for construction by early October. These lots are located on Dunlap Drive, Norris Drive and Jones Court.

Our annual sidewalk replacement projects have gotten underway. Finley Asphalt and Concrete Company was the low bidder for concrete work this year. The first phase of these projects was to replace the Foot Bridge and some sidewalks on Chalmers Court. The next phase of work will be to replace sidewalks and some curb-gutter in various sections through-out the Town. They plan on having all awarded work completed by October 1, 2021.

Berryville Town Council Item Report Summary
September 14, 2021

Item Title

Staff Reports - Public Utilities

Prepared By

Dave Tyrrell, Utilities Director

Background/History/General Information

Plant operations for the months of July and August 2021 have been anything but routine. We have been dealing with equipment failures, low river conditions, and personnel shortages as everyone has tried to take some time off. For the past two months, we have produced 23.054 MG of water with an average daily production of 0.399 MGD. The Wastewater Facility has treated a total of 17.41 MG, with a daily average of 0.28 MGD. As previously mentioned, river conditions have been quite low for July and August but the Town is still in a good position as far as water availability. Drought conditions have been of concern with no drought response action needed by the town at this time.

Findings/Current Activity

Water Treatment

Water quality conditions in the river have created a high demand for disinfectants and coagulants in the past two months. The staff has stayed on top of ever-changing needs and maintained treatment producing a quality product. We have in the past two months cleaned the pre-sedimentation basins and backwash lagoons, made repairs to our back up air compressor #3, prepared valves in the booster building for replacement as much as possible, repaired the chemical feed lines in the booster building, flushed water lines multiple times in the Orchard CT, Page St., and Boom Rd. areas and some flushing in Hermitage subdivision. We have frequently been flushing lines on Church St. to maintain water quality. We also took time during the low river conditions to clear the river bank intake to clean a few years of mud and debris from the inlet. When we finished, we had cleared the screen and had the intake flowing freely. We have also worked with a vendor to remove the river pump local disconnects. This will reduce our vulnerability in flood conditions and enable us to run the river pumps in a deep flood condition without losing electrical connection.

Some good news from VDH, our testing requirements for Total Organic Carbon of Treated and Raw water have been relaxed from once per month to once per quarter due to the low levels found in the river and lower levels found in our treated water.

Wastewater Treatment

There is a long list of equipment issues at the wastewater facility over the past two months. The truck loading conveyor for the dewatering system failed requiring a vendor to troubleshoot the issue and replace the wiring supplying power to the drive unit. We were able to finally repair membrane train #1 and return it to service. The old lighting for the Headworks building has finally been replaced after delays getting the replacement parts. We can actually see in the building better than ever. We have repaired a programming issue with solids press #1 that made the press unusable every time we had a power outage, we repaired the communications wiring that serviced the chemical feed controls, repaired multiple hypochlorite leaks on the hypo feed pump skid, emptied and cleaned solids holding tank #1 replacing several diffusers in the process, rebuilt raw pump #3 and with Public Works assistance, flush the suction line for the pump, and worked with the planning office to update construction standards for pumping stations. We have also worked with a vendor to repair the Southgate pump station generator, repair the 5T Bridge crane with the exception of a unit alignment which we are working on pricing, and removal of all

eleven local blower disconnects which were failing. We have also had a failure of one of our Alum feed pumps which will require replacement. We are seeking a quote for a replacement model.

Please find attached copies of the July and August DMR Data and page 1 of the WTP MOR for your review. Not all data has been received for August and August data is under review for accuracy for reporting.

Financial Considerations

Schedule/Deadlines

Other Considerations

Attachments

1. 2021 -07, 08 Council Report Attachment

Recommendation

Sample Motion

Flows and Chemical Dosages

July 2021

No. Connections Served: 1738
Population Served: 4185

DATE	Raw Water Treated MGD	Finished Water Produced MGD	Finished Water Delivered MGD	Hours in Service	Raw Water Chemicals										Finished Water Chemicals			
					Alum	Carbon	Chlorine	Fluoride	Polymer	KMnO4	Soda Ash	Chlorine	Corr Inhibitor					
					Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day	Lbs per Day
1	0.585		0.513	18.0	61	12.5	2	0.4		7.8	1.60	0.035	0.007	6	1.2		21.5	4.4
2	0.546		0.495	16.0	46	10.0	4	0.8		10.0	2.19	0.074	0.016	5.2	1.1		19.4	4.3
3	0.255		0.221	7.0	30	14.3	2	0.8		3.3	1.55	0.035	0.016	3.3	1.5		9.7	4.5
4																		
5																		
6	0.617		0.538	18.0	61	11.8	3	0.7		4.9	0.95	0.066	0.013	6.1	1.2		23.7	4.6
7	0.614		0.539	18.0	86	16.8	3	0.6		11.8	2.31	0.093	0.018	6.9	1.4		21.5	4.2
8	0.589		0.509	16.0	86	17.5	3	0.7		4.6	0.94	0.084	0.017	6.2	1.3		19.4	3.9
9	0.592		0.514	16.0	86	17.4	2	0.5		7.9	1.60	0.084	0.017	6.6	1.3		20.4	4.1
10	0.327		0.286	9.0	56	20.4	2	0.6		1.0	0.36	0.049	0.018	3.7	1.4		12.9	4.7
11	0.341		0.234	7.5	30	10.5	1	0.3		10.4	3.67	0.022	0.008	3.1	1.1		22.5	7.9
12	0.564		0.475	15.0	30	6.4	3	0.6		14.5	3.08	0.034	0.007	6.2	1.3		23.6	5.0
13	0.547		0.474	14.8	81	17.8	4	0.8		25.0	5.48	0.034	0.007	6.1	1.3		25.8	5.7
14	0.587		0.473	16.0	76	15.5	1	0.2		28.7	5.85	0.038	0.008	6.6	1.3		24.0	4.9
15	0.524		0.516	15.0	70	16.0	1	0.3		6.6	1.51	0.038	0.009	6.2	1.4		22.5	5.1
16	0.556		0.485	15.3	76	16.4	3	0.7		7.1	1.53	0.035	0.008	6.3	1.4		24.7	5.3
17																		
18	0.174		0.177	5.2	15	10.5	1	0.8		2.1	1.45	0.012	0.008	2.2	1.5		5.3	3.7
19	0.889		0.499	15.5	81	10.9	3	0.4		21.8	2.10	0.040	0.005	6.4	0.9		25.8	3.5
20	0.589		0.516	17.6	76	15.5	2	0.5		7.4	1.51	0.075	0.015	7.3	1.5		23.7	5.3
21	0.579		0.510	17.4	76	15.7	3	0.7		7.4	1.54	0.082	0.017	7.8	1.6		23.7	4.9
22	0.594		0.538	17.4	71	14.3	4	0.7		6.6	1.34	0.082	0.017	7.7	1.6		22.6	4.6
23	0.557		0.487	16.8	71	15.3	2	0.5		6.9	1.49	0.075	0.016	7.4	1.6		18.3	3.9
24	0.191		0.180	5.6	25	15.9	1	0.8		2.3	1.44	0.030	0.019	2.5	1.6		7.5	4.7
25	0.156		0.124	4.0	10	8.1	1	0.6		5.2	4.16	0.022	0.018	1.8	1.4		5.4	4.3
26	0.591		0.516	16.5	81	18.4	3	0.5		4.7	0.95	0.084	0.017	7.3	1.5		20.4	4.1
27	0.397		0.361	11.0	56	16.9	3	0.8		5.0	1.51	0.057	0.017	4.9	1.5		15.1	4.6
28	0.568		0.520	17.0	66	13.9	4	0.8		7.2	1.52	0.084	0.018	6.6	1.4		19.4	4.1
29	0.571		0.501	15.5	71	14.9	2	0.4		10.8	2.26	0.079	0.017	6.0	1.3		20.4	4.3
30	0.514		0.463	14.5	76	17.8	3	0.7		6.6	1.55	0.062	0.014	5.8	1.4		20.4	4.8
31	0.143		0.121	3.8	10	8.5	1	1.0		1.9	1.63	0.022	0.018	1.5	1.3		2.2	1.8
Total	13.752	0.000	11.795	379.2	1661	398.1	68	17.3	0.0	239.6	57.1	1.53	0.386	154	38.1	0.0	523.8	127.23
Maximum	0.889	0.000	0.539	18.0	86	20.4	4	1.0	0.0	28.7	5.9	0.09	0.019	8	1.6	0.0	25.8	7.91
Minimum	0.143	0.000	0.121	3.8	10	6.4	1	0.2	0.0	1.0	0.4	0.01	0.005	2	0.9	0.0	2.2	1.81
Average	0.491	0.000	0.421	13.5	59	14.2	2	0.6	#DIV/0!	8.6	2.0	0.05	0.014	5	1.4	#DIV/0!	18.7	4.54

SIGNED: (OPERATOR IN RESPONSIBLE CHARGE)

RAW WATER SOURCE(S) USED DURING MONTH:

(SOURCE/DATES)

PRINTED NAME

David A Tyrrell

Shenandoah River - Entire Month

TITLE: OPERATOR CLASSIFICATION

Class 1

DPOR CERTIFICATION NO.

1955002813

No. Connections Served: 1738
Population Served: 4185

Flows and Chemical Dosages

DATE	Raw Water Treated MGD	Finished Water Produced MGD	Finished Water Delivered MGD	Hours in Service	Raw Water Chemicals										Finished Water Chemicals					
					Alum	Carbon	Chlorine	Fluoride	Polymer	KMnO4	Soda Ash	Chlorine	Corr Inhibitor							
	Lbs per Day	mg/L	Lbs per Day	mg/L	Lbs per Day	mg/L	Lbs per Day	mg/L	Lbs per Day	mg/L	#DIV/0!	#DIV/0!	Lbs per Day	mg/L	Lbs per Day	mg/L	Lbs per Day	mg/L		
1	0.218		0.202	6.5	25	14.0	1	0.6					3	1.4			8.6	4.7		
2	0.527		0.462	16.0	81	18.5	3	0.6	6.4	1.45	0.070	0.016	6.5	1.5			20.4	4.7		
3	0.532		0.481	16.0	66	14.9	2	0.5	6.3	1.43	0.070	0.016	6.6	1.5			23.7	5.3		
4	0.526		0.463	16.0	81	18.5	5	1.1	6.6	1.50	0.070	0.016	6.6	1.5			21.5	4.9		
5	0.296		0.268	9.5	51	20.5	2	0.6	3.7	1.50	0.044	0.018	3.9	1.6			11.8	4.8		
6	0.422		0.371	13.0	56	15.8	1	0.3	5.2	1.47	0.053	0.015	5.4	1.5			16.1	4.6		
7	0.274		0.240	8.0	41	17.8	1	0.5	3.4	1.49	0.039	0.017	3.3	1.5			8.6	3.8		
8	0.268		0.237	7.5	41	18.2	2	0.7	6.8	3.07	0.035	0.016	3.1	1.4			9.7	4.3		
9	0.547		0.493	15.5	71	15.6	3	0.7	3.4	0.75	0.075	0.016	6.4	1.4			24.8	5.4		
10	0.506		0.445	13.5	66	15.6	2	0.6	6.7	1.59	0.071	0.017	5.6	1.3			19.4	4.6		
11	0.517		0.465	14.5	66	15.3	3	0.7	6.7	1.56	0.073	0.017	6.0	1.4			21.5	5.0		
12	0.500		0.440	13.8	91	21.9	4	0.9	6.7	1.62	0.073	0.017	5.7	1.4			19.4	4.6		
13	0.514		0.464	14.5	61	14.2	4	0.9	6.8	1.59	0.073	0.017	6.0	1.4			17.2	4.0		
14	0.262		0.228	8.5	35	16.2	2	0.9	3.4	1.54	0.035	0.016	2.7	1.2			11.8	5.4		
15	0.263		0.226	7.0	30	14.2	2	1.1	2.7	1.28	0.035	0.017	2.9	1.4			9.7	4.6		
16	0.535		0.485	15.3	65	14.6	4	0.9	19.0	4.26	0.032	0.007	6.3	1.4			15.1	3.4		
17	0.368		0.332	10.5	45	14.7	7	2.3	22.0	7.17	0.023	0.007	4.3	1.4			13.9	4.5		
18	0.451		0.387	11.3	55	14.6	4	1.1	2.0	0.53	0.060	0.016	4.6	1.2			15.0	4.0		
19	0.460		0.413	12.8	55	14.3	5	1.3	17.0	4.43	0.053	0.014	5.2	1.4			17.2	4.5		
20	0.421		0.375	11.8	50	14.2	4	1.1	5.3	1.51	0.057	0.016	4.8	1.4			16.1	4.6		
21	0.235		0.200	6.3	25	12.9	4	2.0	3.0	1.53	0.018	0.009	2.5	1.3			6.4	3.3		
22	0.222		0.210	6.5	25	13.5	4	2.2	4.9	2.65	0.026	0.014	2.6	1.4			7.2	3.9		
23	0.523		0.449	15.7	71	16.3	4	1.0	6.6	1.52	0.073	0.017	6.5	1.5			20.4	4.7		
24	0.515		0.452	15.5	61	14.2	5	1.1	6.6	1.55	0.064	0.015	6.4	1.5			19.4	4.5		
25	0.482		0.427	14.9	61	15.1	4	0.9	6.1	1.52	0.066	0.016	6.2	1.5			19.4	4.8		
26	0.499		0.450	14.7	61	14.6	4	1.0	9.8	2.35	0.070	0.017	6.1	1.5			21.5	5.2		
27	0.349		0.309	10.9	41	13.9	2	0.8	1.0	0.33	0.050	0.017	4.4	1.5			15.1	5.2		
28	0.238		0.207	7.2	20	10.2	2	0.8	3.0	1.51	0.033	0.017	3.0	1.5			8.6	4.3		
29																				
30	0.590		0.522	17.0	76	15.5	4	0.9	7.7	1.57	0.082	0.017	7.1	1.4			24.8	5.0		
31	0.629		0.575	17.5	81	15.5	6	1.1	11.8	2.25	0.084	0.016	7.3	1.4			28.0	5.3		
Total	12.678	0.000	11.289	365.4	1653	465.1	100	29.4	0.0	0.00	201.4	56.9	1.54	0.462	15.1	42.7	492.1	137.94	0.0	0.00
Maximum	0.629	0.000	0.575	17.5	91	21.9	7	2.3	0.0	0.00	22.0	7.2	0.08	0.018	7	1.6	28.0	5.43	0.0	0.00
Minimum	0.218	0.000	0.200	6.3	20	10.2	1	0.3	0.0	0.00	0.7	0.3	0.02	0.007	3	1.2	6.4	3.27	0.0	0.00
Average	0.423	0.000	0.376	12.2	55	15.5	3	1.0	#DIV/0!	#DIV/0!	6.7	1.9	0.05	0.015	5	1.4	16.4	4.60	#DIV/0!	#DIV/0!

SIGNED: (OPERATOR IN RESPONSIBLE CHARGE)

RAW WATER SOURCE(S) USED DURING MONTH: (SOURCE/DATES)

PRINTED NAME: David A Tynell

Shenandoah River - Entire Month

TITLE: OPERATOR CLASSIFICATION
DPOR CERTIFICATION NO.

Class 1
1955002813

Berryville STP Monthly DMR Data

July 2021

Date	Effluent Flow MGD	Eff pH SU	Eff Temp Deg C	Eff CBOD mg/l	Eff CBOD KG/D	Eff TSS mg/l	Eff TSS KG/D	Effluent DO River mg/l	Effluent DO WWTP mg/l	Eff NO2 / NO3 mg/l	Eff TKN mg/l	Eff TKN KG/D	Eff Total N mg/l
7/1/2021	0.333	7.4	25.4	2.00	2.52			8.4	8.2	5.39	1.39	1.75	6.78
7/2/2021	0.302	7.5	23.3						7.8				
7/3/2021	0.295	7.4	24.7						7.2				
7/4/2021	0.304	7.4	24.4						6.7				
7/5/2021	0.203	7.6	23.6	3.00	2.31				7.9	5.39	1.48	1.14	6.87
7/6/2021	0.271	7.5	19.2	3.00	3.08				7.2				
7/7/2021	0.296	7.4	24.8						7.2				
7/8/2021	0.265	7.5	25.8	2.00	2.01			8.1	7.8	4.25	0.34	0.34	4.59
7/9/2021	0.309	7.5	23.1						7.6				
7/10/2021	0.300	7.4	25.2						7.1				
7/11/2021	0.300	7.5	24.7						7.2				
7/12/2021	0.292	7.6	25.0	3.00	3.32				7.1	3.76	0.49	0.54	4.25
7/13/2021	0.262	7.5	25.7	2.00	1.98	0.00	0.00		7.2				
7/14/2021	0.262	7.5	25.8						7.5				
7/15/2021	0.249	7.4	25.8	2.00	1.88			8.3	6.8	4.68	0.26	0.25	4.94
7/16/2021	0.296	7.6	26.3						7.1				
7/17/2021	0.313	7.6	25.8						7.3				
7/18/2021	0.304	7.7	25.2						7.2				
7/19/2021	0.314	7.2	25.6	3.00	3.57				6.6	1.39	0.80	0.95	2.19
7/20/2021	0.304	7.5	25.3	2.00	2.30				7.9				
7/21/2021	0.276	7.4	25.4					7.2	7.1				
7/22/2021	0.279	7.6	25.2	2.00	2.11				7.0	2.88	0.30	0.32	3.18
7/23/2021	0.280	7.4	25.1						6.8				
7/24/2021	0.295	7.6	25.0						7.7				
7/25/2021	0.297	7.6	25.2						7.4				
7/26/2021	0.295	7.5	25.8	2.00	2.23				7.0	4.75	0.40	0.45	5.15
7/27/2021	0.276	7.4	25.9	2.00	2.09				7.2				
7/28/2021	0.251	7.6	26.1						7.2				
7/29/2021	0.247	7.4	26.1	1.00	0.93			7.3	7.1	2.95	1.14	1.07	4.09
7/30/2021	0.248	7.4	26.3						6.7				
7/31/2021	0.258	7.6	25.9						7.3				
Minimum	0.20	7.2	19.2	1.00	0.93	0.00	0.00	7.2	6.6	1.39	0.26	0.25	2.19
Maximum	0.33	7.7	26.3	3.00	3.57	0.00	0.00	8.4	8.2	5.39	1.48	1.75	6.87
Total	8.78	232.2	776.7	29.00	30.33	0.00	0.00	39.3	225.1	35.44	6.60	6.80	42.04
Average	0.28	7.5	25.1	2.23	2.33	0.00	0.00	7.9	7.3	3.94	0.73	0.76	4.67
Geo Mean	0.28	7.5	25.0	2.15	2.23	1.00	1.00	7.8	7.3	3.67	0.6	0.62	4.43

Berryville STP Monthly DMR Data

July 2021

Date	Eff Total N KG/D	Eff Total P mg/l	Eff Total P KG/D	E-Coli No/100ml
7/1/2021	8.56	0.85	1.07	1
7/2/2021				
7/3/2021				
7/4/2021				
7/5/2021	5.29	1.00	0.77	1
7/6/2021				1
7/7/2021				
7/8/2021	4.61	0.82	0.82	1
7/9/2021				
7/10/2021				
7/11/2021				
7/12/2021	4.70	1.09	1.21	1
7/13/2021				1
7/14/2021				
7/15/2021	4.66	1.15	1.09	1
7/16/2021				
7/17/2021				
7/18/2021				
7/19/2021	2.61	1.81	2.15	1
7/20/2021				1
7/21/2021				
7/22/2021	3.36	0.95	1.00	1
7/23/2021				
7/24/2021				
7/25/2021				
7/26/2021	5.76	1.04	1.16	1
7/27/2021				1
7/28/2021				
7/29/2021	3.83	1.63	1.53	1
7/30/2021				
7/31/2021				
Minimum	2.61	0.82	0.77	1
Maximum	8.56	1.81	2.15	1
Total	43.38	10.34	10.81	13
Average	4.82	1.15	1.20	1
Geo Mean	4.58	1.11	1.15	1

Berryville STP Monthly DMR Data

August 2021

Date	Effluent Flow MGD	Eff pH SU	Eff Temp Deg C	Eff CBOD mg/l	Eff CBOD KG/D	Eff TSS mg/l	Eff TSS KG/D	Effluent DO River mg/l	Effluent DO WWTP mg/l	Eff NO2 / NO3 mg/l	Eff TKN mg/l	Eff TKN KG/D	Eff Total N mg/l
8/1/2021	0.276	7.5	25.7						7.4				
8/2/2021	0.279	7.5	25.3	0.00	0.00				7.4	2.47	1.20	1.27	3.67
8/3/2021	0.275	7.5	24.8	2.00	2.08				7.4				
8/4/2021	0.301	7.4	24.8						6.9				
8/5/2021	0.323	7.4	24.7	1.00	1.22			8.0	7.8	4.15	1.10	1.34	5.25
8/6/2021	0.273	7.4	24.5						7.7				
8/7/2021	0.274	7.5	25.3						7.4				
8/8/2021	0.290	7.5	25.3						7.2				
8/9/2021	0.351	7.6	23.5	2.00	2.66				6.8	4.95	1.43	1.90	6.38
8/10/2021	0.261	7.4	24.0	1.00	0.99	0.00	0.00		6.8				
8/11/2021	0.204	7.5	24.5						6.3				
8/12/2021	0.228	7.5	24.8	1.00	0.86			6.9	6.6	3.65	1.12	0.97	4.77
8/13/2021	0.255	7.5	25.4						6.9				
8/14/2021	0.253	7.5	24.3						6.1				
8/15/2021	0.249	7.6	23.3						6.7				
8/16/2021	0.256	7.8	25.8	2.00	1.94				7.4	2.90	1.41	1.37	4.31
8/17/2021	0.312	7.8	25.6						7.8				
8/18/2021	0.323	7.6	25.8						7.4				
8/19/2021	0.366	7.4	25.7	1.00	1.39			7.5	7.0	2.42	1.77	2.45	4.19
8/20/2021	0.314	7.5	25.4						7.3				
8/21/2021	0.274	7.6	25.3						7.2				
8/22/2021	0.240	7.5	25.1						7.8				
8/23/2021	0.211	7.2	26.3						7.9				
8/24/2021	0.237	7.7	25.9	0.00	0.00				6.9				
8/25/2021	0.230	7.7	25.7						6.2				
8/26/2021	0.233	7.5	26.2						7.1				
8/27/2021	0.249	7.4	26.4					7.3	7.0				
8/28/2021	0.287	7.3	26.5						7.2				
8/29/2021	0.364	7.5	26.3						7.9				
8/30/2021	0.362	7.5	26.8						6.4				
8/31/2021	0.301	7.5	26.8						6.2				
Minimum	0.20	7.2	23.3	0.00	0.00	0.00	0.00	6.9	6.1	2.42	1.10	0.97	3.67
Maximum	0.37	7.7	26.8	2.00	2.66	0.00	0.00	8.0	7.9	4.95	1.77	2.45	6.38
Total	8.66	232.4	786.8	10.00	11.14	0.00	0.00	29.7	220.1	20.54	8.03	9.30	28.57
Average	0.28	7.5	25.3	1.11	1.24	0.00	0.00	7.4	7.1	3.42	1.34	1.55	4.76
Geo Mean	0.28	7.5	25.3	1.26	1.36	1.00	1.00	7.4	7.1	3.30	1.3	1.48	4.69

Berryville STP Monthly DMR Data

August 2021

Date	Eff Total N KG/D	Eff Total P mg/l	Eff Total P KG/D	E-Coli No/100ml
8/1/2021				
8/2/2021	3.88	1.60	1.69	1
8/3/2021				1
8/4/2021				
8/5/2021	6.43	1.32	1.62	1
8/6/2021				
8/7/2021				
8/8/2021				
8/9/2021	8.49	2.40	3.19	1
8/10/2021				1
8/11/2021				
8/12/2021	4.12	1.99	1.72	0
8/13/2021				
8/14/2021				
8/15/2021				
8/16/2021	4.18	1.46	1.42	1
8/17/2021				
8/18/2021				
8/19/2021	5.81	0.80	1.11	1
8/20/2021				
8/21/2021				
8/22/2021				
8/23/2021				
8/24/2021				1
8/25/2021				
8/26/2021				
8/27/2021				
8/28/2021				
8/29/2021				
8/30/2021				
8/31/2021				
Minimum	3.88	0.80	1.11	0
Maximum	8.49	2.40	3.19	1
Total	32.92	9.57	10.75	8
Average	5.49	1.60	1.79	1
Geo Mean	5.26	1.51	1.69	1



BERRYVILLE POLICE DEPARTMENT

101 Chalmers Ct., Suite A, Berryville VA 22611

(T) 540.955.3863 (F) 540.955.0207

policeadmin@berryvilleva.gov

W. Neal White – Chief of Police

Police and Security Report

	Year To Date	July	June
Month/Year: July 2021	2021	2021	2021
<u>Complaints Answered</u>			
911 Hang Up:	8	0	3
Alarms:	61	5	12
Animal Complaint:	53	5	9
Assault:	13	1	2
Assist County:	24	1	7
Assist EMS and Fire:	90	11	11
Auto Larceny:	2	1	0
Burglary:	0	0	0
Civil Complaints:	39	7	5
Disturbance:	15	3	1
Domestic Disturbance:	14	2	2
Driving Under the Influence	6	2	2
Drunk In Public:	2	0	0
Fraud:	14	4	0
Larceny:	26	3	2
Harassment/Intimidation:	16	2	1
Homicide:	0	0	0
Identity Theft	7	0	0
Juvenile Related:	13	3	0
Mental Health Crisis:	43	9	2
Narcotics Related:	2	0	0
Noise:	35	3	4
Public Service:	5	1	0
Sexual Assault:	0	0	0
Robbery:	0	0	0
Shoplifting:	0	0	0
Suspicious Activity:	83	19	8
Trespassing:	13	2	2
Vandalism:	40	7	2
Welfare Check:	60	9	6
Miscellaneous Complaints:	305	53	44
Total Complaints Answered:	989	153	125



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W. Neal White – Chief of Police

Police and Security Report (Continued)

	Year To Date 2021	July 2021	June 2021
<u>Traffic</u>			
Accidents Investigated:	30	2	7
Assist Motorist:	0	0	0
Child Safety Seat Install:	11	0	4
Funeral Escort:	13	1	3
Hit & Run:	10	1	1
Parking Tickets:	73	12	10
Traffic Warnings:	47	1	4
<u>Traffic Summons Issued</u>			
Defective Equipment:	0	0	0
Driving Suspended:	1	0	0
Expired Inspection:	5	0	0
Expired Registration:	1	0	0
Fail to Obey Highway Sign:	23	1	2
Fail to Obey Traffic Signals:	1	0	0
Fail to Stop/Lights & Siren:	0	0	0
Fail to Yield Right of Way:	6	0	0
Hit and Run:	1	0	0
No Liability Insurance:	0	0	0
No Operator's License:	2	0	0
No Seat Belt:	0	0	0
Reckless Driving:	4	0	0
Speeding:	22	2	1
Miscellaneous Summons:	7	0	1
Total Traffic Summons Issued:	73	3	4
<u>Found Open at Businesses in Town</u>			
Doors:	12	4	0
Windows:	0	0	0
Garage Doors:	0	0	0



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W. Neal White – Chief of Police

Police and Security Report (Continued)

	Year To Date	July	June
	2021	2021	2021
<u>Criminal Arrests Made</u>			
Abduction:	0	0	0
Arson:	0	0	0
Assault and Battery:	7	0	2
Assault and Battery on Police Officer:	0	0	0
Auto Larceny:	0	0	0
Breaking and Entering:	0	0	0
Capias:	2	0	0
Disorderly Conduct:	1	0	0
Driving Under the Influence:	5	1	1
Drunk In Public:	2	0	0
Fail to Obey Police Officer:	0	0	0
Fail to Pay Parking Ticket:	0	0	0
Forgery:	0	0	0
Fraud:	1	0	1
Homicide:	0	0	0
Illegal Drugs/Paraphernalia:	0	0	0
Larceny:	1	0	1
Possess Alcohol Underage:	0	0	0
Protective Order Violations:	1	0	0
Rape:	0	0	0
Resisting Arrest:	0	0	0
Robbery:	0	0	0
Shoplifting:	0	0	0
Trespassing:	1	0	0
Vandalism:	2	0	0
Weapons Violation:	0	0	0
Miscellaneous Criminal Arrests:	17	1	3
Juvenile Detention Order Totals:	15	14	0
Total Criminal Arrests:	55	16	8



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W. Neal White – Chief of Police

Police and Security Report (Continued)

	Year To Date 2021	July 2021	June 2021
<u>Response to Resistance</u>			
Total Community Interface	1061	178	149
Total Enforcement Contacts	141	23	16
Physical Custody	20	1	2
Reported Force Involved	0	0	0
Administrative Review - Justified	0	0	0
Administrative Review - Not Justified	0	0	0
Complaint of Injury - Arrestee	0	0	0
Medical Treatment for Injury - Arrestee	0	0	0
Complaint of Injury - Officer	0	0	0
Medical Treatment for Injury - Officer	0	0	0
<u>Type of Force Involved</u>			
Compliance Hold / Open Hands	0	0	0
Takedown	0	0	0
Strikes (Hands / Knees)	0	0	0
Chemical Sprays (O.C.)	0	0	0
Impact Weapon (Baton)	0	0	0
Mechanical Non-Lethal	0	0	0
Firearm	0	0	0
<u>Arrestee Demographics</u>			
White Male	12	0	0
Black Male	0	0	0
Other Male	1	0	1
White Female	3	1	1
Black Female	4	0	0
Other Female	0	0	0



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W. Neal White – Chief of Police

Police and Security Report

Month/Year: August 2021	Year To Date 2021	August 2021	July 2021
<u>Complaints Answered</u>			
911 Hang Up:	10	2	0
Alarms:	69	8	5
Animal Complaint:	61	8	5
Assault:	15	2	1
Assist County:	27	3	1
Assist EMS and Fire:	102	12	11
Auto Larceny:	3	1	1
Burglary:	0	0	0
Civil Complaints:	45	6	7
Disturbance:	19	4	3
Domestic Disturbance:	15	1	2
Driving Under the Influence	8	2	2
Drunk In Public:	3	1	0
Fraud:	14	0	4
Larceny:	29	3	3
Harassment/Intimidation:	21	5	2
Homicide:	0	0	0
Identity Theft	7	0	0
Juvenile Related:	14	1	3
Mental Health Crisis:	44	1	9
Narcotics Related:	3	1	0
Noise:	36	1	3
Public Service:	7	2	1
Sexual Assault:	1	1	0
Robbery:	0	0	0
Shoplifting:	0	0	0
Suspicious Activity:	97	14	19
Trespassing:	16	3	2
Vandalism:	42	2	7
Welfare Check:	69	9	9
Miscellaneous Complaints:	339	34	53
Total Complaints Answered:	1116	127	153



BERRYVILLE POLICE DEPARTMENT

101 Chalmers Ct., Suite A, Berryville VA 22611

(T) 540.955.3863 (F) 540.955.0207

policeadmin@berryvilleva.gov

W. Neal White – Chief of Police

Police and Security Report (Continued)

	Year To Date 2021	August 2021	July 2021
<u>Traffic</u>			
Accidents Investigated:	34	4	2
Assist Motorist:	0	0	0
Child Safety Seat Install:	11	0	0
Funeral Escort:	19	6	1
Hit & Run:	10	0	1
Parking Tickets:	74	1	12
Traffic Warnings:	53	6	1
 <u>Traffic Summons Issued</u>			
Defective Equipment:	0	0	0
Driving Suspended:	1	0	0
Expired Inspection:	6	1	0
Expired Registration:	1	0	0
Fail to Obey Highway Sign:	27	4	1
Fail to Obey Traffic Signals:	1	0	0
Fail to Stop/Lights & Siren:	0	0	0
Fail to Yield Right of Way:	6	0	0
Hit and Run:	1	0	0
No Liability Insurance:	1	1	0
No Operator's License:	2	0	0
No Seat Belt:	0	0	0
Reckless Driving:	5	1	0
Speeding:	30	8	2
Miscellaneous Summons:	7	0	0
 Total Traffic Summons Issued:	 88	 15	 3
 <u>Found Open at Businesses in Town</u>			
Doors:	13	1	4
Windows:	0	0	0
Garage Doors:	0	0	0



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W. Neal White – Chief of Police

Police and Security Report (Continued)

	Year To Date 2021	August 2021	July 2021
<u>Criminal Arrests Made</u>			
Abduction:	0	0	0
Arson:	0	0	0
Assault and Battery:	9	2	0
Assault and Battery on Police Officer:	1	1	0
Auto Larceny:	0	0	0
Breaking and Entering:	0	0	0
Capias:	3	1	0
Disorderly Conduct:	1	0	0
Driving Under the Influence:	7	2	1
Drunk In Public:	3	1	0
Fail to Obey Police Officer:	0	0	0
Fail to Pay Parking Ticket:	0	0	0
Forgery:	0	0	0
Fraud:	1	0	0
Homicide:	0	0	0
Illegal Drugs/Paraphernalia:	0	0	0
Larceny:	1	0	0
Possess Alcohol Underage:	0	0	0
Protective Order Violations:	1	0	0
Rape:	0	0	0
Resisting Arrest:	0	0	0
Robbery:	0	0	0
Shoplifting:	0	0	0
Trespassing:	1	0	0
Vandalism:	2	0	0
Weapons Violation:	0	0	0
Miscellaneous Criminal Arrests:	23	6	1
Juvenile Detention Order Totals:	15	0	14
Total Criminal Arrests:	68	13	16



BERRYVILLE POLICE DEPARTMENT

101 Chalmers Ct., Suite A, Berryville VA 22611

(T) 540.955.3863 (F) 540.955.0207

policeadmin@berryvilleva.gov

W. Neal White – Chief of Police

Police and Security Report (Continued)

	Year To Date 2021	August 2021	July 2021
<u>Response to Resistance</u>			
Total Community Interface	1213	152	178
Total Enforcement Contacts	179	38	16
Physical Custody	25	5	2
Reported Force Involved	0	0	0
Administrative Review - Justified	0	0	0
Administrative Review - Not Justified	0	0	0
Complaint of Injury - Arrestee	0	0	0
Medical Treatment for Injury - Arrestee	0	0	0
Complaint of Injury - Officer	0	0	0
Medical Treatment for Injury - Officer	0	0	0
<u>Type of Force Involved</u>			
Compliance Hold / Open Hands	0	0	0
Takedown	0	0	0
Strikes (Hands / Knees)	0	0	0
Chemical Sprays (O.C.)	0	0	0
Impact Weapon (Baton)	0	0	0
Mechanical Non-Lethal	0	0	0
Firearm	0	0	0
<u>Arrestee Demographics</u>			
White Male	16	4	0
Black Male	0	0	0
Other Male	1	0	1
White Female	4	1	1
Black Female	4	0	0
Other Female	0	0	0

W. Neal White, Chairman

Timothy Coyne, Vice Chair

OLD DOMINION COMMUNITY CRIMINAL JUSTICE BOARD

*Serving the Communities of Clarke, Frederick, Page, Shenandoah, Warren
Counties and the City of Winchester*



July 13, 2021

Mr. Keith R. Dalton, Town Manager
101 Chalmers Court Ste A
Berryville, VA 22611

Re: Appointment to the CCJB and ASAP Boards

Mr. Dalton,

On April 10, 2018, the Town Council appointed Chief Neal White to the Old Dominion Alcohol Safety Action Program Board and to the Old Dominion Community Criminal Justice Board. His term ended on April 10, 2021.

It is being requested the City Council re-appoint Chief White as a member of both Boards for another 3-year term. Chief White has served as a member of both Boards for many years and has agreed to continue his service representing the Town of Berryville and the Berryville Police Department. Your action is needed to keep Chief White current and active with our Boards.

Should you have any questions, please contact me at 540.535.7155 or kchmura@fcva.us. You may also contact the Chairman, Chief White; the telephone number is 540.955.3863 or email at chiefofpolice@berryvilleva.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Kimberly Chmura', written in a cursive style.

S. Kimberly Chmura
Community Corrections Chief

cc: Ms. P. M. Lowery, ASAP
Chief Neal White

Town Council Agenda Item Report Summary

September 14, 2021

Item Title

Community Development Update

Prepared By

Christy Dunkle

Planning Commission

The Planning Commission did not hold a meeting in July or August. Their next meeting is scheduled for Tuesday, September 28, at 7:00 p.m.

Berryville Area Development Authority

The BADA did not hold a meeting in July or August. Their next meeting is scheduled for Wednesday, September 22 at 7:00 p.m.

Architectural Review Board

The Architectural Review Board held a meeting on Wednesday, August 18, 2021 and discussed the following item:

Architectural Review

Richard G. Sponseller, Owner, Sponseller Flower Shop, Inc., is requesting a Certificate of Appropriateness for replacement windows at the property located at 2 West Main Street, identified as Tax Map Parcel number 14A2-((A))-61A, zoned C General Commercial. *Approved with the addition of exterior grills.*

The next Architectural Review Board meeting is scheduled for Wednesday, October 6, at 12:30 p.m.

Tree Board

The Tree Board met on Wednesday, August 4, 2021 at 5:00 p.m. when they toured the downtown to discuss street trees. Chair William Bigelow and vice chair Lil Ledford will be at the Town Council meeting to discuss recent activities and street tree recommendations.

Board of Zoning Appeals

The BZA has not held a meeting since the last Council meeting.

Town Council Agenda Item Report Summary
September 14, 2021

Item Title
Annexation B-9

Prepared By
Christy Dunkle

Background/History/General Information

Mayor Arnold wrote a letter to Clarke County Board of Supervisors chairman David Weiss on June 24, 2021 proposing the annexation of approximately 130 acres located within Annexation Area B. The letter, included in this staff report, identifies the properties as follows:

- Berryville Public Works – approximately 9 acres
- 341 and 343 First Street – total of approximately 10 acres
- 25 Battletown Drive – approximately 11 acres
- Bel Voi Farm/Friant Enterprises – approximately 100 acres

Findings/Current Activity

Town staff contacted each of the property owners in July letting them know of the Town's intent to annex their respective properties. Staff has discussed the matter with two of the property owners who had no issues with the action.

Legal counsel has advised that the Town and County are not required to have a joint public hearing on the matter.

Financial Considerations

N/A

Schedule/Deadlines

Per the annexation agreement between the Town and County (attached), the proposed annexation would become effective on January 1, 2022.

Other Considerations

N/A

Recommendation

Discuss any questions at the meeting and set a public hearing for the October 12, 2021 meeting.

Sample Motion

I move that the Council of the Town of Berryville set a public hearing for the annexation of approximately 130 acres from Annexation Area B for the October 12, 2021 Council meeting.

Attachments:

- Vicinity map
- Letter and attachments from Mayor Arnold to Clarke County Board of Supervisors Chair David Weiss dated June 24, 2021
- Annexation agreement between the Town and County, executed in 1988

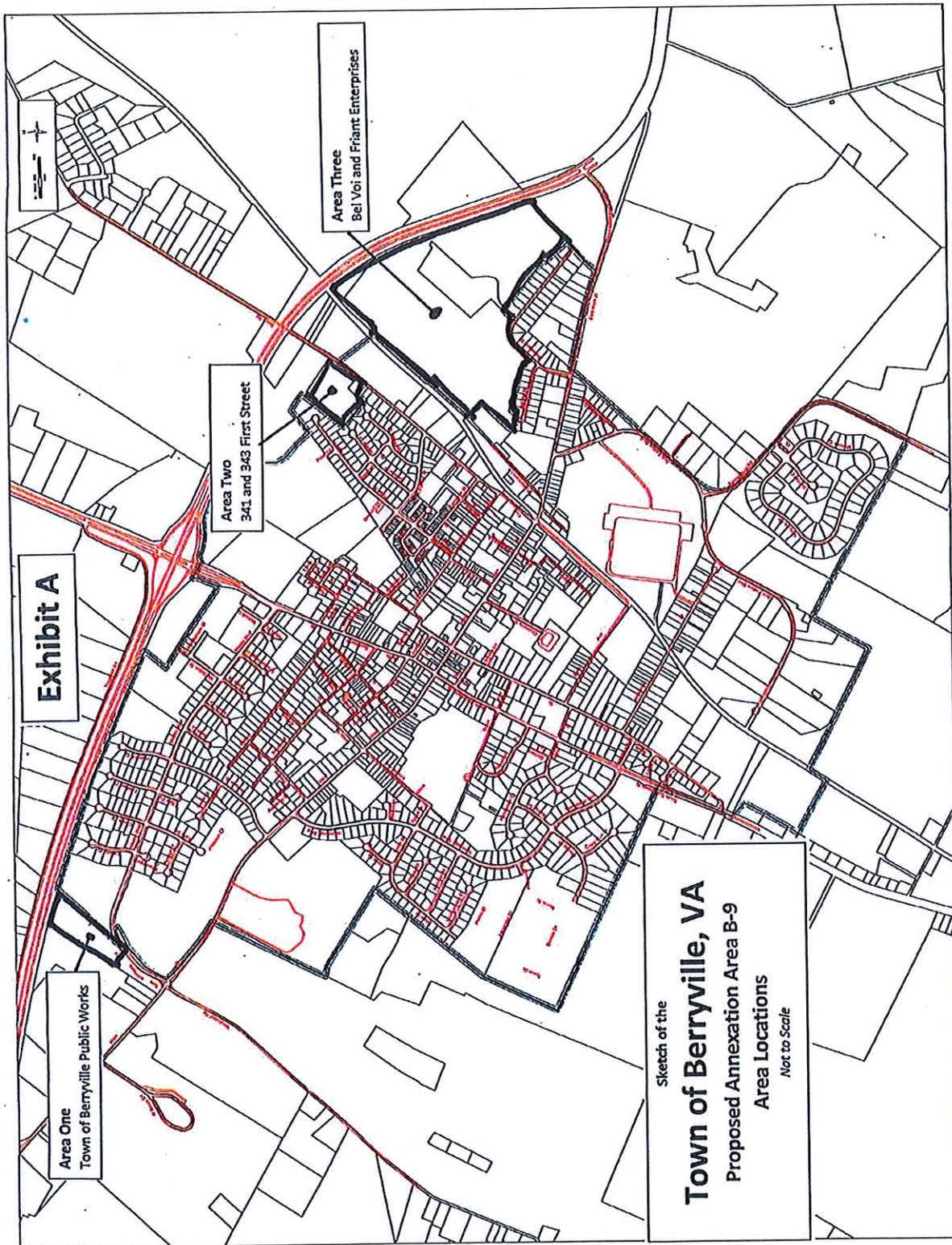


Exhibit A

Area One
Town of Berryville Public Works

Area Two
341 and 343 First Street

Area Three
Bel Voi and Friant Enterprises

Sketch of the
Town of Berryville, VA
Proposed Annexation Area B-9
Area Locations
Not to Scale

Berryville -- Clarke County
Government Center
101 Chalmers Court, Suite A
Berryville, VA 22611



[T] 540/955-1099
[F] 540/955-4524
[E] info@berryvilleva.gov
www.berryvilleva.gov

BERRYVILLE
EST. 1798 *Genuine* VIRGINIA

June 24, 2021

The Honorable David Weiss, Chairman
Clarke County Board of Supervisors
101 Chalmers Court
Berryville, VA 22611

Dear David:

This letter is written regarding the proposed annexation of +/- 130 acres of land in the County of Clarke by the Town of Berryville on January 1, 2022. The properties in question fall within Sub-Areas 2, 10, 13, 14, 15, and 16 of the Berryville Area Plan as identified on the attached Map 4 – Berryville Area Plan Land Uses (2015).

The following properties are being considered for annexation on January 1, 2022:

Town of Berryville Public Works

Location: 201 Tom Whitacre Circle
Tax Map Parcel number: 14-((A))-6
Total Acreage: 8.9368 acres
BAP Sub Area: 2
Current Use: Public Works yard
of Lots: 1
Zoning: Institutional (ITL)
Population: 0
Owner: Town of Berryville
Additional Information: 201 Tom Whitacre Circle is connected to both public water and public sewer service.

Harry Leo Arnold, Jr.
Mayor

Rycka L. Gibson
Recorder

Donna Marie McDonald
Ward 1

Council Members
Diane Harrison
Ward 2

Grant Mazzarino
Ward 3

Kara C. Rodriguez
Ward 4

Kolth R. Dalton
Town Manager

341 and 343 First Street

Location: 341 and 343 First Street
Tax Map Parcel numbers: 14A2-((20))-A1 and 14A2-((20))-A
Total Acreage: .55 acres and 9.24 acres
BAP Sub Area: 10
Current Use: Residential
of Lots: 2
Zoning: Detached Residential-2 (DR-2)
Population: +/- 4
Owners: BREESE BETTY LOU and PARET CHARLES P
Additional Information: A minor subdivision was approved in 2005 to create parcel A1.
341 First Street is connected to both public water and public sewer service.
343 First Street is connected to public water service.

Bel Voi and Friant Properties

Location: 25 Battletown Drive; two surrounding parcels
Tax Map Parcel numbers: 14-A-81; 14-A-80 and 14 A 112
Total Acreage: 11.47 acres; 97.846 and 2.195 acres
BAP Sub Areas: 13-16
Current Use: Residential and agricultural
of Lots: 3
Zoning: Open Space Residential (OSR) and Detached Residential-1 (DR-1); Detached Residential-1 and -2 (DR-1 and DR-2), Business Park (BP), and Open Space Residential (OSR)
Population: +/- 6
Owners: EMMA, ROBERT MAXWELL; FRIANT ENTERPRISES LP LLP
Additional Information: Friant Enterprises parcels are on the market and residential development is anticipated.
25 Battletown Drive is connected to both public water and public sewer service.

Annexation is proposed at this time because it is expected that the development process may soon begin on the Friant property. The Agreement Defining Annexation Rights (Agreement) permits annexation only at the beginning of a given year. If annexation is not pursued now, then the next time such an action can be taken is

Weiss
June 23, 2021
Page 3

January 1, 2023, and if the development of the property begins in the near term, new residents would likely have to navigate a period of time when they would not be eligible for Town services. Accordingly, we are of the opinion that the annexation should proceed under Section 3 (c) of the Agreement. The section in question permits annexation by mutual agreement between the Town and County.

Community Development staff is developing a detailed schedule for the annexation. It is expected that the schedule will include a joint public hearing between the Town Council and the Board of Supervisors in October 2021.

Please find attached a packet of information on the proposed annexation. Let me know if you have any questions or comments.

Sincerely,



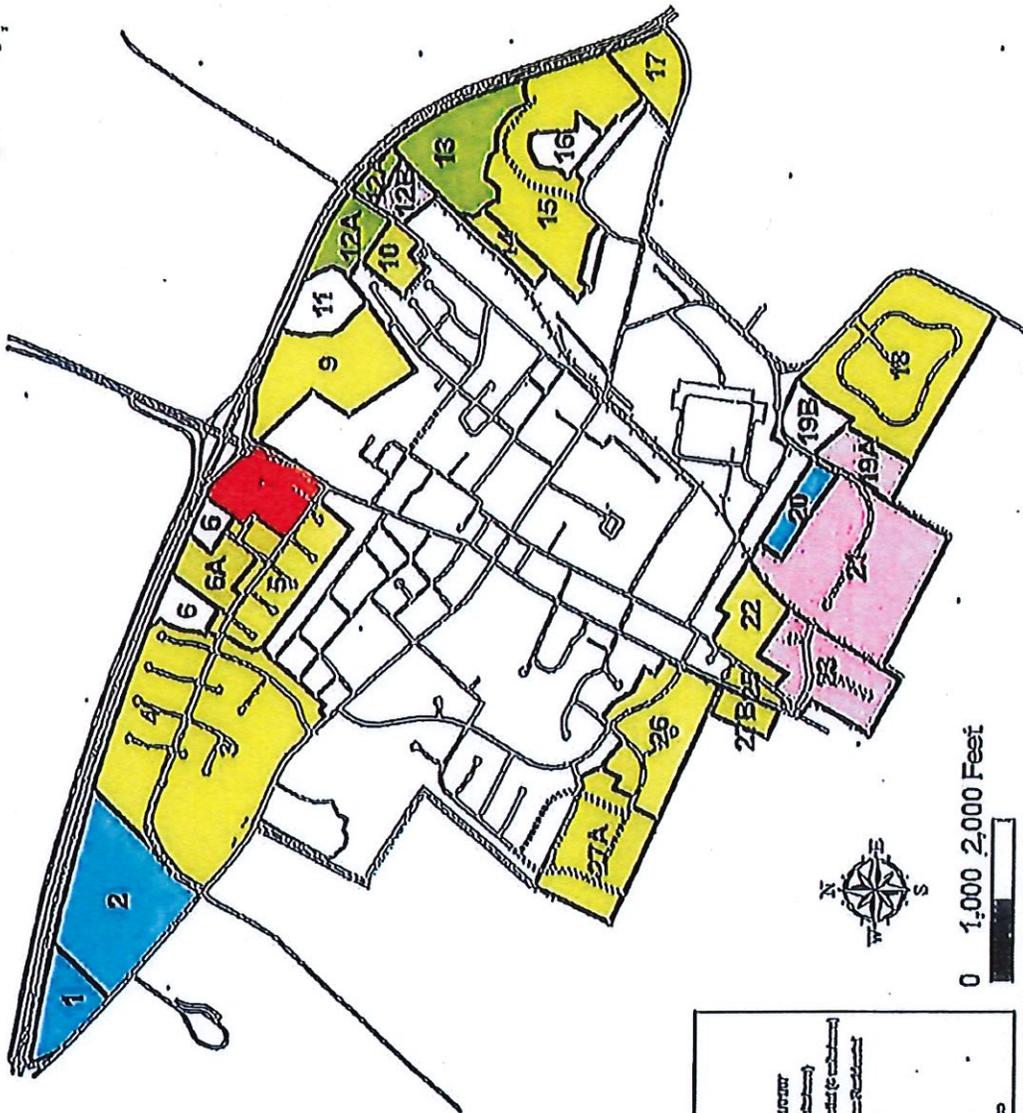
Harry Lee Arnold, Jr.

Enc./6

- Berryville Area Plan Land Use Map (2015)
- Berryville Area Plan Sub-Area descriptions
- Vicinity map
- Town of Berryville Public Works plat
- 341 and 343 First Street plat
- Friant/Emma plat

Cc: Keith Dalton, Town Manager, via email
Chris Boles, County Administrator, via email
Brandon Stidham, Planning Director, via email
Christy Dunkle, Director of Community Development, via email

MAP 4 - Berryville Area Plan Land Uses (2015)



- Boundary of Berryville
- Proposed Road
- Right-of-Way
- Berryville Sewer Mainlines
- Berryville Sewer Treatment Plant
- Low Density Residential (R-1)
- Medium Density Residential (R-2)
- Medium Density Residential (R-3)
- High Density Residential (R-4)
- Community Center
- Public Office
- Public Library
- Public Park
- Environmental Corridor
- Berryville Park



0 1,000 2,000 Feet

A4

The area is served by a private water line that is maintained by the property owners or by private agreement with the Town, and the two users use septic drainfields. It was determined that while these businesses may expand, significant additional development of this Sub-Area is unlikely. A parish hall was added to the church parcel in 2013. The extension of Town-maintained utilities is recommended if any additional development occurs.

Businesses in this Sub-Area are accessed via Route 7 Business as their Route 7 frontages are designated as limited access. Given the Sub-Area's location to the Route 7/Route 7 Business intersection, it is a potential location for a future park-and-ride commuter lot.

Given that this Sub-Area has excellent highway visibility and limited vegetative cover, planning for any development must address issues of buffering, open space and landscaping. The overall appearance of this property, as seen from both highways, must be a significant factor in selecting its most appropriate uses. In this context, any development proposals for the land must be carefully weighed against the planning goals and objectives related to the entry corridors of the Berryville Area. Due to the Sub-Area's location, historic access corridor ordinance and design guidelines should be adhered to and addressed in any development applications.

SUB-AREA 2

Name:	FAIRGROUNDS
Acres:	58.9 acres
Land Use Designation:	Institutional
Annexed:	No

Sub-Area 2, containing approximately 58.9 acres, is comprised of the Ruritan fairgrounds, two single-family homes, a commercial recreation business, two of the Town's municipal water storage facilities and Town public works shop and storage area. The zoning applied to this Sub-Area is Institutional and Historic Access Corridor Overlay. Its northerly and southerly boundaries are Route 7/Bypass and Route 7 Business, respectively. The westerly boundary is delineated by the common property line with Sub-Area 1, while the easterly limits of the Sub-Area generally correspond to the north/south ridge whereon the existing water tanks are sited. The Town's Public Works Department has access to sanitary sewer since the development of the Clarke County High School in Sub-Area 3. Utilities have not been extended past this point and the Sub-Area has not been annexed by the Town.

While the majority of this Sub-Area consists of the fairgrounds, there is the potential for future redevelopment. The Institutional zoning district allows for low- to moderate-income housing to be constructed allowing 12 units per net developable acre with an approved Special Use Permit. The maximum potential density is 540 units. The installation of Town utilities would be required of any developer who chose to build in this Sub-Area.

The Institutional/Public Use planning designation supports and characterizes the dominant existing site uses. The historic access corridor district regulations impact this Sub-Area and provide for design review treatment of any subsequent development proposals. The Sub-Area has generally stable land uses given its major use as the County fairgrounds and Town water facilities. As such, no additional urban uses should be prescribed for the Sub-Area.

Transportation improvements to the Sub-Area shall include provision for pedestrian movements, via sidewalks and paths, along Route 7 Business given the public nature uses in the Sub-Area. Due to its location to the Route 7 Bypass, a park and ride facility would be appropriate for this Sub-Area and should be considered in the future.

SUB-AREA 3

Name: HIGH SCHOOL/BATTLEFIELD ESTATES SOUTH
Acreage: 84.4 acres
Land Use Designation: Low Density Residential
Annexed: Yes

Sub-Area 3 contains approximately 84 acres and is located entirely within Town limits. It is bordered on the south by Route 7 Business and the Berryville Corporate Limits. The north and west boundaries of the Sub-Area is Mosby Boulevard. Sub-Area 3 is the location of the Clarke County High School which was completed in the fall of 2012. 71 single-family homes were removed from the original yield of 290 homes in order to build the high school. A total of 143 single-family homes are constructed within this Sub-Area in the Battlefield Estates Subdivision with two undeveloped lots remaining. The zoning in Sub-Area 3 is DR-4 Detached Residential.

The residential density should not exceed two residential units per net developable acre. Density calculations should be based on the developable or net acreage of a parcel so as to better reflect its actual development potential.

Significant transportation improvements have occurred in Sub-Area 3 since the Area Plan's development. The Mosby Boulevard extension which was part of the Berryville Area Plan Proposed Road Network was completed in 2012. A roundabout was added to the intersection of West Main Street (Business 7), Mosby Boulevard and Westwood Road and has been an effective tool for traffic management. A multi-use trail was constructed by the Town in the mid-2000s that runs along the Clarke County High School site. The path was paved as a part of the high school development and is now extended to Chet Hobart Park. The path also follows the new portion of Mosby Boulevard from the intersection to existing sidewalks.

As of 2015, this Sub-Area is close to maximum build-out assuming the Clarke County High School property cannot be further developed. This Sub-Area may be a candidate for removal from the Plan in the near future.

SUB-AREA 4

Name: BATTLEFIELD ESTATES NORTH
Acreage: 50.1 acres
Land Use Designation: Low Density Residential
Annexed: Yes

Sub-Area 4, containing approximately 50.1 acres, is located between Mosby Boulevard to the south, Route 7 Bypass to the north, Hancock Court to the east, and the Racitan Fairgrounds to the west. The parcels within this Sub-Area are zoned Detached Residential-4 (DR-4) and have been

SUB-AREA 10

Name: FIRST STREET RESIDENTIAL AREA
Acreage: 9.5 acres
Land Use Designation: Low Density Residential
Annexed: No

Sub-Area 10, originally containing approximately 9.5 acres, is bounded on the south by the previous Town corporate limits with the Battletown townhouses beyond. The previously described ridge formation establishing its western boundary is common with Sub-Areas 9 and 11. The northerly boundary follows the centerline of the stream, Buckmarsh Run that drains the majority of this Sub-Area. To the east, a number of residences line the First Street frontage across from the industrial property on the east side of First Street.

The property within this Sub-Area, known as Apple Glen, was previously subdivided into 67 quarter-acre lots using property in both Sub-Areas 9 and 10. The parcels within the development are zoned Detached Residential-4 (DR-4). The subdivision was fully built out as the Darbybrook Subdivision in 2005 and 2006 using the general layout from the original subdivision. This portion of the Sub-Area has been annexed into the Town and has been removed from the Plan with the 2015 update. Also in conjunction with the 2015 update, the stormwater detention facility that serves Darbybrook Subdivision and is located at the end of Page Street is removed from the plan. This change results in a maximum development yield for Sub-Area 10 of six (6) units.

This Sub-Area also includes two parcels that front on First Street and are not part of Darbybrook Subdivision. These parcels are zoned Detached Residential-2 (DR-2) and have not been annexed by the Town.

SUB-AREA 11

Name: SOLDIER'S REST PRESERVATION AREA
Acreage: 13.8 acres
Land Use Designation: Historic/Cultural Preservation
Annexed: No

The configuration of Sub-Area 11, comprising 13.8 acres, establishes a desirable boundary around the historic house, Soldier's Rest. The Sub-Area encompasses the main grounds and physical improvements of Soldier's Rest, with its west, south and east boundaries common with those of Sub-Areas 9, 10, and 12, respectively. The northerly Sub-Area boundary is Route 7 Bypass. The Sub-Area is zoned Open Space Residential (OSR). A small portion of the original Sub-Area the storm water detention facility for the Darbybrook Subdivision at the terminus of Page Street zoned Detached Residential-4 (DR-4), was removed in conjunction with the 2015 Plan update.

The OSR zoning designation allows for one (1) residential structure for every ten (10) acres. The district was created to preserve and protect properties with significant cultural and/or historical value; those areas with sensitive environmental features; and promote open space within Annexation Area B. The County's historic resources survey (survey #21-73) states that what is now rear wing of the Soldier's Rest house dates from circa 1769 with a major addition in the 1820's of what is now the front of the house. The several farm related outbuildings date from the

SUB-AREA 13

Name: BUCKMARSH RUN CONSERVATION AREA
Acreage: 32.4 acres
Land Use Designation: Environmental Conservation
Annexed: No

Sub-Area 13, containing approximately 32 acres, is bounded on the northwest by the railroad and on the northeast by Route 7 Bypass. Most of the southern boundary follows the floodplain of Buckmarsh Run, common with Sub-Areas 10, 11, and 12. The entire Sub-Area is located outside of Town limits and is currently undeveloped.

Given the marshy, flood-prone characteristics of the area, it is classified as an environmentally sensitive area and is currently zoned Open Space Residential (OSR). The Open Space Residential

District allows for by-right development of single-family dwellings on lots no smaller than ten (10) acres in size.

Similar to Sub-Area 12A and Sub-Area 12B, this Sub-Area is seasonally wet and has poorly drained bottom land character. The environmental make-up of the sub-area renders it unsuitable for urban land uses, and as such, the land should be viewed as having the lowest comparative development potentials in the Berryville Area. No urban land uses should be permitted for this land unit. Coordination of stormwater management plans with those of other Sub-Areas is critical to preserving the natural integrity of this Sub-Area; every step should be taken so that each Sub-Area detains its run-off on site. Alteration of the Buckmarsh Run stream channel is discouraged.

The southern boundary of this Sub-Area was developed using topographic maps and may include limited areas that are not considered critical environmental areas (e.g., floodplain or flood-prone). In the event that developable land is located along the southern boundary of this Sub-Area through site engineering and analysis, these areas may be considered developable as part of the adjacent Sub-Area.

SUB-AREA 14

Name: NORTHEAST RESIDENTIAL TRANSITION AREA
Acreage: 7.2 acres
Land Use Designation: Medium-Low Density Residential
Annexed: No

Sub-Area 14, containing approximately 7.2 acres, is located just to the southeast of the railroad right-of-way that also corresponds to the current boundary of the Town of Berryville. The Sub-Area is bordered on the south and east by existing development that includes an established neighborhood of single-family detached homes. The Sub-Area is bounded on the east by a well-defined natural swale, which drains into the lowlands of Sub-Area 13. The entire Sub-Area is currently located outside of Town limits.

The Sub-Area is undeveloped and the physiography of the site with limited transportation access is not conducive to intensive land uses, particularly industrial uses. Mixed hardwood vegetation is

scattered throughout the planning unit, affording opportunities for visual buffers for the residential area to the south. Future land uses should be clustered so as to preserve the site's natural drainage way.

Transportation planning for Sub-Area 14 shall provide for connections through the existing Battletown Subdivision as well as potential linkages into Sub-Area 15. Transportation planning should also consider the potential for any developer-funded local collector road options that could be identified to provide direct connectivity from this Sub-Area to East Main Street.

The Sub-Area is currently zoned Business Park (BP) and is adjacent to the Norfolk Southern Railroad. Modifying this land use and its zoning should be considered due to its lack of vehicular access. Access is currently from Cattleman's Lane which is owned by Norfolk Southern Railroad. This road is substandard in width and is not publicly maintained making it unsuitable for business access absent substantial investment in a new industrial collector road.

This Sub-Area, previously designated as Sub-Area 14A, was originally recommended for light industrial uses due to its proximity to the Norfolk-Southern Railroad. In conjunction with the 2015 Plan update, this Sub-Area is now recommended for development of medium-low density residential as a transition area between the railroad and the adjoining low-density residential uses recommended for Sub-Area 15. Given the challenges of developing safe and effective ingress/egress for industrial traffic, this Sub-Area would be better served by lower-capacity residential streets constructed as part of a phased development plan that could occur in the future in Sub-Area 15.

Zoning requirements should encourage that residential development be planned in clusters. Cluster design for the residential neighborhood would provide the opportunity to reserve sensitive environmental areas and natural drainage ways, which would in turn, provide for more efficient use of the land. Clustering would also be an important tool by which land disturbance and grading activities could be confined.

It should be noted that the majority of the land contained in the Sub-Areas 13, 14, and 15 are in common ownership as of the 2015 Berryville Area Plan update. This presents the potential opportunity of facilitating a master plan development for these Sub-Areas including, but not limited to, the following elements:

- Transportation connectivity and improvements (see discussion under Sub-Areas 15 and 17).
- Cluster design to reduce infrastructure costs and adverse environmental impacts.
- Walkability elements including sidewalks and walking trails.
- View shed protection.
- Master planning for public water, public sewer, and stormwater infrastructure.
- Cash proffers or other developer-funded improvements to mitigate the impact of new development on Town and County capital needs.

If supported by a master plan of development that effectively addresses those and other elements, Sub-Area 14 supports medium-low density residential development at a density of 4 units per acre. The maximum potential yield for this Sub-Area is 28 units. The original Berryville Area Plan

Identified Future Land Uses in Table V-1 and included planned yields for respective commercial and residential development. Of the residential development that has occurred in Annexation Area B through 2015, 195 residential units of the planned yield had not been constructed. Additional density that would allow for a portion of these units to be included in this Sub-Area would come from these unused residential units.

SUB-AREA 15

Name: NORTHEASTERN RESIDENTIAL GROWTH AREA
Acreage: 63.1 acres
Land Use Designation: Low Density Residential
Annexed: No

Sub-Area 15, containing approximately 63 acres, surrounds the large historic house, Bel Voi, and is bounded on its outer limits by the Route 7 Bypass and the lowlands of Sub-Area 13 to the north, a well-defined drainage way to the west and the Battletown Subdivision to the south. The land is currently zoned Detached Residential-1 (DR-1). The entire Sub-Area is located outside of Town limits. The boundaries of this Sub-Area were revised with the 2015 Plan update to incorporate previous Sub-Area 14B, which was recommended for medium-low density residential uses. The revised Sub-Area 15 is now recommended for low-density residential uses consistent with the DR-1 zoning.

Approximately one-third of the area has slopes greater than fifteen percent, with a portion of the slopes exceeding twenty-five percent. The Sub-Area has minor, scattered tree cover and several defined drainage swales which must be addressed from both a site planning and stormwater management standpoint.

The land is highly visible from the Route 7 Bypass. In this regard, future development must be carefully sited. Further, land use proposals should respect the location and scale of the existing historic residence on adjoining Sub-Area 16.

Transportation planning for the Sub-Area should emphasize sensitively located linkages to and through Battletown Subdivision and the other Sub-Areas that make up this quadrant. However, given the low capacity nature of Battletown's residential streets, additional access options to Sub-Area 15 should be explored. A primary access to serve the entire Sub-Area shall be developed through Sub-Area 17 providing an uninterrupted, direct connection to Route 7 Business. Access to Route 7 Bypass is restricted. The internal street system within Sub-Area 15 should be aligned to provide secondary connections to Sub-Areas 14 and 17 and Battletown Subdivision in the town to the south but only after the aforementioned primary access is accepted for public use.

This Sub-Area, with substantial contiguous frontage to Route 7 Bypass, is designated for Low Density Residential uses. Based on preliminary planning analysis, the Sub-Area has an estimated land holding capacity for approximately 81 residential units. The clustering of housing should be a design objective for this Sub-Area.

As previously noted, the majority of Sub-Areas 13, 14, and 15 are in common ownership as of the 2015 Berryville Area Plan update. This presents the potential opportunity of facilitating a master plan development for these Sub-Areas including, but not limited to, the following elements:

- Transportation connectivity and improvements (see discussion under Sub-Area 15 and 17).
- Cluster design to reduce infrastructure costs and adverse environmental impacts.
- Walkability elements including sidewalks and walking trails.
- Viewshed protection.
- Master planning for public water, public sewer, and stormwater infrastructure.
- Cash proffers or other developer-funded improvements to mitigate the impact of new development on Town and County capital needs.

If supported by a master plan of development that effectively addresses these and other elements, Sub-Area 15 could support medium-low density residential development at a density of 4 units per acre. The original Berryville Area Plan identified Future Land Uses in Table V-1 and included planned yields for respective commercial and residential development. Of the residential development that has occurred in Annexation Area B through 2015, 195 residential units of the planned yield have not been constructed. Additional density that would allow for a portion of these units to be included in this Sub-Area should be considered.

Transportation access to Sub-Area 15 is a challenging element due to the fact that the historic Bel Voi house is located on an 11.47 acre parcel that overlaps Sub-Areas 15 and 16 and extends northward to Buckmarsh Run and the planning boundary with Sub-Area 13. Connectivity between the west and east sides of Sub-Area 15 can only be achieved with future cooperation with the owner of the Bel Voi parcel. Absent this participation, the challenge will be to develop separate access plans that do not adversely impact existing transportation networks.

SUB-AREA 16

Name:	BEL VOI PRESERVATION AREA
Acres:	8.9 acres
Land Use Designation:	Historical/Cultural Preservation
Annexed:	No

Sub-Area 16, containing approximately 9 acres, partially encompasses the property immediately surrounding the existing historic residence, Bel Voi, contiguous to Balfordtown Subdivision. The land is zoned Open Space Residential (OSR). The planning unit is surrounded on the west, north and east by Sub-Area 15 and on the south by the existing residential subdivision. The Sub-Area has not been annexed by the Town.

The Sub-Area is designated for planning purposes as historical and cultural preservation, recognizing the existing home and grounds, known as Bel Voi, for both its cultural and historical significance within the Berryville community (survey #21-142). The County's historic resources survey states that the north wing of the house was built circa 1825, with additions made in 1953 and 1971. In addition to the brick vernacular residence, a brick smoke house, and a 4-bay brick slave's quarters (renovated as a guest house) are also on the property. The geographical limits of the Sub-Area are so defined as to create sufficient setbacks and buffer opportunities from any

future development on the contiguous undeveloped property. Given its high visibility and unique architectural features, Bel Voi should be preserved and considered as a focal point around which any future land uses should be carefully sited.

It should be noted that the historic Bel Voi home lies on an 11.47 acre parcel that is mostly within Sub-Area 16 but also partially extends into Sub-Area 15 to Brookmarsh Run adjacent to the environmentally-sensitive Sub-Area 13. The boundaries of Sub-Area 15 were originally drawn not to capture the physical boundaries of this parcel, but to account for existing topography and viewsheds surrounding the historic home. As noted in the description for Sub-Area 15, the boundaries of the Bel Voi parcel present some challenges to the future master planning of development on adjacent Sub-Areas. Regardless of the participation of the owner of Bel Voi in a future development project, it is recommended that the boundaries and recommended development density of Sub Area 16 be retained and any adjoining development project shall provide appropriate mitigation measures (e.g., buffers, architectural features) to further protect the historic home.

SUB-AREA 17

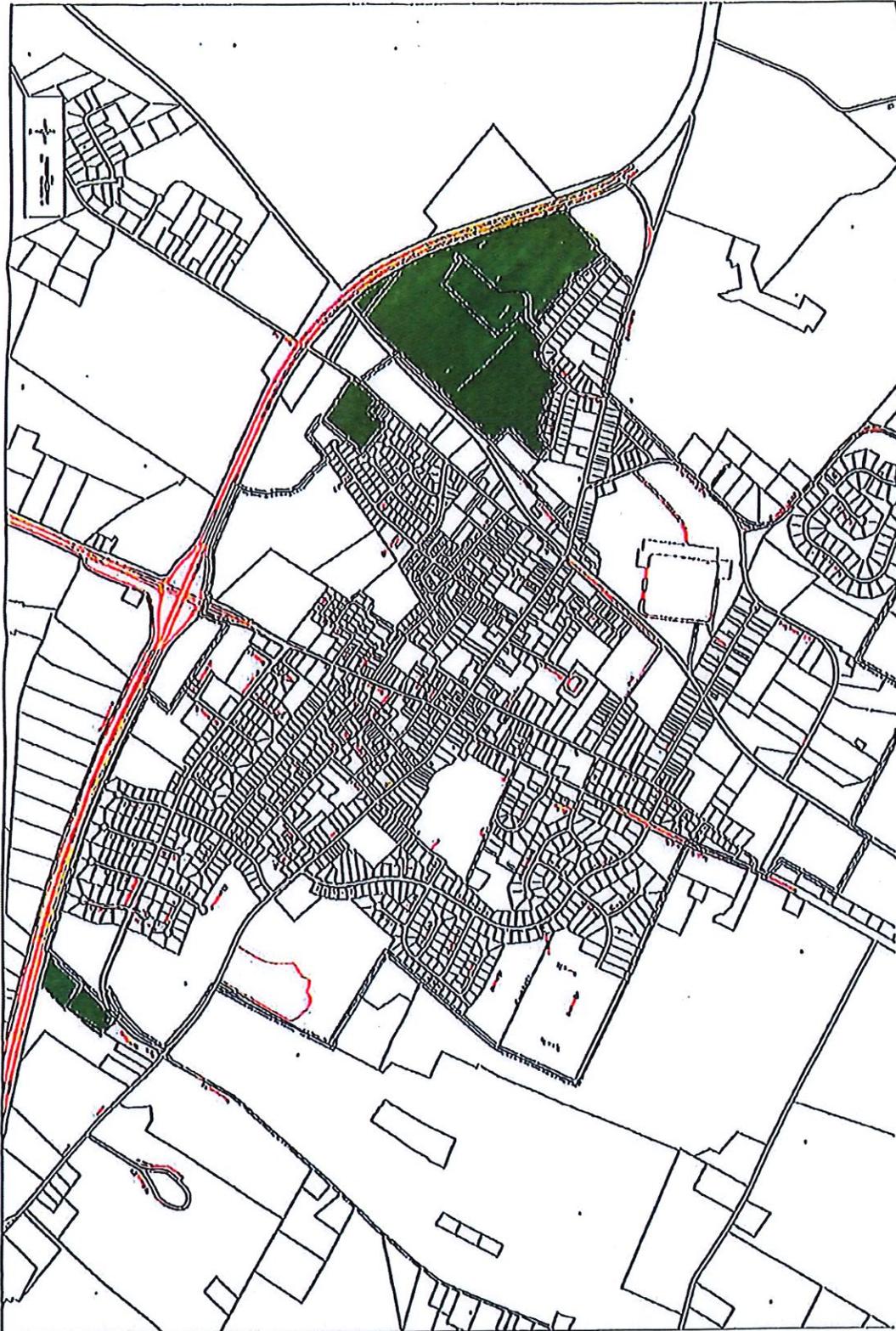
Name: EASTERN GATEWAY
Acreage: 15.1 acres
Land Use Designation: Low Density Residential
Annexed: No

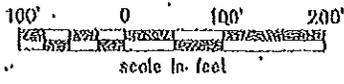
A residual portion of Audley Farm when the Route 7 Bypass was constructed, Sub-Area 17, containing approximately 16.0 acres, is located immediately west of the Route 7 Bypass/Route 7 Business intersection, at the easterly entrance into the Berryville Area. This land has its northern border defined by the Route 7 Bypass, southern and eastern borders defined by Route 7 Business, and Sub-Area 15 and Battletown Subdivision in the Town establishing its western limits. This Sub-Area is zoned Detached Residential-1 (DR-1) and has not been annexed by the Town.

The land is highly visible from the Route 7 Bypass/Business intersection and is considered the eastern entrance to the Town of Berryville. Future development should be designed with frontage roads, significant landscape buffers, or other devices to present the most attractive face of a development toward this important entry corridor.

Transportation planning for Sub-Area 17 should be analyzed for appropriate access. The priority in planning for the transportation element in this area (including Sub-Areas 13, 14, 15, 16, and 17) should be to explore an access point to Route 7 Business for a future local collector road system, in addition to the public rights-of-way through Battletown subdivision. This local collector road would serve as the primary means of ingress/egress for future development in the aforementioned Sub-Areas. The priority should be to develop a new access to Route 7 Business before accessing existing stub streets in the Battletown subdivision.

As previously noted, the majority of Sub-Areas 13, 14, and 15, are in common ownership as of the 2015 Berryville Area Plan update. This presents the potential opportunity of facilitating a master plan development for these Sub-Areas with the owner of Sub-Area 17 including, but not limited to, the following elements:





Brookfield
Washington, LLC
M 14A2-13-C
O.D. 400, P. 802

Stephanis
M 14A2-20-02
O.D. 350, P. 064

Residue Lot
0.24 acres

Brookfield
Washington, LLC
M 14A2-13-C
O.D. 400, P. 802

Barry
M 14A2-A-161

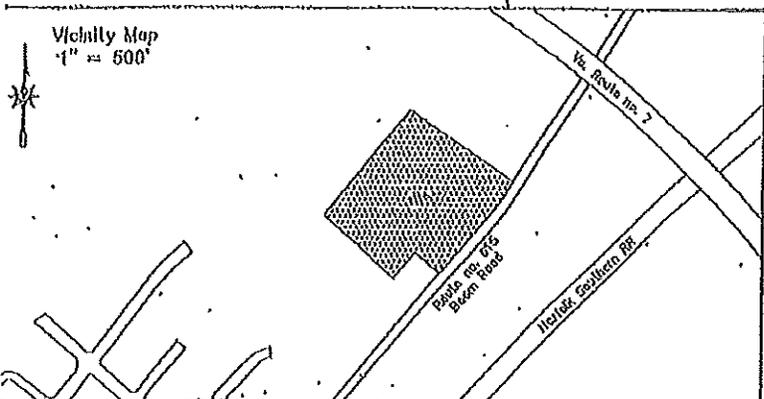
Smucker
M 14A2-A-162
O.D. 300, P. 285

Lot 1

Route No. 615 - First
Street

area of dedication
for public use

Vicinity Map
1" = 500'



Approved	<i>[Signature]</i>
Town Planner	
Date	10-26-15
Area Tabulation:	
5.03 acres	area of M 14A2-20-
0.14 acres	area dedicated for pub
0.85 acres	area of Lot 1
0.24 acres	area (Residue Lot)

15-1257

OWNER'S CERTIFICATE

BOOK 591 PAGE 754

The attached plat of boundary survey of lands of Priant Enterprises, L.P., L.L.P., a Virginia limited liability company limited partnership, prepared by W. Stuart Dumm, Land Surveyor, dated June 19, 2015 (revised July 17, 2015), located in Battletown Magisterial District, Clarke County, Virginia, being a portion of the same property conveyed to Priant Enterprises, a Virginia limited partnership, by Deed from Berryville Lumber Company, Inc., a Virginia corporation, dated July 1, 1986 and recorded in Deed Book 169 at Page 647 in the Office of the Clerk of the Circuit Court of Clarke County, Virginia, and by Deed from Profundus Virginia Properties, Inc., a Virginia corporation, dated July 10, 1990 and recorded in Deed Book 207 at Page 41 in the aforesaid Clerk's Office, is hereby confirmed and submitted for record in the aforesaid Clerk's Office. Priant Enterprises is now a Virginia limited liability limited partnership known as Priant Enterprises, L.P., L.L.P., as appears from the Amended and Restated Certificate of Limited Partnership of record in Partnership Book 2 at Page 783 in the aforesaid Clerk's Office.

Given under our hands this 22nd day of July, 2015.

PRIAN'T ENTERPRISES, L.P., L.L.P.

By: *John R. Priant, Jr.*
 Managing General Partner

By: *Katherine F. Funkhouser*
 Managing General Partner

STATE OF VIRGINIA
 COUNTY OF CLARKE, to wit:

The foregoing instrument was acknowledged before me this 22 day of July, 2015; by JOHN R. PRIANT, JR. and KATHERINE F. FUNKHOUSER, Managing General Partners of PRIAN'T ENTERPRISES, L.P., L.L.P., a Virginia limited liability limited partnership, in behalf of said partnership.

BETTY L. HILLS
 NOTARY PUBLIC
 Commonwealth of Virginia
 Reg. #280200
 My Commission Expires Aug. 01, 2018

Betty L. Hills
 Notary Public

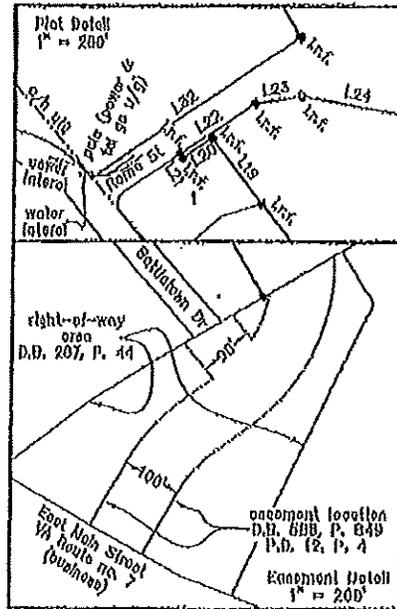
Boundary Survey of the Lands of **BOOK 591 PAGE 755**
Triant Enterprises, L.P, LLP
 Deed Book 169, Page 647 Deed Book 100, Page 679
 Tax Map 14-A-00
 Deed Book 207, Page 41
 Tax Map 14-A-112
 Ballietown Magisterial District, Clarke County, Virginia

Notes:

- (1) No Title Report furnished, Encumbrances of record not shown may exist.
- (2) c.f.m. = concrete highway monument; l.r.f. = iron rod (round); l.s.o. = iron rod (set); l.p.f. = iron pipe found; T.M. = tax map identification number; o/h = overhead; M.L. = utility line.
- (3) These lands are in Flood Zone X, established from FEMA Community Profile no. 01043C0063D and 51043C0064D, effective September 20, 2007.
- (4) Encumbrance recorded in Deed Book 670, Page 689, over existing ditches on T.M. 14-A-01 for ingress and egress to barn and other agricultural appurtenances.
- (5) The utilities marked shown in the Plot Detail leading to T.M. 14-A-01 are approximate. The location was established by Miss HURTY. Prior to any excavation an accurate location should be determined.

CURVE	RADIUS	ARC	DELTA	CHORD	CHORD	TANGENT
01	11400.10'	1005.42'	7°03'20"	1404.03'	S 84°48'03" W	703.00'
02	11442.10'	220.00'	1°00'10"	220.00'	S 89°47'01" W	114.63'
03	5730.72'	140.21'	2°17'10"	140.21'	N 25°27'04" W	74.02'
04	281.36'	500.20'	80°39'48"	347.08'	N 04°31'09" W	237.13'

LINE	BEARINGS	DISTANCE
01	N 90°00'00" W	11.02'
02	N 00°36'33" W	400.00'
03	N 09°00'41" W	109.00'
04	S 82°10'17" W	110.13'
05	N 37°40'43" W	199.07'
06	N 34°21'14" W	269.43'
07	N 00°17'10" E	261.08'
08	N 30°11'42" W	10.00'
09	N 01°18'10" E	139.00'
10	N 47°37'20" W	17.00'
11	S 10°24'13" E	220.00'
12	S 04°37'41" E	250.37'
13	S 09°10'22" E	400.01'
14	N 07°20'20" E	202.04'
15	S 30°20'50" E	200.00'
16	N 40°30'23" W	80.70'
17	S 30°30'50" E	146.71'
18	N 40°24'40" E	42.02'
19	S 30°50'49" E	137.94'
20	N 56°12'22" E	50.04'
21	S 33°57'37" E	7.70'
22	S 08°00'01" W	149.31'
23	S 00°40'00" W	78.13'
24	N 70°20'20" W	223.02'
25	S 58°28'10" W	61.00'
26	S 22°31'42" W	108.36'
27	S 05°12'44" W	212.40'
28	N 40°20'11" E	66.60'
29	N 61°61'20" E	82.20'
30	S 40°40'34" E	305.11'
31	N 31°30'20" W	300.24'
32	N 50°00'30" E	410.30'
33	S 82°00'02" W	239.04'
34	N 41°34'46" W	172.01'



Survey no. 2124
 sheet 1 of 2

Dunn Land Surveys, Inc.
 106 North Church Street
 Barryville, Virginia 22811
 Tel: 640-688-3300
 June 18, 2015
 Revised July 17, 2015

Survey no. 2124

Virginia Administrative Code
 Title 1. Administration
 Agency 50. Commission On Local Government
 Chapter 20. Organization and Regulations of Procedure

1VAC50-20-540. Annexation.

In developing its findings of fact and recommendations with respect to a proposed annexation, the commission shall consider the information, data, and factors listed in this section. Any city or town filing notice with the commission that it proposes to annex territory shall submit with the notice data and other evidence responsive to each element listed in this section that it deems relevant to the proposed annexation. Any voters or property owners filing notice pursuant to § [15.2-2907](#) of the Code of Virginia with the commission seeking annexation to a municipality shall submit with the notice data and other evidence responsive to each element listed in this section that they deem relevant to the proposed annexation, except that subdivision 1 of this section is required to be included in the notice filed with the commission.

1. A written metes and bounds description of the boundaries of the area proposed for annexation having, as a minimum, sufficient certainty to enable a layman to identify the proposed new boundary. The description may make reference to readily identifiable monuments such as public roads, rivers, streams, railroad rights of way, and similar discernible physical features.
2. A map showing (i) the boundaries of the area proposed for annexation and their geographic relationship to existing political boundaries; (ii) identifiable unincorporated communities; (iii) major streets, highways, schools, and other major public facilities; (iv) significant geographic features, including mountains and bodies of water; (v) existing uses of the land, including residential, commercial, industrial, and agricultural; and (vi) information deemed relevant as to the possible future use of the property within the area sought for annexation.
3. A land-use table showing both the acreage and percentage of land currently devoted to the various categories of land use in the municipality, the county, and the area proposed for annexation.
4. The past, the estimated current, and the projected population of the municipality, the county affected by the proposed annexation, and the area of the county proposed for annexation.
5. The past, the estimated current, and the projected future number of public school students enrolled in the public schools and the number of school-age children living in the municipality, the county affected by the proposed annexation, and the area of the county proposed for annexation.
6. The assessed property values, by major classification, and if appropriate, the ratios of assessed values to true values for real property, personal property, machinery and tools, merchants' capital, and public service corporation property for the current year and the preceding 10 years for the municipality and the county affected by the proposed annexation, and similar data for the current year for the area of the county proposed for annexation.
7. The current local property and nonproperty tax rates and the tax rates for the preceding 10 years, applicable within the municipality, the county affected by the proposed annexation, and the area of the county proposed for annexation.
8. The estimated current local revenue collections and intergovernmental aid, the collections and aid for the previous 10 years, and projections of the collections and aid (including tax receipts from real property, personal property, machinery and tools, merchants' capital, business and professional license, consumer utility, and sales taxes) within the municipality, and the county affected by the proposed annexation, and similar data for the past year for the area of the county proposed for annexation.
9. The amount of long-term indebtedness and the purposes for which all long-term debt has been incurred by the municipality and the county affected by the proposed annexation.

10. The need in the area proposed for annexation for urban services, including those listed in this subdivision, the level of services provided by the municipality and by the county affected by the proposed annexation, and the ability of the municipality and the county to provide the services in the area proposed for annexation:

- a. Sewage treatment;
- b. Water;
- c. Solid waste collection and disposal;
- d. Public planning;
- e. Subdivision regulation and zoning;
- f. Crime prevention and detection;
- g. Fire prevention and protection;
- h. Public recreational facilities;
- i. Library facilities;
- j. Curbs, gutters, and sidewalks;
- k. Storm drains;
- l. Street lighting;
- m. Snow removal;
- n. Street maintenance;
- o. Schools;
- p. Housing; and
- q. Public transportation.

11. Efforts made by the municipality and the county affected by the proposed annexation to comply with applicable state policies with respect to environmental protection, public planning, education, public transportation, housing, and other state service policies promulgated by the General Assembly.

12. The community of interest which (i) may exist between the municipality and the area proposed for annexation and its citizens and (ii) may exist between that area and its citizens and the rest of the county; the term "community of interest" may include consideration of natural neighborhoods, natural and manmade boundaries, the similarity of service needs, and economic and social bonds.

13. Any arbitrary prior refusal to cooperate by the governing body of the municipality or of the county affected by the proposed annexation, if such has occurred, to enter into cooperative agreements providing for joint activities that would have benefited citizens of both localities.

14. The need for the municipality to expand its tax resources, including its real estate and personal property tax base.

15. The need of the municipality to obtain land for industrial, commercial, and residential development.

16. The adverse effect on the county affected by the proposed annexation resulting from the loss of areas suitable and developable for industrial, commercial, or residential use.

17. The adverse effect on the county of the loss of tax resources and public facilities necessary to provide services to those persons in the remaining areas of the county after the proposed annexation.

18. The adverse impact of the proposed annexation on agricultural operations located in the area proposed for annexation.

19. The terms and conditions upon which the municipality proposes to annex, its plans for the improvement of the annexed territory during the 10-year period following annexation, including the extension of public utilities and other services, and the means by which the municipality shall finance the improvements and extension of services.

20. Data pertinent to a determination of the appropriate financial settlement between the municipality and the affected county as required by § [15.2-3211](#) of the Code of Virginia and other applicable provisions of the Code of Virginia.

21. The commission's staff shall endeavor to assist parties contemplating or involved in annexation proceedings by identifying additional data elements considered by the commission to be relevant in the disposition of annexation issues.

Statutory Authority

§ [15.2-2903](#) of the Code of Virginia.

Historical Notes

Derived from VR45-01-02 § 4.1, eff. November 1, 1984; amended, Virginia Register [Volume 22, Issue 26](#), eff. October 4, 2006; [Volume 35, Issue 1](#), eff. October 18, 2018.

Website addresses provided in the Virginia Administrative Code to documents incorporated by reference are for the reader's convenience only, may not necessarily be active or current, and should not be relied upon. To ensure the information incorporated by reference is accurate, the reader is encouraged to use the source document described in the regulation.

As a service to the public, the Virginia Administrative Code is provided online by the Virginia General Assembly. We are unable to answer legal questions or respond to requests for legal advice, including application of law to specific fact. To understand and protect your legal rights, you should consult an attorney.

AGREEMENT DEFINING ANNEXATION RIGHTS

WHEREAS, the Town of Berryville, Virginia, (herein called "the Town"), and the County of Clarke, Virginia, (herein called "the County"), desire to enter into an agreement defining the Town's annexation rights in the future; and

WHEREAS, the Town Council has completed a study to determine the feasibility of annexing certain lands located in the County adjacent to the corporate limits of the Town; and

WHEREAS, the said study developed a map (see Attachment A) and metes and bounds descriptions (see Attachment B) outlining Areas "A" and "B" in which future annexation by the Town may take place; and

WHEREAS, the Town offers to permanently renounce its right to become a city; and

WHEREAS, the Town and the County desire to enter into an agreement to provide for the regular and orderly urban growth of the Town consistent with the County and Town Comprehensive Plans,

NOW, THEREFORE, WITNESSETH: That for and in consideration of the premises and in further consideration of the mutual premises and covenants herein contained, the Town and County do mutually agree as follows:

1. The Town, by the execution of this agreement as provided by §16.1-1068.1 of the Code of Virginia, 1960, as amended, does hereby permanently renounce its right to become a city.

2. It is the intent of the Town to annex the area designated as Area "A" in the proposed annexation map, which is attached hereto as Attachment A and incorporated herein by reference as a

part of this agreement, as of January 1, 1989. Such annexation shall be accomplished by enacting a Town Annexation Ordinance after the execution of this agreement by the parties.

3. Any tract of land in Area B, contiguous to the Town, or contiguous to land being simultaneously annexed by the Town, may be annexed by the Town, at its discretion, at any time after joint approval of the land use plan for Area B, as provided in paragraph 6 (a) of this agreement, and (a) the County has taken zoning action after January 1, 1988, to permit development on the tract which requires public water and/or sewer service or (b) the Town has approved a subdivision application for the tract which requires public water and/or sewer service or (c) by mutual agreement of the Town and the County. For purposes of this agreement, "zoning action" shall include zoning, rezoning, approval of a site development plan, or any action to permit a use not permitted by right pursuant to zoning regulations.

4. The annexation of property in Area B shall be effected by Town ordinance; provided, however, no such annexation ordinance shall be adopted by the Town unless prior formal notice has been given to the Board of Supervisors of the County announcing the intention of the Town to adopt such an ordinance, nor until a public hearing, advertised once a week for two successive weeks in a newspaper of general circulation in the County has been held on such proposed annexation. Any annexation ordinance adopted by the Town under the terms of this agreement shall include:

(a) a description of the area to be annexed, such description being of sufficient definiteness to enable location

of the boundaries of the area to be annexed;

(b) information which can be recorded on a map attached to the ordinance, indicating the location of subdivisions, major industrial and commercial sites and vacant areas, as well as other information relevant to the possible future uses of property within the area proposed for annexation; and

(c) a statement of the terms and conditions upon which the annexation will be effected, including provisions for the extension of utilities and for meeting an annexed area's service needs.

5. All annexation shall be made effective as of midnight on December 31 of the year specified, and certified copies of each adopted annexation ordinance shall be filed with the Circuit Court of Clarke County, the Secretary of the Commonwealth, and other State and Federal agencies which require knowledge of local government boundary changes.

8. a) The Town and County agree that in order to have coordinated and meaningful planning and land use regulation and administration in Area B, the County shall designate this area as the County's "Urban Services Area", in and for which Area the County and Town shall, jointly and formally, adopt a specific future land use plan by March 31, 1989. Such jointly adopted future land use plan, as it applies to Area B, shall not be amended in the future without joint approval of the Town and the County. In the event the County and Town do not jointly adopt the future land use plan for Area B by March 31, 1989, or such later date mutually agreed on by the County and Town, then the

parties agree that they will jointly adopt the future land use plan for Area B for which the joint public hearing was held on December 12, 1988. In order that subdivision regulations reflect Town standards for development, the Town or its designated agent shall have exclusive extraterritorial subdivision jurisdiction in all of the Area B - Urban Services Area upon joint adoption of the future land use plan as required herein. The Town and County agree that County zoning ordinances shall apply to all tracts of land in the Area B -- Urban Services Area and shall be administered by the County through its appointed officials until the effective date of annexation of each respective tract of land in Area B by the Town. The Town agrees to permit any land use approved by the County in Area B - Urban Services Area, subject to the performance by the landowner of any conditions or zoning proffers imposed by the County or granted by the applicant at the time of the land use approval, whether by rezoning, special permit, special exception, variance or waiver. Following annexation of an area, the Town or its designated agent shall assume the administration of all zoning and land use control ordinances for the area annexed pursuant to Town zoning and land use control ordinances.

b) The County agrees that all applications in Area B for zoning action shall be referred by the County Planning Administrator for a joint review by the County Planning Commission and Town Planning Commission. The respective commissions may meet jointly and shall make their recommendations jointly or severally, as each respective commission may so desire, to the County Board of Supervisors, as provided by law.

The Town agrees that provided such referrals are made in a timely fashion so as to allow adequate time for review, the Town Planning Commission shall in turn make a timely recommendation, if any, so as not to delay formal action by the County within the statutory time limits for same. Any such referrals by the County to the Town Planning Commission should be made no less than five (5) days prior to any meeting of the Commission during which presentation by the County Planning Administrator and action thereon by the Commission is desired.

c) The County recognizes that portions of Area A and Area B drain into the Town, and that zoning and development in those areas without the Town's review will create an unfair burden on the Town. As a result, the County agrees not to approve any zoning action in Area B - Urban Services Area until the Town has received and commented on the provision of storm water drainage control and the provision of Town public utilities.

7. The County agrees that it shall fund \$75,000 toward necessary stormwater drainage improvements to that portion of Town Run situated outside the existing, preannexation corporate boundaries of the Town at such time that the Town institutes the project.

8. Notwithstanding the terms of this agreement, the Town in no way relinquishes authority or power to use the traditional annexation process authorized by Article I, Chapter 25, Title 15.1 of the Code of Virginia as now in existence or as may be amended in the future, as to any land in the County including Areas A and B.

9. This agreement shall become void in the event no annexation ordinance is adopted by the Town within five (5) years of the date of the final approval of this agreement.

10. Notwithstanding the terms of this agreement, no one residing or owning property in Clarke County (including Areas A and B) is restricted in exercising his or her right to petition for voluntary annexation to the Town of Berryville under §15.1-1034 of the Code of Virginia of 1950, as amended. However, the Town shall reserve its right to reject such annexation petition by ordinance, as provided in § 15.1 - 1034 of the Code of Virginia, 1950, as amended.

11. The Town and County reserve the right to modify this agreement by joint consent. Review and modification of the Area B limits delineated in Attachments A and B, shall be considered in the event that major development is proposed outside the area, but is contingent on the provision of Town services. A request for review may be initiated by the Town or the County. If no such review is requested during the first thirty (30) years the agreement is in effect, one shall be scheduled during the thirtieth year jointly by the County and Town.

12. The Town agrees that upon the effective date of any annexation which is accomplished under the terms of this agreement, the Town shall extend its public safety and other general governmental services to the areas annexed at the same level as there exists within the Town.

Witness the following signatures and seals:

TOWN OF BERRYVILLE
BY *Richard L. Fisher* (SEAL)
Mayor

DATE: 12/29/88

Attest:
Ray E. Feltz Jr.

COUNTY OF CLARKE
BY *John D. Hardisty* (SEAL)
Chairman

DATE: 12/29/88

Attest:
G. K. [unclear], County Administrator

Town Council Agenda Item Report Summary

September 14, 2021

Item Title

Construction Project Update

Prepared By

Christy Dunkle

Shenandoah Crossing Subdivision

- 82 single-family homes
- Owned by D.R. Horton, Inc.
- To be developed by D.R. Horton, Inc.
- Zoned DR-2 Detached Residential
- Cluster layout
- HOA-maintained facilities
- Home construction and sales underway

Fellowship Square Subdivision

- 50 single-family homes
- Zoned DR-4 Detached Residential
- Cluster layout
- HOA maintained facilities
- The first Certificate of Occupancy and sale occurred in November
- Fairfax Street opened to the public on December 14, 2020 connecting First Street to North Buckmarsh Street
- All 50 lots are either completed, under construction, or have grading plans submitted for review (the parking lot for the sales home is the only lot without applications submitted)
- Town staff will be conducting a site visit with the developer, the Town's engineer, and others to create a punch list of items that need to be repaired or reviewed (e.g., sidewalk repairs, ADA compliance) on September 9.

Hermitage Phase V

- 71 single-family homes
- Final phase of Hermitage subdivision (started 2000)
- Zoned R-1 and DR-1
- Phase V will have HOA oversight, other phases will not be affected
- Property purchased by D.R. Horton, Inc. in March 2021
- Pre-construction meeting was held on April 8, 2021
- Pre-blast surveys have been completed
- Land disturbance underway
- Grading plans have been submitted for individual lot development
- Staff conducted a site visit after the September storm event to inspect storm water controls

Town Council Agenda Item Report Summary
September 14, 2021

Item Title
Bond Release – Robert Regan Village

Prepared By
Christy Dunkle

Background/History/General Information

In March of 2019, Town Council set the public improvement and erosion and sediment control bonds as follows:

Erosion and Sediment Controls:	\$46,111.50
Public Improvements:	\$187,628.24
<u>25% Contingency:</u>	<u>\$58,434.94</u>
TOTAL	\$292,174.68

Town Council reduced the bond at the February 2021 meeting, retaining a total of \$38,762.83 for public improvements and items identified by the Town's engineer including storm water detention facilities and sidewalks.

Findings/Current Activity

The items referenced above have been addressed by the developer and reviewed by Town planning and public works staff and Pennoni Engineering. All items identified have been resolved.

Financial Considerations

N/A

Schedule/Deadlines

N/A

Other Considerations

N/A

Recommendation

Approve the release of the bond in the amount of \$38,762.83.

Sample Motion

I move that the Council of the Town of Berryville approve the bond release for the Robert Regan Village in the amount of \$38,762.83.

Town Council Agenda Item Report Summary
September 14, 2021

Item Title

Updates to Town of Berryville Constructions Standards and Specifications Manual

Prepared By

Christy Dunkle

Background/History/General Information

Utility and Public Works staff are recommending changes to two chapters of the Construction Standards and Specifications Manual as it relates to sanitary sewer pump stations.

Findings/Current Activity

Content changes to Section 2 General Design Standards are identified in red on pages 7 and 17. Proposed language identifies requirements for storm water pipes in public rights of way and the process by which a Certificate to Operate is transferred from the developer to the Town of Berryville.

Changes to Section 14 Minimum Standards for Wastewater Pumping Stations are also identified in red and include the following:

- Updates to staff references
- Pump station site maintenance
- Site requirements including access, easements, and identification of the property
- Design standards
- Metering of the facility and the requirement of an outdoor hose bib on the building
- Lighting and power sources
- Wet well upgrades

Financial Considerations

N/A

Schedule/Deadlines

N/A

Other Considerations

N/A

Recommendation

Approve the changes as recommended.

Sample Motion

I move that the Council of the Town of Berryville approve the proposed changes to the Construction Standards and Specifications Manual as presented.

Attachments:

- Section 2 General Design Standards
- Section 14 Minimum Standards for Wastewater Pumping Stations

Section 2

General Design Standards

I. Provision for Future Growth

The Town may require the modification of certain proposed public improvements to provide adequate capacity for the logical extension of said improvements. Proposed facilities would include, but not be limited to, water lines, booster stations, water pressure control valves, sewer lines, sewer pump stations, and streets and associated stormwater management facilities. Costs for the provision of additional capacity or modifications as required above may be reimbursed by the Town or through agreements with other owners/developers.

II. Phased Construction

A. Delineation

If development is to be constructed in phases, plans shall clearly indicate by phase lines and notes, which facilities are to be constructed under each phase. Plans shall indicate locations of contour tie-ins for each phase and specific measures for phased termination of all water, sewer, storm drainage, streets and other public improvements. Construction plans for public improvements and utilities shall be designed so as to be fully functional at the completion of each phase and allow for construction of the next phase with a minimal impact to existing improvements. A temporary marker identifying the location of the utility termination shall be provided.

B. Bonding

Bonding of public improvements and erosion and sediment control measures as required by Town Ordinance shall be provided independently for each proposed phase.

C. Posting of Construction Hours

Hours of construction as regulated in the Code of the Town of Berryville, Section 11-4(e) must be posted at each vehicular access point of the site under construction.

III. Drainage

A. General

1. An evaluation shall be performed for all proposed drainage systems to ensure adequate hydraulic capacity for conveyance of the minimum ten-year event including, but not limited to, channels, storm water management facilities and conduits.
2. Hydraulic capacity must be verified with engineering calculations, in accordance with the procedures outlined in the *Virginia Erosion and Sediment Control Handbook*, the *Virginia Department of Transportation Drainage*

Manual, Town of Berryville Storm Water Management Ordinance, and this manual. Submit two complete copies of drainage calculations with construction plans.

Calculations shall include a copy of the site grading and drainage plan, at the plan scale, upon which the boundaries, acreages, time of concentration paths and C-factors of the interior drainage areas shall be shown. Calculations shall also include a map at an appropriate scale delineating the boundaries, acreages, time of concentration paths and C-factors of the drainage areas, upstream of the development, which would contribute storm water to the development.

3. Due consideration must be given to infrequent events (100-year) resulting in runoff quantities greater than minor system design capacity. The design for the major drainage system shall provide for overland relief of the 100-year event without flooding or damaging buildings and structures and without reliance upon the minor drainage system. The limits of the area affected by the 100-year event shall be represented on construction plans.
4. The drainage system shall be designed to honor all natural drainage divides and create no adverse impact on downstream properties; to account for all off-site storm water and; to convey discharge surface waters to the flow line of a natural watercourse or an existing underground or above-ground adequate conveyance system.
5. The owner or developer may not create a new discharge or concentrated storm water from a pipe, culvert, channel, or other drainage structure, onto or through lands of another, without first obtaining a permanent storm drainage easement and constructing improvements to guarantee continuity of an outfall from the point of discharge to the nearest natural or man-made watercourse.
6. If off-site downstream construction and easements are required to construct an adequate channel outfall, no plans shall be approved until such storm drainage easements, extending to the nearest natural or man-made watercourse, have been obtained and recorded. It will be the responsibility of the developer to obtain all off-site easements.
7. Energy dissipation devices and/or friction channel lining shall be used at and downstream of outfalls when discharge velocities exceed the maximum permissible as defined by the *Virginia Erosion and Sediment Control Handbook*.
8. Plans shall be prepared to preclude adverse impacts because of higher flow rates that may occur during construction.
9. Construction plans shall show the location, size, flow line elevations, profiles and details of all drainage facilities and structures, existing or proposed, including, but not limited to, swales, ditches, culverts under public streets and private drives, drop inlets, storm sewers and detention/retention ponds and pond outlet structures. Typical cross sections of all swales and ditches shall be shown.
10. Profiles of streets shall show profiles of storm sewers and cross sections of culverts together with point of intersection. Profiles shall show clearance of such drainage facilities with water mains and sanitary sewer.

B. Storm Sewer Systems (09/16)

1. General

- A. The following minimum requirements are considered acceptable to the Town of Berryville for the collection and detention of stormwater runoff. Deviation from these may be allowed if: a) the deviation is in accordance with sound engineering standards; b) the deviation will not increase the likelihood of a system failure; c) the deviation will not adversely impact the environment or others.
- B. As a general guideline, standards shall be those set forth in the latest editions of the Virginia Erosion and Sediment Control Handbook, the Virginia Stormwater Management Handbook, and the Virginia Department of Transportation Drainage Manual. If the standards set forth in this manual conflict for a particular application, the Director of Public Works shall determine which standard is to be applied.
- C. When the Town of Berryville standards differ from state and/or federal requirements, the most stringent requirement shall apply.
- D. All drawings, specifications, and engineer's reports submitted for approval shall be prepared by or under the supervision of a registered professional engineer with a current registration in the Commonwealth of Virginia in accordance with Title 54.1, Chapter 3 of the Code of Virginia, 1950, as amended. Where applicable, design may be performed under the direction of a certified Land Surveyor B, in accordance with § 54.1-408 of the above-cited code. The front cover of each set of drawings, of each copy of the engineer's report, and of each copy of the specifications submitted for review shall bear the signed imprint of the seal of the above licensed professional who prepared or supervised the preparation, and shall be signed with an original signature and date.
- E. The engineer shall be responsible for obtaining the review and necessary approvals of all drawings and specifications by applicable Town, County, State and Federal agencies having jurisdiction. Copies of such approvals shall be submitted to the Town of Berryville Department of Public Works at the time of final approval.

2. Stormwater Report

- A. All drainage calculations shall be incorporated into a stormwater report, which shall present the following information as applicable. If the necessary calculations are minimal, they can be included on the plan sheets.
 1. A description of the computer software used and references to charts and tables used. Computer spreadsheets or programs created "in-house," used in lieu of standard forms or standard manual calculations, shall be substantiated, at least initially, with manual calculations showing equivalent results. Acceptance of, or request for substantiation of "in-house" spreadsheets and programs will be the decision of the Director of Public Works.

2. The following computations shall be shown for both pre-developed and post-developed conditions:
 - a. The stormwater report or plan set shall show the grading plan with the boundaries, acreages, and C-factors or CN values for all drainage areas contributing storm water to the site.
 - b. Flow paths and calculations of times of concentration.
 - c. Runoff computations.
3. Stormwater Design
 - A. General
 1. An evaluation using verifiable engineering calculations shall be performed for all proposed drainage systems including, but not limited to, channels, inlets, and conduits. At a minimum, this evaluation shall show adequate hydraulic capacity for conveyance of the ten year storm event.
 2. Due consideration must be given to less frequent storms, up to and including the 100-year storm event. The design of drainage systems shall generally provide for overland relief of the 100-year storm event without flooding or damaging buildings and structures.
 3. The drainage system shall be designed with an attempt to closely maintain existing drainage divides and must not create adverse impacts on upstream or downstream properties.
 4. Drainage designs must account for any off-site drainage that will be collected by the drainage system or that will flow through any part of the site. Ultimate developed condition of currently undeveloped areas within a watershed shall be based upon the current or anticipated zoning of those areas.
 5. All systems shall be designed to convey runoff to the flow line of a natural watercourse or to an adequate conveyance system.
 6. The owner or developer may continue to discharge stormwater as sheet flow (non-concentrated) onto an adjoining property if, at the same location:
 - a. The post-development peak runoff rate based on documentation and calculations does not exceed the pre-development peak rates.
 - b. The duration of the flow does not increase under post-development conditions.
 7. The owner or developer may not create a new discharge of concentrated storm water from a pipe, culvert, channel, or other drainage structure, onto or through lands of others without first obtaining a permanent storm drainage easement, and ensuring that adequate conveyance exists downstream between the point of discharge and the nearest natural or man-made waterway.
 8. If off-site downstream construction and easements are required to construct an adequate channel outfall, no plans shall be approved until such storm drainage easement, extending to the nearest natural or man-made watercourse, has been obtained and recorded. It will be the responsibility of the developer to obtain all off-site easements.

B. Storm Sewer Systems

1. All publicly owned storm inlets and manholes shall include inlet/invert shaping per VDOT standard IS-1.
2. No concentrated flow greater than one cubic foot per second, based on the 10-year storm, shall cross a sidewalk or curb.
3. Culverts and storm sewers shall be of adequate size to transport runoff from the 10-year storm, for the ultimate developed condition of the subject property. Contributions of off-site flow from permanently developed properties shall be based upon existing conditions. Contributions of off-site flow from undeveloped properties shall be calculated based upon the two-year fully developed flow (undetained) from such properties. Plans shall account for overland relief resulting from less frequent events.
4. The hydraulic grade line of storm sewers for the post-developed 10-year storm shall be lower than the gutter line or grate inlet top elevation at all points.
5. ~~All publicly owned storm sewer pipes within traffic bearing areas shall be reinforced concrete pipe with a minimum diameter of 15 inches or equivalent elliptical size. Publicly owned storm sewer pipe in non-traffic bearing areas may be corrugated HDPE pipe with a minimum diameter of 15 inches.~~ **All publicly owned storm sewer pipes within street rights-of-way shall be reinforced concrete pipe with a minimum diameter of 5 inches or equivalent elliptical size, unless otherwise approved by the town's engineer and the Director of Public Works. Publicly owned storm sewer pipe in non-traffic bearing areas may be either reinforced concrete pipe or corrugated HDPE pipe, with a minimum diameter of 15 inches.**
6. All pipes shall terminate with flared end sections or concrete headwalls. Box culverts shall include concrete headwalls and end walls, which shall be located a minimum of 25 feet from the edge of pavement if the culvert is subject to vehicular traffic.
7. The outfall conditions of pipes and culverts shall be designed to withstand the velocities produced during the 2-year storm event without erosion.
8. Pipe shall not deflect between storm structures. Pipe on slopes greater than 20 percent shall be anchored.
9. Minimum cover for storm sewer pipe within the right-of-way shall be according to the Town of Berryville Standard Details 22 and 24. Outside the right-of-way, the minimum cover, from finished grade to the outside crown of pipe, shall be the greater of one foot or half the pipe diameter.
10. In parallel installations, under normal conditions, storm sewer pipes shall be laid at least 10 feet horizontally from water lines and sanitary sewer lines. The distance shall be measured from outside edge to outside edge.
11. In general crossing situations, storm sewer pipes shall maintain a minimum vertical distance of 18 inches from water mains and 12 inches from sanitary sewer lines. In cases where this separation is impossible to achieve, the water or sanitary sewer line shall be protected in accordance with the appropriate Town of Berryville utility standard. In cases where

the water or sanitary sewer line is not owned by the Town of Berryville, the crossing shall be governed by the regulations of the authority which owns the utility in question.

12. Test pits will be required and shall be shown on the plans for all crossings which involve gas lines, water mains 12 inches in diameter and larger, sanitary sewer crossings that have minimum clearance, and all fiber optic telephone service lines. Test pits shall be dug and clearances verified prior to installing any portion of the storm sewer system.

C. Easements

1. An "easement" shall mean any area to which the Town has unlimited access for maintaining adequate drainage.
2. Permanent easements shall be a minimum width of 20 feet. Wider easements may be required where more than one facility may occupy an easement, or in consideration of structure size, depth, or access requirements. The extent of drainage easements shall be dependent on upstream and downstream conditions and the scope of maintenance needed to maintain adequate drainage.
3. Easements shall be recorded and the Deed Book and Page Numbers of the recordation provided to the Planning Department before approval of the as-built plans and release of the construction bonds.
 - a. No building or other structure, including but not limited to fences and decks, shall be erected over permanent easements.
 - b. Any plantings installed within an easement may be damaged or destroyed during the course of servicing. The Town is not liable for damage to any improvements or plantings within an easement. The Town will re-seed as necessary any bare or disturbed soil for erosion control purposes.
 - c. Small and medium shrubs, groundcovers, or grasses may be planted within an easement. Their suitability shall be determined by their likelihood to create or entrap debris, or to obstruct natural flow.

D. Storm Inlet Design

1. Drop inlets shall be sized and spaced such that a minimum of one half of the travel way in each direction shall be free from flooding at the inlet design flow.
2. To properly drain sag vertical curves, it is required on roads classified as minor arterial or higher to place three inlets on each side of the road; one inlet at the low point and one flanking inlet on each side of the low point. The flanking inlets shall be placed so that they will limit the spread in the low gradient (flatter) approaches to the sag point and will act in relief of the sag inlet should it become clogged.
3. Drainage flowing in street gutters shall be intercepted 100 percent, at design flow, prior to entering an intersection with another public street.

4. Inlets which have bypass flows shall be clearly marked on the plans and bypass flow must be included in the total gutter flow contributing to the next downstream inlet.
5. Downstream flow for drop inlets in streets and parking areas shall be computed using the rational method and applying a rainfall intensity of four inches per hour. Design flow for grate inlets located near structures that could be damaged by flooding shall be computed using the 100-year storm and assuming 50 percent blockage of the grate. Design flow for all other grate inlets shall be the same as street inlets but must assume 50 percent blockage.

E. Stormwater Conveyance Channels

1. Channel adequacy, hydraulic capacity, maximum velocities, channel linings, and other related design variables shall be determined by the procedures outlined in Chapter 5 of the Virginia Erosion and Sediment Control Handbook, or by approved computer software.
2. All open channels shall be designed to contain the 10-year storm with six inches of freeboard below the banks of the channel. Contributions of off-site flow from permanently developed properties shall be calculated based upon the two-year fully developed flow (undetained) from such properties. Plans shall account for overland relief resulting from less frequent events.
3. Unless otherwise approved, the need, type, and dimensions of lining for erosion control shall be based on the velocity and depth of flow associated with the ten-year event.
4. Maximum side slope for grass lined conveyance channels shall be 3:1 (H:V) with a minimum longitudinal slope of two percent.

F. Stormwater Quantity

1. To protect downstream properties and receiving waterways from flooding, the ten (10) year post-development peak rate and velocity of runoff from the land development shall not exceed the two (2) year pre-development peak rate of runoff.
2. To protect downstream properties and receiving waterways from channel erosion, the two (2) year post-development peak rate and velocity of runoff from the land development shall not exceed the two (2) year pre-development peak rate and velocity of runoff.
3. If the land development is in a watershed for which a hydrologic and/or hydraulic study has been conducted or a stormwater model developed, the program authority may modify the requirements of items 1 and 2 above so that runoff from the land development is controlled in accordance with the findings in the study or model, or to prevent adverse watershed storm flow timing, channel degradation, and/or localized flooding problems.
4. The program authority may also require that the plan include additional measures to address damaging conditions to downstream properties and receiving waterways caused by the land development.

5. Pre-development and post-development runoff rates shall be verified by calculations that are consistent with accepted engineering practices as determined by the program authority.

G. Stormwater Quality

1. Best management practices shall be designed and sited to capture runoff from the entire land development project area and, in particular, areas of impervious cover within the land development, to the maximum extent practicable.
2. Best management practices shall be designed to remove the difference between post-development and pre-development total phosphorus loads in cases where post-develop loads exceed pre-development loads. The calculation method in Appendix 5D of the Virginia Storm Water Management Handbook shall be used to perform the calculations.

4. Materials

A. Concrete Pipe

1. Circular reinforced concrete culvert and storm sewer pipe shall be in accordance with ASTM C76 and be Class III minimum.
2. Elliptical reinforced concrete culvert and storm sewer pipe shall be in accordance with ASTM C507.
3. Gasketed joints shall be bell and spigot with rubber gasket seal in accordance with ASTM C443. Tongue and groove joints shall be sealed with mortar or pre-formed flexible sealant per ASTM C990, or other suitable sealant.

B. Corrugated Plastic Pipe

1. Pipe shall be in accordance with AASHTO M294 or ASTM 2306.
2. Pipe shall be joined using a bell and spigot joint meeting AASHTO M252, AASHTO M294, or ASTM F2306. The joint shall be soil-tight and gaskets, when applicable, shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. A joint lubricant supplied by the manufacturer shall be used on the gasket and bell during assembly.
3. Fittings shall conform to AASHTO M252, AASHTO M294 or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the soil-tight joint performance requirements of AASHTO M252, AASHTO M294, or ASTM F2306.
4. All installation of corrugated plastic pipe shall be per manufacturer's specifications.

C. Drop Inlets

1. Standard drop inlets shall be per VDOT specifications.
2. For drop inlets in shallow conditions, structures shall be consistent with Standard Details 25A, B and C or shall be a precast or cast-in-place concrete box with a top consistent with Standard Detail 26.

3. For drop inlets requiring a manhole frame and cover for access, the manhole frame and cover shall be as manufactured by Neenah Foundry per Standard Detail 26. Frames and covers shall be manufactured in the United States.

D. Manholes

1. Storm manholes shall be per VDOT specifications.
2. Frames and covers shall be as manufactured by Neenah Foundry per Standard Details 27 - 30, or approved equivalent.

5. Inspection and Testing

A. Concrete Pipe

1. Concrete pipe shall be inspected visually during installation by the Director of Public Works or his/her designee.
2. After installation and backfill, all sand, dirt, and debris from the lines shall be flushed prior to inspection.
3. All lines and manholes shall be visually inspected by the Town of Berryville from every manhole by use of television cameras. The cost shall be the responsibility of the Owner/Developer as identified on the Planning and Zoning Fee Schedule, 2012, as amended.
4. The lines shall exhibit a fully circular pattern when viewed from one manhole to the next.
5. Lines which do not exhibit a true and correct line and grade, or have obstruction or structural defects, shall be corrected to meet these specifications and the barrel left clean for its entire length.

B. Corrugated Plastic Pipe

1. Corrugated plastic pipe shall be inspected visually during installation by the Director of Public Works or his/her designee.
2. Following installation, the contractor shall perform cleaning and video inspection of the installed plastic pipe. The processes listed below shall be followed:
 - a. The CCTV inspection must be completed per this manual and by an impartial, qualified and reputable Inspection Agency in the presence of a Town inspector. The Town reserves the right to reject an Inspection Agency.
 - b. The Owner/Developer shall provide 48 hours notice to the Town prior to televising any pipe to allow an inspector to be on site.
 - c. A written inspection report accompanied by visual recording shall be provided to the Town's Inspector at the end of each day of CCTB inspection. Visual recording shall be digital mpeg4 format. The written report shall be in both list form and plan view. PLEASE NOTE: VHS video tapes will not be accepted.
 - d. It will be the Developer/Contractor's responsibility to demonstrate acceptable joint spacing.

- e. Deflection visible on the CCTV monitor will be assumed to be greater than 5%. The Developer/Contractor has the right to challenge this decision by direct measurement or by the use of a GO-NO-GO Mandrel. The pipe will be rechecked for damage after use of the Mandrel.
- f. The Developer/Contractor must repair all defects found during inspection. A follow-up CCTV inspection shall be performed by the Developer/Contractor to assure the repairs have been completed satisfactorily.

IV. Water & Sewer

A. General

A Preliminary Design Report shall be submitted to the Town which shall describe the additions to the water distribution and sewerage collection systems, and at a minimum shall include:

1. Number of units, with the estimates for water usage and wastewater production.
2. Hydraulic calculations for the proposed water system and existing water system to ensure that adequate pressure and volume can be sustained to the new development without reducing pressure or volume in other areas of the existing system.
3. Hydraulic calculations for the proposed sewerage collection system and all existing lines or pump stations that may be impacted.

B. Design Practices

1. Scope

- a. This section is included for the clarification, information and benefit of the engineering design community, to act as a guide to the practices of the Town. This section is a compilation of a variety of typical practices to be followed in the layout and design of water distribution and wastewater collection systems of the Town. The information contained in this section must be applied in conjunction with the regulations of the Commonwealth of Virginia Department of Environmental Quality, Virginia Department of Health Waterworks Regulations and the other sections of this manual.
- b. Many criteria listed are minimums. Additional separations and clearances are to be furnished as practical to optimize each design. Attention shall be given to locating utilities so as to facilitate their re-excavation. The Town will consider factors such as depth and magnitude of facility in determining the adequacy of each design, and may relax or increase dimensional requirements accordingly. In general, a design is to be sought which minimizes length of piping and number of appurtenances, while providing a system which minimizes maintenance costs.
- c. Because of the wide variety of situations that arise, it is impossible to address all scenarios. The Town reserves the right to exercise engineering judgement and will have the final decision on the acceptability of design.

- d. The Town reserves the right to amend or modify this document without notice and to interpret the meaning of all statements made herein.

2. Water Distribution

a. Design Flows

(i) Fire Flows. The water distribution system piping and any extensions thereof shall have adequate capacity to supply the normal (average) and peak hour demands of all customers – domestic, public, commercial and industrial – while maintaining a pressure of not less than 30 pounds per square inch at all points of delivery. In addition, the piping system shall be capable of delivering on the day of maximum customer demand, flows required for fire protection to at least one (1) point within 300 feet of each building being served or proposed to be served by such system and extension, while maintaining a residual pressure of not less than 20 pounds per square inch at the point of service. Flows required for fire protection shall be a minimum of 750 gpm for Single Family Detached Dwelling developments, 1,500 gpm for Attached Residential or Apartment (3 stories or less), and 2,000 gpm for Commercial and Industrial developments.

(ii) Daily Demands. The following criteria will be used in estimating demands for water and accomplishing hydraulic design of the system.

(a) Average day, maximum day and peak hour demands to be used in system hydraulic design will be estimated using the following parameters:

1. Residential Population

$$= N = \text{number of dwelling units} \times 2.75$$

2. Average daily water demand of residential population in gallons per day (g.p.d.)

$$= R = N \times 100$$

3. Average daily commercial and industrial water demand in g.p.d.

$$= C = \text{number of commercial and industrial employees} \times 100^*$$

*NOTE: Appropriate additional water demand allowance shall be made for commercial and/or industrial establishments of types having water demands in excess of 100 g.p.d. per employee.

4. Average daily school water demand in g.p.d.

$$= S = \text{number of staff employees and students} \times 20$$

5. Average daily water demand in g.p.d.

$$= A = R + C + S$$

6. Maximum daily water demand in g.p.d.

$$= M = A \times 2$$

7. Peak hour demand in g.p.m. is calculated using the formula provided in the Waterworks Regulations 12 VAC 5-590-690

$$=Q = 11.4 \times N^{0.544}$$

- (iii) Distribution piping design will be based upon providing flows and service pressures in accordance with these standards from the supply design gradient (HGL) furnished by the Town. Hydraulic design of distribution piping will be based on pipe carrying capacities consistent with head losses determined in accordance with the following:

<u>Pipe Diameter</u>	<u>Hazen-Williams Coefficient "C"</u>
6"	100
8"	110
10"	115
12" or greater	120

3. Wastewater Collection

a. Design Flows

- (i) Tributary Population
- (a) Sewer systems, which provide for a complete watershed, shall be designed and sized assuming the entire watershed to be completely developed according to present or planned land use designation whichever requires the greater capacity.
 - (b) Sewer systems initially developed for only a part of a complete watershed shall be sized to provide for the entire watershed. Otherwise, if acceptable to the Town, physical provision shall be made for future increased capacity. Proper modification to allow for the characteristics (i.e. domestic, commercial and industrial wastes, and ground water infiltration) of the area under consideration shall be made.
- (ii) Capacities
- (a) In determining the required capacities of sanitary sewers, the following factors shall be considered:
 - (1) Maximum hourly quantity of domestic sewage.
 - (2) Additional maximum sewage or waste from industrial plants and commercial areas.
 - (b) New sewer systems shall be designed on the basis of an average per capita flow of sewage from the equivalent population served of not less than 100 gallons per capita per day. Lateral and submain sewers shall be designed for a minimum of 400% of the average flow, main and trunk sewers shall be designed for a minimum of 250% of the average flow, and interceptors shall be designed for a minimum of 200% of the average flow.

- (c) Computations shall use a roughness coefficient (n) in the Mannings Formula of 0.014. However, other values may be used for situations where sufficient engineering justification can be demonstrated.
- (d) The 100 gallons per capita per day figure is assumed to cover normal infiltration, but an additional allowance shall be made where conditions are especially unfavorable.
- (e) The minimum allowance for flow from single-family detached residences shall be based on 3.5 people per home. For single-family attached residences or dwelling units in multifamily structures, a basis of 3 people per unit may be used.
- (f) Unless evidence is presented to prove a different flow from industry at ultimate development, the minimum allowance for industrial flow shall be determined by providing an equivalent population of 40 persons per acre or one (1) equivalent population per employee, whichever is the greater, in the industrial area. "Area" shall include the entire area zoned for industry, except public road, street, and highway rights-of-way, flood plains on which construction is prohibited, and "green zones" separating industrial from residential areas, on which construction is prohibited.
- (g) The minimum allowance for flows from commercial areas shall be determined by providing an equivalent population of 30 persons per acre, or one-half (1/2) equivalent population per employee, whichever is the greater, in the commercial area. "Area" shall include entire area zoned for commercial development, including off-street parking and landscaped areas, but excluding the rights-of-way of public roads, streets and highways, flood plains of streams on which construction is prohibited and "green zones" 100 feet or more wide separating commercial from residential areas, on which construction is prohibited.
- (h) Sewer size shall not be less than eight inches in diameter, except under the following condition:
 - 1. Laterals serving six connections or fewer on cul-de-sacs or as sidewalk collector lines may be six inches in diameter.
- (i) Minimum Gravity Sewer Slopes
Sewer Size Minimum Slope in Feet per 100 Feet

<u>Nonsettled Sewage</u>	
3 inch	Not Allowed
4 inch	Not Allowed
6 inch	0.49
8 inch	0.40
10 inch	0.28
12 inch	0.22

14 inch	0.17
15 inch	0.15
16 inch	0.14
18 inch	0.12
21 inch	0.10
24 inch	0.08
27 inch	0.067
30 inch	0.058
36 inch	0.046

All sewer shall be nonsettled unless pre-approved by the Director of Public Works.

- (j) Minimum flow velocities of 1.3 fps and 2 fps are required for settled and non-settled sewage, respectively.
- (k) Special provisions must be made to protect against internal erosion when flow velocities exceed 15 fps.
- (l) A minimum sewer burial depth to protect against freezing shall be 24".
- (m) In cases where the above criteria are not applicable, an alternate design procedure may be submitted to the Town for approval. A description of the procedure used and justification for the modifications for sewer design proposed shall be included with the Design Analyses and plans submitted for approval.

V. *Easements*

Where the Town of Berryville permits the construction of water, sewer, or storm water improvements (town utilities) outside of the public right-of-way, the following shall apply:

- A. Town utilities approved such that they will not be in the public right-of-way shall be located in easements conveyed to the Town of Berryville. Such easement shall include language and conditions as required by the Town and will be approved by the Town prior to recordation.
- B. Easements shall be located so as to provide access to all parts of the utility without interference from abutting buildings, fences, and other private improvements.
- C. Easements shall not be centered on property lines but shall run parallel to boundary lines to the greatest degree practical. Easements may straddle boundaries, provided that the associated channel or pipeline is offset from the boundary.
- D. Easements must remain clear of buildings, trees, fences, and other improvements, and underground structures other than the designated utility. Fence sections may be erected across an easement section so long as the section contained within the easement is a gate through which personnel and equipment may enter the

- property. Trees planted in and/or improvements erected within a utility easement that are damaged or destroyed in the course of utility inspection, maintenance, or reconstruction will not be replaced or paid for by the Town of Berryville.
- E. Easements shall be a minimum of twenty (20) feet in width; however, the Town reserves the right to require wider easements as deemed necessary.
 - F. Town utility easements are exclusive. Other utilities may only cross the town's easement, and such crossings must be at or near a 90-degree angle.

VI. Submission of Calculation Data in Digital Format

- A. Engineering calculations used in the design of public improvements shall be submitted to the Town in digital format for review.
- B. Submissions for water system design shall be on a master development plan that includes the locations of the water mains. The plan(s) shall be paper drawings or provided in an AutoCad compatible format. In addition, the plans shall be a scale accurate drawings referenced to the State Plane Coordinate System.
- C. Submissions for sanitary sewer system design should be provided in Microsoft Excel format, or Heastead input/output files.
- D. Submissions for storm drain system, and storm water management design should be provided in Microsoft Excel format, or Heastead input/output files, or Soil Conservation Service TRT -20 or 55 format.

VII. Transferring of Pump Station Ownership

- A. **Transfer of ownership of a pump station(s) to the Town of Berryville will occur only after final acceptance in writing of a completed project. A project is considered complete for the purpose of transferal when 95% of the structures in the project area have a Certificate to Occupy. See Section 14 1 A of the Town of Berryville Construction Standards and Specifications for additional information on transferal / acceptance requirements.**
- B. The developer will be responsible for any maintenance as a result of construction defects of said facilities for one year from the date of Final Acceptance.

VIII. Streets and Related Improvements in the Public Right-of-Way

- A. All activity performed in the public right-of-way requires an approved permit from VDOT or the Town of Berryville. VDOT maintains public primary roadways (Business Route 7 and SH 340). The Town of Berryville maintains public secondary roadways.
- B. All work performed under a permit issued by the Town of Berryville must be performed in accordance with the following as applicable:
 - 1. Berryville Town Ordinances
 - 2. Berryville Construction Standards and Specifications
 - 3. VDOT Road and Bridge Standards, current edition
 - 4. VDOT Road and Bridge Specifications, current edition
 - 5. Manual on Uniform Traffic Control Devices (MUTCD) including the VDOT supplement

6. VDOT Manuals on Planting and Irrigation in the Right-of-Way
 7. VDOT Land Use Permit Manual
 8. Virginia Erosion and Sediment Control Handbook
- C. Right-of-way dedication and acceptance of public streets not maintained by VDOT shall be evidenced by authorized signatures on the deed of dedication or other instrument deemed acceptable by the Town of Berryville.
 - D. In order to obtain guarantee of performance to assure timely completion and competent construction of physical improvements, the applicant is required to post a bond or other acceptable surety as identified in Article VII. Performance Surety, of the Town of Berryville Subdivision Ordinance and Article III, Section 314.8 Construction and Bonding of the Town of Berryville Zoning Ordinance.
 - E. Performance bonds shall be submitted to the Town of Berryville for review and approval for those streets in the Town's system (secondaries).
 - F. Dedication and acceptance of public streets shall be in compliance with VDOT Memorandum SR-50-93, Guide for Additions, Abandonments, and Discontinuances, current edition.

Section 14

Minimum Standards for Wastewater Pumping Stations

I. Design Criteria

A. General

The purpose of this document is to establish minimum technical and design standards for developers and engineers for the design and acceptance of wastewater pumping stations within the service area of the Town of Berryville. The standards are intended to ensure uniformity and quality of construction for wastewater pumping stations throughout the Town. Any deviation from the standards contained herein shall be subject to the approval of the Town Engineer and **Superintendent and the directors of Public Works and Utilities**. Plans and specifications shall be prepared and certified by a professional engineer registered in the Commonwealth of Virginia.

Certain equipment manufacturers have been noted herein for the purposes of establishing standards for the level of quality for materials and workmanship, reliability, ease of maintenance, and minimization of spare parts inventory. Other equipment may be used, but must be pre-approved by the Town Engineer and **Superintendent and the directors of Public Works and Utilities**. The pumping station and all appurtenant equipment and materials shall be new and unused.

If the property to be served by a pump station is located within the same drainage area as other undeveloped or underdeveloped land situated within the limits of the Berryville Area, the Town may require an increase or modification in sizing or design of the building, wet well, pumps, mains and/or other associated improvements.

After the construction plans and specifications for pumping stations have been completed by the design engineer and have received approval by the Town, the design engineer shall submit the plans to the Virginia Department of Environmental Quality (DEQ), Valley Regional Office along with a stamped and signed application for a Certificate to Construct certifying that the pump station design is in accordance with the Sewage Collection and Treatment Regulations and complies with the reliability requirements as calculated by the DEQ Reliability Requirement Work sheet. A copy of DEQ's approval and issuance of the Certificate to Construct must be provided to the Town prior to final approval by the Town of Berryville.

The Town of Berryville shall have access to the site and building upon connection to the first structure to the sanitary sewer served by the respective pump station. Maintenance of the pump station shall be provided by the contractor following the maintenance guidelines of the equipment

manufacturers. A log of maintenance activities shall be maintained on site and be available for review by Town staff. Should maintenance not be in accordance with equipment manufacturers recommendations, the Town of Berryville shall have the right to maintain the facility and use bond funds to cover such maintenance.

Upon completion of the construction of the pumping station, the design engineer shall inspect the station; review reports by the equipment manufacturer's field representatives; and request written documentation from the Town that the station is acceptable. The design engineer shall then submit to DEQ a stamped and signed application for a Certificate to Operate (CTO). A ~~Certificate to Operate (CTO)~~ for each pump station must be issued **by DEQ and delivered to the Town of Berryville with record drawings** prior to its acceptance by the Town of Berryville.

B. Design Data

1. The pump station design shall comply with all Virginia Department of Environmental Quality regulations, and Town Standards.
2. Pumps shall be capable of handling the maximum peak hourly flow with one unit out of service. A minimum peak factor of 2.5 is required.

C. Site Requirements

1. The site of any pumping station, where all equipment is not completely enclosed within a building or if the emergency generator is located outside of the main station structure in its own sound attenuating enclosure, shall be protected by a chain link fence at least 6 feet in height. One 3-foot walk-through gate and one 10-foot drive-through gate shall be provided. The grounds within the fenced area shall be covered with a weed barrier and 4 inches of stone (21B) and shall contain no slopes exceeding 15 percent.
2. Access to the station shall be via a dedicated asphalt or concrete paved **twelve-foot-wide access road terminating at the drive through gate or if fencing is not required, at the building entrance. In unusual cases,** e Curbs and gutters may be required by the Town Engineer. In no case shall the profile grade exceed 15 percent.
3. All grounds are to be landscaped or seeded with grass. Slopes requiring mowing shall not exceed 15 percent.
4. The pumping station shall be designed to remain fully operational and accessible during a one-hundred (100) year flood event.
5. The pumping station shall be located within a dedicated easement or fee-simple lot dedicated to the Town of Berryville. **Easement limits or property boundaries shall be a minimum of 20 feet from all site improvements.**
6. All pump station lots shall have screening with a Town-approved evergreen species of trees and/or tall shrubs along the property lines, and other areas as determined by the Town Director of Public Works.
7. **The street address must be posted on the property and visible from the right-of-way.**

8. Signage indicating "Authorized Personnel Only" shall be posted on the fence at the entrance gate.

D. Pumping Station Building

1. The building shall be precast concrete with a ~~faux brick finish (desert sand) finish provided by the developer and approved by the Town of Berryville~~, have a minimum 8-foot clear ceiling height, 12 foot overall width and 20 foot overall length. The size may be increased ~~or decreased~~ at the discretion of the Town Engineer or Director of Utilities to provide adequate clearance for equipment operation and maintenance. The building shall have one 6'-0" x 6'-8" fiberglass or aluminum insulated double door with key lock and stainless steel hardware. The building shall have no windows. The interior walls and ceiling to be primed and painted with an alkali resistant primer, and white 100% acrylic industrial enamel finish coat. (Primer: Pittsburgh 6-603, Finish Pittsburgh 90-374 or approved equal.) The roof shall be shingled with thirty-year asphalt shingles and have a minimum 5/12 pitch. The roof pitch shall conform to other structures in the area.
2. Key locksets to the Town of Berryville's existing master-key system. Deliver four (4) master keys to the Town only.
3. A minimum 3'-0" of unobstructed floor space shall be provided in all directions around the pumping equipment or as otherwise accepted by the Town Engineer or Superintendent.
4. A ventilator shall be provided using forced air as opposed to exhaust. Ventilation requirements are 12 air changes/hour for continuous duty or 30 air changes/hour for intermittent duty. A ventilation louver shall be provided on the wall opposite to the ventilation fan.
5. No manholes or wet well entrances shall be located inside the pumping station building.
6. **A metered water service shall be provided with a Town-approved 3/4-inch x 5/8-inch meter, setter, and crock.** ~~Water service shall be provided~~ **Appurtenances shall include one 3/4-inch hose bib and sink located inside the building and one exterior frost-free hose bib located on the building adjacent to the wet well and opposite the concrete slab required per E.10. of this section.** This service must have a reduced pressure zone device as its backflow protection.
7. Sufficient electric heat shall be provided so as to prevent freezing inside the building at -10°F ambient temperature.
8. ~~One outside entry light shall be provided near the entrance door. Provide adequate illumination for all areas in the station and the control panel, a minimum of 2 watts illumination per square foot shall be provided. This lighting shall be supplied by the required number of fluorescent type lighting fixtures, each having two (2) 40-watt fluorescent tubes and separate ballasts. A light switch shall be located adjacent to each door opening. Lighting circuit shall be protected by a thermal magnetic circuit breaker. All exterior lighting is to be controlled via a switch located on the inside of the building near the door entrance. Interior lighting shall be comprised of LED fixtures that~~

are controlled by a switch located inside of the building near the entrance. This lighting shall provide a minimum of 4-watts of illumination per square foot of interior space.

9. A minimum of two 110-volt receptacles shall be provided with ground fault protection and waterproof covers. **Outlets should be a minimum of 10 feet apart and three feet off the floor. Outlets shall be located in the natural walking areas and not obstructed by equipment or piping.**
10. In general, the building type and architecture should match and compliment adjacent buildings and properties. It shall also meet all applicable building codes.
11. **Exterior lighting shall be comprised of at least two downcast LED wall packs with a minimum output of 5,000 lumens each. One light shall be located outside of the entrance door and a second light shall be located over the wet well. Exterior lights shall be controlled by switches located inside the building near the entrance.**

E. Wet Well

1. All penetrations through the slab to the wet well shall be sealed to prevent sewer gas leakage.
2. An aluminum door shall be provided for access to the wet well sized to provide a minimum 30"x30" clear opening. The door shall have a 300 lbs./square foot load rating with automatic hold open arm.
3. The bottom of the wet well shall be sloped 1:1 toward the pump suction inlet to minimize solids settling. Slope shall begin below pumps off elevation.
4. The wet well shall have a ductile iron 4-inch vent pipe with a 180°turn-down outside of the building. The vent pipe must be screened with stainless steel screen.
5. A ladder or manhole rungs of corrosion-resistant materials shall be provided to provide access to the bottom of the wet well.
6. For 3-inch self-priming pumps or submersibles passing 2.5-inch solids, a strainer basket to remove rags shall be required. The strainer basket bars shall be 2 in. on center and the basket mounted on guide tracks and removable without entering the wet-well. The basket and guide tracks shall be constructed of welded aluminum and anchored with stainless steel nuts and bolts. Provide aluminum winch stand for removal of basket.
7. The wet-well volume shall be of sufficient capacity to ensure that the time between pump run cycles is within the requirements of the electric motor manufacturer. For duplex pumping stations with alternating pumps, the wet-well cycle time between pump on and pump off levels shall be a minimum of 10 min. for motor sizes less than 15 HP or 15 min. for motor sizes greater than 15 HP when the inflow to the wet well is one-half of the pump rated capacity.
8. Provide adequate distance between the pump off level and the pump suction intake pipe to prevent vortexing.
9. To prevent concrete deterioration from hydrogen sulfide and other sewer gases, the wet well shall be coated with Sherwin Williams Cor-Cote SC

Sewer-Cote or an approved equivalent. Surface preparation and coating application shall follow manufacturer's guidelines.

- 10. A wire reinforced concrete slab with minimum dimensions of six feet wide, six feet length, and 6 inches thick shall be placed immediately adjacent to the wetwell and building. The top of the slab should be about two inches above the final grade.**

F. Pumps & Associated Controls

Unless performance conditions prohibit their use, all pumps shall be the suction lift type with pumps, motors, valves, and controls located inside a weatherproof above-ground enclosure. Basic details of these suction lift pumps shall include:

1. The pumps shall be located above grade inside the pump station building. Suction lift pumps shall be Super T-Series (or T-Series) as manufactured by the Gorman Rupp Company of Mansfield, Ohio or a Town of Berryville approved equivalent. Discharge piping and controls shall be furnished by Gorman-Rupp or a Town of Berryville approved equivalent. Each pump shall have a large cover plate opening to allow for unclogging and removal of the impeller. Each pump shall be equipped with the following:
 - a. Spring-assisted discharge check valve.
 - b. Discharge plug valve.
 - c. Air release valve, automatic, spring-assisted.
 - d. Suction and discharge gauges, glycerin-filled 3-1/2" diameter.
 - e. Drain valve with quick connect piping.
 - f. High pump temperature thermostat.
 - g. Pump controls shall be manufactured by Gorman-Rupp and employ an electronic pressure switch air bubbler wet well level controller with digital readout of wet well level. The pump controller shall be equipped with high wet-well level alarm capability.
 - h. All pumps shall be equipped with fixed speed ODP enclosure motors equipped with OSHA-compliant V-belt drive for setting the design pump rpm. Pumps shall be of non-clog design capable of passing a minimum 2-1/2-inch sphere for 3-inch pumps and a minimum 3-inch sphere for larger pumps through all openings within the pump.
 - i. For any design flow, a minimum of two fixed speed pumps shall be provided; each capable of pumping in excess of the peak hourly flow.
 - j. Pumps, motors, valves, piping and controls shall be tested as a unit at the pump manufacturer's facility prior to shipment. Provide Town Engineer with a copy of the certified test data. Suction lift pumps must include certified reprime performance tests.
 - k. All valves shall have ports designed to pass 3-inch spherical solids.
 - l. Pumps shall be designed to create a low-pressure area within the pump housing to initiate priming. No vacuum-assisted priming systems will be acceptable.
 - m. The station shall be equipped with an emergency by-pass connection with both suction and discharge connections. Connections shall be a minimum 4-inch aluminum cam and groove connector with a cover plate and

required valving to isolate pumps and connectors. The by-pass connection shall terminate outside the station enclosure.

- n. The pump station controls must provide pump alternation and protection from short circuits, overloads, and low voltages on all phases.
- o. Provide the following spare parts for each pump:
 - i. Mechanical seal
 - ii. Cover Plate o-ring
 - iii. Shaft sleeve
 - iv. Suction flap valve
 - v. Sufficient volume of seal lubricant to perform one lubricant change in all pumps with a minimum volume of 2 quarts.
 - vi. Impeller
 - vii. Wear plate

Where suction lift pumps cannot be used, pumps shall be submersible with all valves and controls located above ground in a weatherproof enclosure. Basic details of submersible pumps shall include:

1. The pumps shall be specifically designed for submersible duty in a sewage environment, and shall be as manufactured by The Gorman-Rupp Company of Mansfield, Ohio or pre-approved equal. All valves, gauges, and controls shall be supplied by the pump manufacturer and shall be located above ground in a weatherproof fiberglass enclosure. Enclosure to be positively sealed from wet well. Each pump shall be equipped with the following:
 - a. Discharge check valve
 - b. Discharge plug valve
 - c. High motor winding temperature thermostat
 - d. Motor housing moisture detector
 - e. Discharge gauge kit, glycerin-filled, 3½ inch diameter
2. Pump controls shall be manufactured by the pump manufacturer and employ an electronic pressure switch air bubbler wet well level controller with digital readout of wet well level. The pump controller shall be equipped with high wet well level alarm capability.
3. All pumps shall be equipped with a fixed-speed motor with water-proof enclosure. Motors shall conform to NEMA standards, and shall be capable of operating in liquids with a maximum temperature of 40 degrees C. Motors and power cables shall be supplied as an assembly, and all components shall be water-tight such that the assembly is capable of operating at a continuous submergence of 65 feet without loss of water-tight integrity.
4. For any design flow, a minimum of two fixed speed pumps shall be provided; each capable of pumping in excess of the peak hourly flow.
5. Pumps, valves, motors, piping and controls shall be tested as a unit at the pump manufacturer's facility prior to shipment. Provide Town Engineer with a copy of the certified test data.
6. All valves shall have ports designed to pass 3-inch spherical solids.
7. Provide stainless steel guide rails, sized in accordance with the pump manufacturer's recommendations, for each pump. If desired by the Town

Engineer, provide a portable hoist and winch assembly suitable for lifting the pumps. Hoist socket shall be permanently installed on station slab.

G. Electrical

1. Electrical service shall be 3-phase, 60 HZ, 460 volt.
2. **The electrical breaker panel shall be provided with two spare 110-volt 20-amp and one spare three phase 480-volt 30-amp breakers.**
3. **A 110-volt 20-amp circuit shall be provided and installed on the outside of the building in a weather resistant enclosure and shall be located near the center of the concrete slab beside the wet well.**
4. Phase conversion equipment to convert single phase power to three phase power shall not be acceptable.
5. Control voltage shall be 110 volt.
6. Electrical components shall be as manufactured by Allen-Bradley, General Electric, or Furnas. Circuit breakers shall have through the door operating mechanisms to prevent the door from opening when the breakers are in the "on" position. Motor starters, relays and selector switches shall be NEMA rated. Enclosure shall be stainless steel.
7. The pump control panel shall be manufactured by the pump manufacturer. Each panel shall be built by a UL panel builder and the assembly shall bear a serialized UL label for "Enclosed Industrial Control Panels". All wiring, workmanship, and schematic wiring diagrams shall be in compliance with the National Electric Code (NEC).
8. Pump stations shall be equipped with the necessary equipment to interface with the Town SCADA system as determined by the Director of Utilities. Provide the following minimum alarm conditions; high water alarm, pump fail to start, high pump temperature, power failure, engine overcrank, battery failure, and high engine temperature. A separate float switch shall be wired directly to the SCADA to serve as an independent high water alarm.
9. All equipment shall be wired for automatic restart capability after restoration of power.
10. Elapsed time meters shall be provided for each pump on the motor control panel.
11. The pump station controls must provide pump alternation and protection from short circuits, overloads, and low voltages on all phases.
12. Pump stations shall be equipped with an emergency generator and automatic load transfer switch. If the generator is installed outside the main station building, it shall be located inside a sound attenuating enclosure and fencing and screening shall be provided per Section 14. C. 1. Units shall be powered by natural gas or LP gas. If LP gas is used, provide calculations on storage tank sizing. Fuel tank is to be sized to allow for five days of continuous operation. Provide a 115 volt battery charger to maintain the charge on the 12 volt DC battery supplied with the engine.
13. LP Fuel tanks shall be designed for underground storage meeting ASME standards and installed following NFPA 58 standards. A minimum of twelve (12) inches of sand shall surround the tank to allow for improved water draining. Tank domes shall be equipped a drain leading to a location lower than the dome and away from the tank. Cathodic protection is to be provided for all LP tanks. Tanks

installed in flood plains must be properly anchored to a four (4) inch thick slab buried at least seventy (70) inches below grade with four eye bolts installed in the slab at time of pour. If underground storage is not possible and a waiver is granted by the Town's Director of Utilities or the Town Engineer, above ground installation following the NFPA 58 standards is required and screening shall be provided as determined by the Town Planner.

H. Force Main

1. Force main and fittings of diameters 4 inch and larger shall be Polyvinyl Chloride (PVC) manufactured in accordance with ANSI/AWWA C900.
2. All PVC SDR Series pipe shall be manufactured from a Type I, Grade I Polyvinyl Chloride (PVC) compound with a Cell Classification of 12454 per ASTM D1784. The pipe shall be manufactured in strict compliance to ASTM D2241, consistently meeting and/or exceeding the Quality Assurance test requirements of this standard with regard to pressure rating, material, workmanship, burst pressure, flattening, impact resistance, and extrusion quality.
3. All force mains shall be pressure tested in accordance with procedures in ANSI/AWWA C 600.
4. Depth of cover shall be a minimum of 4' - 0".
5. A by-pass connection with a quick connect coupling and shut-off plug valve shall be installed inside the pump station building on the discharge header to allow for bypass pumping into the force main.
6. Force main shall be designed to operate at velocities between 2.0 and 5.0 feet per second.
7. Minimum force main pipe diameter is 4-inch, unless otherwise approved by the Town Engineer, and unless a grinder pump is to be utilized. Force main sizing to be coordinated with pump design for optimum performance.

I. Start-Up

1. Start-up and equipment check operations shall be performed by an authorized service technician from the original equipment manufacturer.
2. The Town Engineer shall be notified forty-eight hours prior to start-up and a Town representative shall be present during the period of start-up.
3. A copy of the technician's start up report showing all field data control, set points and equipment condition shall be furnished to the Township Engineer.
4. Sufficient water for start-up and equipment check shall be the responsibility of the developer.

J. Submittals

Prior to beginning work on the station the following data shall be submitted to the Town Engineer for approval:

1. A completed application form.
2. All calculations and assumptions for the system head curve, total dynamic head, flow quantification, wet-well volume, pump duty cycle at average and peak daily flow, force main line velocity, as well as any other design calculations.

3. Site plan showing subject pumping station relative to area under development and the existing sewer system.
4. Building blueprints for the pumping station.
5. All pump curves.
 Prior to acceptance of the pumping station, the following shall be submitted to the Town Engineer:
 1. Three copies of the equipment submittal drawings.
 2. Three copies of the manufacturer's O/M manuals for all mechanical and electrical equipment.
 3. Recommended spare parts list from the equipment manufacturer.
 4. One copy of manufacturer's certified test data including reprime performance tests.

II Summary of Design Criteria

DESIGN PARAMETER	DESIGN VALUE
1. FLOW DEVELOPMENT	
a. Single family dwellings, GPD/capita	100
b. Others	per accepted text or manuals
2. RATIO OF PEAK HOURLY FLOW/DESIGN AVERAGE FLOW	2.5
3. SITE	
a. Fence	chain link (6' min.)
b. Roadway	asphalt or concrete, single lane, less than 15% grade
c. Maximum landscaped slope, %	15
d. Flood protection, flood event	100 Yr.
4. BUILDING (unless alternate is approved)	
a. Minimum clear ceiling height, ft.	8
b. Unobstructed floor space around pumps, ft.	3
c. Ventilation requirements, air changes/hr	12 continuous, 30 intermittent
d. Potable water service line, in	3/4
e. Interior lighting, 2 bulb, 40W fixtures	2 watts/SF minimum
f. Interior electrical receptacles, 110 volt	2
5. WET-WELL	
a. Minimum wet-well bottom slope	1:1
b. Detention time between pump run cycles, min.	15
6. PUMPS	
a. Maximum pumping rate	2x designed peak pump station influent
b. Minimum number of pumps	2

Town of Berryville Construction Standards and Specifications - April 2015 (Revised September 2021)
Section 14 * Minimum Standards for Wastewater Pumping Stations

- | | |
|----------------------------------|--|
| c. Pump type | suction lift, constant speed
unless conditions prohibit |
| 7. ELECTRICAL | |
| a. Incoming service, volt/phase | 460, 3 phase |
| b. Control voltage, volts | 110 |
| 8. FORCE MAIN | |
| a. Pipe material of construction | C 900 PVC |
| b. Depth of cover, ft. | 4 |
| c. Line velocities, fps | 2.0-5.0 |

APPLICATION FORM FOR WASTEWATER PUMPING STATION

All construction plans and specifications for pumping stations must be submitted to the Virginia Department of Environmental Quality, Valley Regional Office, for review and approval. A copy of the DEQ's approval must be provided to the Town, prior to final approval by the Town of Berryville.

A. General Information

1. Name of project served _____
2. Total area served, acres _____
3. Estimated start of construction _____
4. Estimated completion date _____

B. Applicant

I, the undersigned, am fully aware that the statements made in this application for approval of a wastewater pumping station are true, correct and complete to the best of my knowledge.

_____	_____
Mailing Address	Signature of Applicant
_____	_____
_____	_____
Telephone No.	Name and Title
_____	_____
_____	_____
Date	Representing

C. Engineer

This is to certify that this application has been prepared under my direction and the plans and specifications for this wastewater pumping station have been designed by me and are in conformance with sound engineering practices.

_____	_____
Mailing Address	Signature of Engineer
_____	_____
_____	_____
Company Name	Name
_____	_____
_____	_____
Telephone Number	Registration No.
_____	_____
_____	_____
Date	

APPLICATION FORM FOR WASTEWATER PUMPING STATION PAGE 2

D. Critical Elevations

- 1. 100 year flood _____
- 2. Top of pumping station structure _____
- 3. Influent line in wet-well _____
- 4. Bottom of wet-well _____
- 5. Pump on _____
- 6. Pump off _____

E. Quantification of Design Flow

	UNITS	@	GAL/UNIT	GPD
1. Single Family Dwellings	_____	@	_____	_____
2. Condominiums, Apartments	_____	@	_____	_____
3. Swimming Pools	_____	@	_____	_____
4. Motels	_____	@	_____	_____
5. School	_____	@	_____	_____
6. Commercial	_____	@	_____	_____
7. Industrial	_____	@	_____	_____
8. Other	_____	@	_____	_____
Average Daily Flow	_____		GPD	
Minimum Daily Flow	_____		GPD	
Peak Hourly Flow	_____		GPD	
Peaking Factor	_____			

F. Design Information

- 1. Head
 - a. Static head, ft _____
 - b. Total dynamic head, ft _____
- 2. Wet-Well
 - a. Volume, CF _____
 - b. Detention time at peak hourly flow, min. _____
 - c. Time between pump starts _____
 - d. Ventilation present _____
 - e. Strainer basket present _____
- 3. Pumps
 - a. Pump manufacturer/Model No. _____
 - b. Number of pumps _____
 - c. Type of pumps _____

APPLICATION FORM FOR WASTEWATER PUMPING STATION PAGE 3

- d. Pump capacity
 - No. 1 _____ GPM @ _____ TDH; _____ HP
 - No. 2 _____ GPM @ _____ TDH; _____ HP
- e. Pump controller
Manufacturer/Model No. _____

- 4. Force Main
 - a. Pipe material of construction _____
 - b. Pipe diameter, inches _____
 - c. Line velocity _____
 - d. Depth of cover, ft. _____

- 5. Electrical
 - a. Electrical service manufacturer _____
 - b. Voltage, Phase _____
 - c. Automatic restart capability _____
 - d. Alarm manufacturer/Model No. _____
 - e. Emergency generator, standby engine or portable engine driven pump _____

- 6. Building
 - a. Interior 3/4" hose bib present _____
 - b. Minimum unobstructed distance around equipment, ft. _____
 - c. Overhead support beam present _____
 - d. Ventilator present _____
 - e. Number of 110 volt electrical receptacles _____
 - f. Area of building, SF _____

- 7. Submittals attached with this application
 - a. Calculations _____
 - b. Site plan _____
 - c. Building blueprints _____
 - d. Pump curves _____

**Berryville Town Council Item Report Summary
September 14, 2021**

Item Title

Staff Reports - Administration and Finance

Prepared By

System Admin

Background/History/General Information

Findings/Current Activity

Financial Considerations

Schedule/Deadlines

Other Considerations

Attachments

1. Admin Finance Corrected

Recommendation

Sample Motion

On-Line Pmts - August 2021

Deposit Date	On Line Batch date	Checks		Credit Card		Total	Bal REG Trans	Description
		Date to bnk	Amount	Date to Bnk	Amount			
8/5/2021	8/11/2021		820.83		495.57	1,316.40		UB Online Pmt deposited on 8/5/2021 Batch#17863
8/6/2021	8/2/2021		505.36		2,723.28	3,228.64		UB Online Pmt deposited on 8/6/2021 Batch#17876
8/9/2021	8/3/2021		463.62		487.20	950.82		UB Online Pmt deposited on 8/9/2021 Batch#17896
8/9/2021	8/4/2021		470.15		151.00	621.15		UB Online Pmt deposited on 8/9/2021 Batch#17908
8/9/2021	8/5/2021		568.15		100.16	668.31		UB Online Pmt deposited on 8/9/2021 Batch#17913
8/10/2021	8/6/2021		0.00		442.57	442.57		UB Online Pmt deposited on 8/10/2021 Batch#17931
8/10/2021	8/6/2021		0.00		64.72	64.72		TAX(PP) Online Pmt deposited on 8/10/2021 Batch#17929
8/11/2021	8/7/2021		164.47		326.09	490.56		UB Online Pmt deposited on 8/11/2021 Batch#17932
8/11/2021	8/7/2021		0.00		130.36	130.36		TAX(PP) Online Pmt deposited on 8/11/2021 Batch#17930
8/12/2021	8/8/2021		139.05		37.37	176.42		UB Online Pmt deposited on 8/12/2021 Batch#17933
8/13/2021	8/9/2021		288.53		239.20	527.73		UB Online Pmt deposited on 8/13/2021 Batch#17970
8/16/2021	8/10/2021		1,774.84		245.74	2,020.58		UB Online Pmt deposited on 8/16/2021 Batch#17999
8/16/2021	8/11/2021		727.20		239.21	966.41		UB Online Pmt deposited on 8/16/2021 Batch#18007
8/16/2021	8/17/2021		1,102.74		418.94	1,521.68		UB Online Pmt deposited on 8/16/2021 Batch#18014
8/17/2021	8/13/2021		1,264.62		1,537.25	2,801.87		UB Online Pmt deposited on 8/17/2021 Batch#18030
8/18/2021	8/14/2021		1,173.67		1,084.13	2,257.80		UB Online Pmt deposited on 8/18/2021 Batch#18031
8/18/2021	8/14/2021		640.96		22.50	663.46		TAX(RE) Online Pmt deposited on 8/18/2021 Batch#18029
8/18/2021	8/14/2021		0.00		167.38	167.38		TAX(PP) Online Pmt deposited on 8/18/2021 Batch#18027
8/19/2021	8/15/2021		0.00		49.02	49.02		TAX(PP) Online Pmt deposited on 8/19/2021 Batch#18028
8/19/2021	8/15/2021		2,726.42		1,011.77	3,738.19		UB Online Pmt deposited on 8/19/2021 Batch#18032
8/20/2021	8/16/2021		0.00		80.09	80.09		TAX(PP) Online Pmt deposited on 8/20/2021 Batch#18091
8/20/2021	8/16/2021		1,889.11		674.32	2,563.43		UB Online Pmt deposited on 8/20/2021 Batch#18092
8/23/2021	8/17/2021		0.00		5.00	5.00		TAX(PP) Online Pmt deposited on 8/23/2021 Batch#18100
8/23/2021	8/17/2021		354.36		347.14	701.50		UB Online Pmt deposited on 8/23/2021 Batch#18101
8/23/2021	8/18/2021		0.00		104.37	104.37		TAX(PP) Online Pmt deposited on 8/23/2021 Batch#18103
8/23/2021	8/18/2021		0.00		303.50	303.50		TAX(RE) Online Pmt deposited on 8/23/2021 Batch#18109
8/23/2021	8/18/2021		125.58		130.00	255.58		UB Online Pmt deposited on 8/23/2021 Batch#18110
8/24/2021	8/19/2021		0.00		139.76	139.76		TAX(RE) Online Pmt deposited on 8/24/2021 Batch#18115
8/24/2021	8/19/2021		0.00		346.59	346.59		TAX(PP) Online Pmt Deposited on 8/24/2021 Batch#18116
8/25/2021	8/21/2021		0.00		35.00	35.00		TAX(PP) Online Pmt deposited on 8/25/2021 Batch#18117
8/24/2021	8/20/2021		401.84		1,803.52	2,205.36		UB Online Pmt deposited on 8/24/2021 Batch#18118
8/25/2021	8/21/2021		125.00		379.79	504.79		UB Online Pmt deposited on 8/25/2021 Batch#18119
8/26/2021	8/22/2021		79.39		121.07	200.46		UB Online Pmt deposited on 8/26/2021 Batch#18120
8/27/2021	8/23/2021		0.00		48.19	48.19		TAX(PP) Online Pmt deposited on 8/27/2021 Batch#18127
8/27/2021	8/23/2021		0.00		917.82	917.82		UB Online Pmt deposited on 8/27/2021 Batch#18128
8/30/2021	8/24/2021		0.00		703.99	703.99		UB Online Pmt deposited on 8/30/2021 Batch#18159
8/30/2021	8/25/2021		647.75		266.68	914.43		UB Online Pmt deposited on 8/30/2021 Batch#18161
8/30/2021	8/26/2021		0.00		56.41	56.41		TAX(PP) online Pmt deposited on 8/30/2021 Batch#18173
8/30/2021	8/26/2021		0.00		160.00	160.00		UB Online Pmt deposited on 8/30/2021 Batch#18174
8/31/2021	8/27/2021		77.81		-	77.81		TAX(PP) Online Pmt deposited on 8/31/2021 Batch#18178
8/31/2021	8/27/2021		0.00		266.15	266.15		UB Online Pmt deposited on 8/31/2021 Batch#18179
9/1/2021	8/28/2021		76.26		13.47	89.73		UB Online Pmt deposited on 9/1/2021 Batch#18180
9/2/2021	8/29/2021		177.94		152.52	330.46		UB Online Pmt deposited on 9/2/2021 Batch#18181
9/3/2021	8/30/2021		0.00		45.04	45.04		TAX(RE) Online Pmt deposited on 9/3/2021 Batch#18190
9/3/2021	8/30/2021		383.62		127.10	510.72		UB Online Pmt deposited on 9/3/2021 Batch#18191
9/7/2021	8/31/2021		0.00		120.00	120.00		TAX(PP) Online Pmt deposited on 9/7/2021 Batch#18193
9/7/2021	8/31/2021		429.62		191.00	620.62		UB Online Pmt deposited on 9/7/2021 Batch#18194

35,110.87

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29,509.25

Cash Balance Report

Period Ending 8/31/2021

Town of Berryville
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Bank 1	Bank of Clarke Operating Acct#- 1138499		
	Account		Balance
	100-1140000-0000 B/C OPR		-\$83,743.77
	501-1140000-0000 B/C OPR		-\$14,683.61
	502-1140000-0000 B/C OPR		-\$11,022.66
		Bank 1	Total:
			-\$109,450.04
Bank 2	Bank of Clarke NOW Acct#- 1138502		
	Account		Balance
	100-1149000-0000 B/C NOW		\$5,724,939.75
	501-1149000-0000 B/C NOW		\$1,706,825.01
	502-1149000-0000 B/C NOW		\$4,791,730.49
		Bank 2	Total:
			\$12,223,495.25
Bank 3	Bank of Clarke Payroll Acct#- 1139510		
	Account		Balance
	100-1121000-0000 CASH/ BC PAYROLL		\$40,043.26
	501-1121000-0000 CASH/BC PAYROLL		\$0.00
	502-1121000-0000 CASH/BC PAYROLL		\$0.00
		Bank 3	Total:
			\$40,043.26
Bank 4	Bank of Clarke CIP Acct#- 1138405		
	Account		Balance
	100-1123000-0000 BC/CIP CD		\$555,492.84
	501-1123000-0000 BC/CIP		\$2,051,156.28
	502-1123000-0000 BC/CIP		\$3,270,109.65
		Bank 4	Total:
			\$5,876,758.77
Bank 5	Bank of Clarke SW Acct#- 1138413		
	Account		Balance
	100-1128000-0000 BC/SWMGT CD		\$464,013.66
		Bank 5	Total:
			\$464,013.66
Bank 6	Bank of Clarke PDAF Acct#- 1138421		
	Account		Balance
	100-1131000-0000 PD ASSET FORFEITURE		\$31,663.41
		Bank 6	Total:
			\$31,663.41
Bank 7	Bank of Clarke DSR Acct#- 1138456		
	Account		Balance
	100-1124000-0000 BC/RDA DEBT SER RES		\$111,307.88
		Bank 7	Total:
			\$111,307.88
Bank 8	Bank of Clarke PPTRA Acct#- 1138464		
	Account		Balance

Cash Balance Report

Period Ending 8/31/2021

Town of Berryville
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	100-1125000-0000 BC/PPTRA RES	\$403,611.45
	501-1125000-0000 BC/PPTRA RESERVE	\$0.00
	502-1125000-0000 BC/PPTRA RESERVE	\$0.00
	Bank 8	Total:
		\$403,611.45
Bank 9	Bank of Clarke RAU Acct#- 1138472	Balance
	Account	
	100-1145000-0000 BCC Rau Account	\$944.29
	Bank 9	Total:
		\$944.29
Bank 10	Bank of Clarke VRA Reserve Acct#- 6041647	Balance
	Account	
	502-1155000-0000 BCVRA Reserve Account	\$470,002.00
	Bank 10	Total:
		\$470,002.00
Bank 11	Bank of Clarke Proffer Reserve Acct#- 1897098	Balance
	Account	
	100-1126000-0000 Cash BC/Proffers Reserve	\$90,470.69
	501-1126000-0000 CASH/BC Proffers Reserve	\$0.00
	502-1126000-0000 CASH/BC Proffers Reserve	\$0.00
	Bank 11	Total:
		\$90,470.69
Bank 12	Bank of Clarke Performance Bonds Acct#- 1910841	Balance
	Account	
	100-1135000-0000 B/C PERFORMANCE BONDS	\$11,279.68
	Bank 12	Total:
		\$11,279.68
Bank 13	BB&T Acct#- 5137523525	Balance
	Account	
	100-1130000-0000 CASH/BB&T MM+	\$68,519.71
	501-1130000-0000 CASH/BB&T MM+	\$0.00
	502-1130000-0000 CASH/BB&T MM+	\$0.00
	Bank 13	Total:
		\$68,519.71
Bank 14	Bank of Clarke PD Contributions Acct#- 5759859	Balance
	Account	
	100-1133000-0000 PD Contributions	\$2,757.75
	Bank 14	Total:
		\$2,757.75
Bank 15	Bank of Clarke PSN Refund/Pmt. Acct. Acct#- 6079334	Balance
	Account	
	100-1146000-0000 BC PSN Refund Acct	\$0.00
	Bank 15	Total:
		\$0.00
Bank 16	Bank of Clarke PSN Dep. Acct. Acct#- 6079326	Balance
	Account	

Berryville Town Council Item Report
September 2021
Berryville Auto Parts
July/August Activity Paid in July/August

<u>Department</u>	<u>Date</u>	<u>Description of Transaction</u>	<u>Invoice Amount</u>
Police Dept	7/15/2021	2018 EXPLORER #03 SERVICE OIL & FILTER, CK FLUID, ROTATE TIRES CK BRAKES	\$ 63.12
			<u>63.12</u>
	7/30/2021	2017 EXPLORER #05: MOUNT & BALANCE FOUR NEW TIRES	\$ 75.50
			<u>75.50</u>
			<u>\$ 138.62</u> \$ 138.62
PUBLIC WORKS	8/4/2021	SHOP SUPPLIES: TOWELS, GLASS CLEANER, TIRE COAT	\$ 37.34
			<u>37.34</u>
	8/5/2021	SHOP SUPPLIES: 32GB SD	\$ 12.85
			<u>12.85</u>
	8/16/2021	FASTENERS, NUTS AND BOLTS	\$ 18.55
			<u>18.55</u> \$ 68.74
Utilities (RECEIPTS RECD LATE FROM LAST MONTH)	7/26/2021	Combo Wrench	\$ 12.73
	7/28/2021	15/16 Wrench	\$ 9.99
	7/7/2021	ETHERNET SWITCH	\$ -
	7/26/2021	Impact Socket Set	\$ -
			<u>\$ 22.72</u>
	7/26/2021	2013 Ford F150: Svc oil&Filter, Ck fluids Rear Brake pads/Rotors/Rotate Tires, VA state Inspection(N/C)	\$ 411.51
			<u>411.51</u> \$ 411.51
Total spent in June/July 2021			<u>\$ 641.59</u>
Previous Months Balance forward			\$ -
Total spent fiscal year to date			<u>\$ 641.59</u>
NOTES:	ALL STATE INSPECTIONS ARE DONE AT NO CHARGE		
	Total Shop Supplies to date		\$ 91.46
	Total Vehicle charges to date		\$ 550.13

Check Listing

Date From: 8/1/2021 Date To: 8/31/2021
Vendor Range: 4IMPRINT, INC. - ZENON ENVIRONMENTAL CORPORATION

Town of Berryville
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Check Number	Bank	Vendor	Date	Amount
6822	1	ANDERSON LAWN CARE, INC.	08/11/2021	\$550.00
6823	1	AXON ENTERPRISE, INC.	08/11/2021	\$5,410.50
6824	1	BADAL JANICE 8498	08/11/2021	\$300.44
6825	1	BERRYMAN RICHARD G 2512	08/11/2021	\$25.00
6826	1	BROWN SUSAN LYNNE 7791	08/11/2021	\$28.00
6827	1	Bureau for Child Support Enforcement	08/11/2021	\$875.00
6828	1	CARTHEN MONIQUE RACHELLE 7798	08/11/2021	\$41.82
6829	1	CENTRIC BUSINESS SYSTEMS INC	08/11/2021	\$330.54
6830	1	COMBS WASTEWATER MANAGEMENT LLC	08/11/2021	\$75.00
6831	1	Douglas A. Shaffer	08/11/2021	\$75.00
6832	1	DUTROW LINDA V 2521	08/11/2021	\$25.00
6833	1	DUTROW LINDA VIRGINIA 2520	08/11/2021	\$50.00
6834	1	GORDON CARTER B 7677	08/11/2021	\$91.10
6835	1	GOWDY TIMOTHY E 8234	08/11/2021	\$407.15
6836	1	H. Allen Kitchman	08/11/2021	\$75.00
6837	1	Hall, Monahan, Engle, Mahan & Mitchell	08/11/2021	\$207.50
6838	1	HODGES TINA 8479	08/11/2021	\$249.88
6839	1	HUTCHINSON IRA E JR 4378	08/11/2021	\$101.45
6840	1	JENKINS ASHLEY D 3021	08/11/2021	\$30.13
6841	1	JEREMY TIPTON	08/11/2021	\$1,092.00
6842	1	JEWELL MICHAEL WAYNE 7883	08/11/2021	\$35.00
6843	1	Keith Dalton	08/11/2021	\$50.00
6844	1	KENNY AMY VAN ZANDT 1900	08/11/2021	\$25.00
6845	1	KERSEY MASON MARTIN 7351	08/11/2021	\$69.36
6846	1	LLOYD HERMAN B & ALICE L TRSTEEBS 5481	08/11/2021	\$8.00
6847	1	MANUEL LISA MARIE 8156	08/11/2021	\$105.00
6848	1	MCKENNA, MATTHEW P & ANNELIESE 8380	08/11/2021	\$414.52
6849	1	MCMAINS JAMES 8480	08/11/2021	\$353.49
6850	1	Michelle M. Jones	08/11/2021	\$805.00
6851	1	Municipal Code Corporation	08/11/2021	\$250.00
6852	1	Municipal Safety Sales	08/11/2021	\$393.54
6853	1	SPENCE VENTURES LLC 8432	08/11/2021	\$70.74

Check Listing

Date From: 8/1/2021 Date To: 8/31/2021

Vendor Range: 4IMPRINT, INC. - ZENON ENVIRONMENTAL CORPORATION

Town of Berryville
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Check Number	Bank	Vendor	Date	Amount
6854	1	The Hall Company	08/11/2021	\$1,243.19
6855	1	TREVOR KEEDY	08/11/2021	\$124.76
6856	1	VUPS	08/11/2021	\$206.85
6857	1	WHITEHEAD SARAH E 6915	08/11/2021	\$36.25
6858	1	WILLIAMS KENNETH H & SANDRA K 6955	08/11/2021	\$80.72
6859	1	ALEXANDRA THARPE	08/26/2021	\$91.37
6860	1	Bureau for Child Support Enforcement	08/26/2021	\$875.00
6861	1	CORE & MAIN LP	08/26/2021	\$17,653.84
6862	1	HIGGINS KRISTINE M 8140	08/26/2021	\$35.00
6863	1	Minnesota Life Insurance Co.	08/26/2021	\$220.40
6864	1	Nationwide Retirement Solutions	08/26/2021	\$735.00
6865	1	PENNONI ASSOCIATES INC	08/26/2021	\$11,006.25
6866	1	RALPH & JENNIFER WELIVER	08/26/2021	\$80.00
6867	1	ROSS DOUGLAS H 732	08/26/2021	\$47.37
6868	1	Treasurer of Clarke County	08/26/2021	\$58,851.00
6869	1	Treasurer of Frederick County	08/26/2021	\$6,820.50
6870	1	VALLEY REGIONAL ENTERPRISES, INC.	08/26/2021	\$45.00
6871	1	VIRASEC IT Support Services, Inc.	08/26/2021	\$2,219.20
50		Checks Totalling		\$112,991.86

Totals By Fund

Fund	Checks	Voids	Total
100	\$88,422.62		\$88,422.62
501	\$19,613.41		\$19,613.41
502	\$4,955.83		\$4,955.83
Totals:	\$112,991.86		\$112,991.86

BERRYVILLE TOWN OF

August 01, 2021 - August 31, 2021

Company Statement

Purchasing Card

Account Information	Payment Information	Account Summary
Mail Billing Inquiries to: BANKCARD CENTER PO Box 660441 Dallas, TX 75266-0441 TTY Hearing Impaired: Dial "711" Outside the U.S.: 1.800.353.6656 24 Hours For Lost or Stolen Card: 1.800.449.2273 24 Hours	Statement Date 08/31/21 Payment Due Date 09/26/21 Days in Billing Cycle 31 Credit Limit \$500,000 Cash Limit \$0 Total Payment Due \$86,865.62	Previous Balance \$84,132.30 Payments -\$84,132.30 Credits -\$39.89 Cash \$0.00 Purchases \$86,895.61 Other Debits \$0.00 Overlimit Fee \$0.00 Late Payment Fee \$0.00 Cash Fees \$0.00 Other Fees \$0.00 Finance Charge \$0.00 Current Balance \$86,855.62

Important Messages

Please do not send payment. Your automatic payment is scheduled to be credited to this account on 09/24/21.

Global Card Access – your card information whenever, wherever and however you need it. From the dashboard, you can quickly check your credit limit, balance, available credit and recent card activity. Other features like View PIN, Change PIN, Lock Card and Alerts help you keep your card secure. For added convenience, you can easily view or download your current statement up to 12 months of past statements. Visit www.bofa.com/globalcardaccess to register your card and start using Global Card Access today.

Cardholder Activity Summary

Account Number Credit Limit	Credits	Cash	Purchases and Other Debits	Total Activity
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8413230 8685562 8685562 4715291201837237


 BANK OF AMERICA
 PO BOX 15731
 WILMINGTON, DE 19886-5731


 BERRYVILLE TOWN OF **10012344
 STE A
 101 CHALMERS CT
 BERRYVILLE, VA 22811-1387

Account Number: [REDACTED]
 August 01, 2021 - August 31, 2021

Total Payment Due \$86,865.62
 Payment Due Date 09/26/21

Enter payment amount

Mail this coupon along with your check payable to:
 BANK OF AMERICA

⑆54994001⑆00051201837237⑆



Posting payments: Payments received by mail at the remittance address shown on the Payment Coupon portion of the face of this statement on a banking day will be posted to your account on the day received. If we receive your mailed payment on a non-banking day, we will post it to your account on the next banking day. There may be a delay of up to 5 banking days in posting payments made at a location other than the mailing address listed on the front of your payment coupon.

Service for the hearing impaired (TTY/TDD): We accept calls made through relay services (dial 711).

Telephone monitoring: For the purposes of monitoring and improving the quality of service, Bank's supervisory personnel may listen to and/or record telephone calls between Bank employees and any person acting on Company's behalf.

In case of errors or questions about your bill: Errors or questions about your bill must be received in writing no later than 60 days after we sent you the first statement on which the error or problem appeared. Please mail this information to BANKCARD CENTER, PO BOX 880441, DALLAS, TX 75288-0441. Your letter must include the following information:

- The company name, cardholder name and account number in question.
- The dollar amount of the suspected error.
- A written description of the error and why you believe there is an error. If you need more information, describe the item you are unsure about.

Customer Service:	For questions regarding transactions, general assistance, and reporting lost and stolen cards, call:	
	<u>Within the U.S.</u> 1.888.449.2273	<u>Outside the U.S.</u> 1.809.353.6856 (collect calls accepted)

Thank you for your business.

Posting payments: Payments received by mail at the remittance address shown on the Payment Coupon portion of the face of this statement on a banking day will be posted to your account on the day received. If we receive your mailed payment on a non-banking day, we will post it to your account on the next banking day. There may be a delay of up to 5 banking days in posting payments made at a location other than the mailing address listed on the front of your payment coupon.

BERRYVILLE TOWN OF
 August 01, 2021 - August 31, 2021
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Cardholder Activity Summary

Account Number Credit Limit	Credits	Cash	Purchases and Other Debits	Total Activity
BOOR, RICK [REDACTED]				
15,000	0.00	0.00	2,120.65	2,120.65
HOOTH, KEVIN [REDACTED]				
1,000	0.00	0.00	453.33	453.33
BRAITHWAITE, JAY [REDACTED]				
500	0.00	0.00	192.98	192.98
BUSSERT, ERNIE [REDACTED]				
15,000	0.00	0.00	5,488.45	5,488.45
CULP, PAUL [REDACTED]				
5,000	38.99	0.00	769.23	719.24
DORSEY, DANIEL [REDACTED]				
600	0.00	0.00	43.10	43.10
ELLIOTT, RALPH [REDACTED]				
5,000	0.00	0.00	2,250.86	2,250.86
FERRÉBEE, DARRELL [REDACTED]				
500	0.00	0.00	16.94	16.94
GRIFFITH, RICHARD A [REDACTED]				
500	0.00	0.00	317.05	317.05
JOHNSON, KAREN [REDACTED]				
1,000	0.00	0.00	0.60	0.60
KERN, JODI [REDACTED]				
6,000	0.00	0.00	635.00	635.00
LINK, BRIAN [REDACTED]				
1,000	0.00	0.00	111.44	111.44
MCCORMICK, HARRY [REDACTED]				
500	0.00	0.00	62.86	62.86
POULIN, CYNTHIA [REDACTED]				
50,000	0.00	0.00	44,607.28	44,607.28
STOVER, KEITH [REDACTED]				
1,000	0.00	0.00	331.86	331.86
TYRRELL, DAVE [REDACTED]				
35,000	0.00	0.00	24,092.94	24,092.94
WHITE, NEAL [REDACTED]				
15,000	0.00	0.00	5,421.04	5,421.04

Transactions

Posting Date	Transaction Date	Description	Reference Number	MCO	Charge	Credit	Total Activity
		BERRYVILLE TOWN OF					\$84,132.30
08/24	08/24	AUTO PAYMENT DEDUCTION		0071			84,132.30
		BOOR, RICK					2,120.65
08/10	08/09	IN *SELECT SPECIALTY PROD	434-2863937	VA	24692161221100800538542	6169	147.33
08/11	08/09	GRIFFITH ENERGY SERVIC.	410-956-3000	MD	24250021222017020000007	5083	1,717.13
08/13	08/12	WWP*PEST MGMT SRVS.	703-723-2899	VA	24445001224300510913929	7342	74.00
08/16	08/14	WAL-MART #3344	WINCHESTER	VA	2422638122709100720747	5411	27.36
08/23	08/20	VIRGINIA TRACTOR WINCHEST	640-7226630	VA	24087201234421160000875	5046	154.61



BERRYVILLE TOWN OF
 August 01, 2021 - August 31, 2021
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Posting Transaction		Description	Reference Number	MCO	Charge	Credit
Date	Date					
ROOTH, KEVIN						
Account Number: [REDACTED]						
08/11	08/10	CLARKE COUNTY AUTOMOTIVE BERRYVILLE VA	24247601222200127826527	7538	331.10	
08/18	08/18	ANDERSON'S NURSERY BERRYVILLE VA	24064061228016025173203	6261	92.85	
08/20	08/19	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971232091402000105	6251	20.38	
						Total Activity
						463.33
BRAITHWAITE, JAY						
Account Number: [REDACTED]						
08/17	08/16	OWPSAOBATE 816-278-6142 CA	24492161228052675440594	8641	168.00	
08/18	08/17	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971230091408000168	6251	24.98	
						Total Activity
						192.98
BUSBERT, ERNIE						
Account Number: [REDACTED]						
08/02	07/30	MCMMASTER-CARR 630-834-9600 IL	24789301213053200084666	6085	65.65	
08/04	08/03	USA BLUE BOOK 800-548-1234 IL	24940451215836000059592	6085	255.20	
08/04	08/03	TAYLOR TECHNOLOGIES INC SPARKS MD	24247601216300596918477	5996	188.63	
08/09	08/06	COYNE CHEMICAL 215-785-3000 PA	24137461219501054037811	5169	1,027.87	
08/11	08/10	USA BLUE BOOK 800-548-1234 IL	24940451222636000058173	6085	331.01	
08/11	08/10	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971223091404000054	6251	4.40	
08/18	08/16	MCMMASTER-CARR 630-834-9600 IL	24789301229125100075240	6085	86.01	
08/20	08/18	COYNE CHEMICAL 215-785-3000 PA	24137461231500847096955	5169	399.94	
08/20	08/18	COYNE CHEMICAL 215-785-3000 PA	24137461231500847097037	5169	1,391.10	
08/20	08/18	MCMMASTER-CARR 630-834-9600 IL	24789301231133700108916	6085	33.08	
08/20	08/18	MCMMASTER-CARR 630-834-9600 IL	24789301231133700108916	6085	33.08	
08/25	08/23	MCMMASTER-CARR 630-834-9600 IL	24789301231133700108916	6085	68.70	
08/25	08/24	USA BLUE BOOK 800-548-1234 IL	24940451236638000056189	6085	259.44	
08/25	08/24	USA BLUE BOOK 800-548-1234 IL	24940451236638000056189	6085	125.22	
08/25	08/24	USA BLUE BOOK 800-548-1234 IL	24940451236638000056189	6085	702.00	
08/26	08/24	COYNE CHEMICAL 215-785-3000 PA	24137461237600769160850	5169	409.33	
08/30	08/27	USA BLUE BOOK 800-548-1234 IL	24940451236638000056236	6085	140.97	
08/30	08/27	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971240091408000299	6251		
						Total Activity
						710.24
CULP, PAUL						
Account Number: [REDACTED]						
08/02	07/30	STAPLS7335983136000001 877-8267755 NJ	24164071211105280357180	5111	39.98	
08/02	07/30	STAPLS7336000171000001 877-8267755 NJ	24164071211105290436709	5111	184.96	
08/04	08/03	STAPLS7336169710000001 877-8267755 NJ	24164071216105020307022	5111	39.99	
08/08	08/05	STAPLS7336169710001001 SOUTH HACKENS NJ	74164071217105020307025	5111	39.99	39.99
08/09	08/08	STAPLS7336169710002001 877-8267755 NJ	24164071218105050737541	5111	138.76	
08/09	08/07	STAPLS7336615286000001 877-8267755 NJ	24164071220105060292384	5111	69.35	
08/13	08/12	STAPLS7336993237000001 877-8267755 NJ	241640712241051106009905	5111	17.79	
08/20	08/19	STAPLS7337520026000001 877-8267755 NJ	24164071231105100540701	5111	39.99	
08/20	08/19	STAPLS7337520026000002 877-8267755 NJ	24164071231105970540705	5111	42.00	
08/27	08/26	STAPLS7338006839000001 877-8267755 NJ	24164071238105250433947	5111	5.86	
08/27	08/26	STAPLS7338006839000002 877-8267755 NJ	24164071238105970433948	5111	150.46	
08/30	08/27	STAPLS7338050415000001 877-8267755 NJ	24164071239105260678704	5111		
						Total Activity
						43.10
DORSEY, DANIEL						
Account Number: [REDACTED]						
08/09	08/06	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971219091406000033	6251	43.10	
						Total Activity
						2,260.86
ELLIOTT, RALPH						
Account Number: [REDACTED]						
08/12	08/10	A SIGN PLACE/PERSONALIZE WINCHESTER VA	24223691223030053938627	5099	73.90	
08/13	08/12	CLARKE COUNTY AUTOMOTIVE BERRYVILLE VA	24247601224200123866780	7538	1,255.86	
08/18	08/17	BROY & SON PUMP SERVICE BERRYVILLE VA	24073141229900010200012	1799	650.00	
08/23	08/20	CLARKE COUNTY AUTOMOTIVE BERRYVILLE VA	24247601232200131987691	7538	238.76	
08/30	08/27	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971240091408000091	6251	12.24	
08/31	08/30	BIG DADDY AUTOMOTIVE LLO BERRYVILLE VA	24247601242200127460591	7538	20.00	
						Total Activity
						16.94
FERREBE, DARRELL						
Account Number: [REDACTED]						
08/13	08/12	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971225091408000066	6251	16.94	
						Total Activity
						347.86
GRIFFITH, RICHARD A						
Account Number: [REDACTED]						
08/05	08/04	BIG DADDY AUTOMOTIVE LLO BERRYVILLE VA	24247601216200124203435	7538	20.00	
08/05	08/04	BIG DADDY AUTOMOTIVE LLO BERRYVILLE VA	24247601216200124203500	7538	20.00	
08/05	08/04	BIG DADDY AUTOMOTIVE LLO BERRYVILLE VA	24247601216200124203682	7538	20.00	
08/06	08/04	BERRYVILLE AUTO PARTS INCBERRYVILLE VA	24767891217073200092071	5533	37.34	
08/06	08/05	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971218091404000150	6251	8.32	
08/13	08/12	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971225091408000025	6251	6.85	
08/26	08/25	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971238091404000313	6251	0.79	
08/30	08/29	FRONT ROYAL RURAL KING FRONT ROYAL VA	24065231242400662000913	6999	194.75	
						Total Activity
						0.60
JOHNSON, KAREN						
Account Number: [REDACTED]						
08/04	08/03	Amazon web services aws.amazon.coVA	24692161215100004519403	7399	0.60	

BERRYVILLE TOWN OF
 August 01, 2021 - August 31, 2021
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Transactions						
Posting	Transaction	Description	Reference Number	MCC	Charge	Credit
Date	Date					Total Activity
KERN, JODI						
Account Number: [REDACTED]						
08/03	08/02	VA DMV ONLINE BILLING PAY804-4977100 VA	24755421215132162910325	9399	25.00	
08/05	08/04	UVA COOPER CNTR CONF WEB 494-9825714 VA	24755421217732170802207	8220	160.00	
08/13	08/12	USPS PO 5107680300 BERRYVILLE VA	24137481225001480212726	9402	275.00	
08/23	08/23	MSFT * E0100FJHQ4 800-8427676 WA	24204291235000045097548	6045	175.00	
						Total Activity
						111.44
LJNK, BRIAN						
Account Number: [REDACTED]						
08/27	08/26	WAL-MART #3344 WINCHESTER VA	24226381239091068959773	5411	86.75	
08/31	08/30	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971243081404000266	6251	14.69	
						Total Activity
						62.86
MCCORMICK, HARRY						
Account Number: [REDACTED]						
08/31	08/30	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971243081404000100	6251	52.86	
						Total Activity
						44,807.28
POULIN, CYNTHIA						
Account Number: [REDACTED]						
08/17	08/16	REPUBLIC SERVICES TRASH 868-576-5548 AZ	24941661228083762454630	4900	125.00	
08/17	08/16	REPUBLIC SERVICES TRASH 868-576-5548 AZ	24941661228083749031715	4900	16,576.28	
08/17	08/16	RAPPAHANNOCKELECTRICCOOP EBILL.MYREC.CVA	24231681228747006774871	4900	5,033.71	
08/17	08/16	RAPPAHANNOCKELECTRICCOOP EBILL.MYREC.CVA	24231681228747006774707	4900	3,830.08	
08/17	08/16	RAPPAHANNOCKELECTRICCOOP EBILL.MYREC.CVA	24231681228747006774788	4900	8,831.84	
08/17	08/16	RAPPAHANNOCKELECTRICCOOP EBILL.MYREC.CVA	24231681228747006774798	4900	8,107.41	
08/18	08/17	REPUBLIC SERVICES TRASH 868-576-5548 AZ	24941661229083715883530	4900	139.24	
08/24	08/24	COMCAST 800-COMCAST MD	24692161236100308725497	4899	1,252.39	
08/25	08/24	VERIZONWRLSS*RTCCR VB. 800-922-0204 FL	24692161236100548708129	4814	234.68	
08/25	08/24	VERIZON*ONETIMEPAYMENT 800-VERIZON FL	24692161236100548708137	4814	413.95	
08/25	08/24	VERIZON*ONETIMEPAYMENT 800-VERIZON FL	24692161236100006107087	7899	54.00	
08/25	08/24	IN*TRUESHRED 888-7608783 VA				
						Total Activity
						331.86
STOVER, KEITH						
Account Number: [REDACTED]						
08/02	07/29	REXEL 3128 888-443-9776 VA	24492151211082742546723	5065	185.98	
08/09	08/05	BERRYVILLE AUTO PARTS INC BERRYVILLE VA	24767891218078000108463	5533	12.85	
08/09	08/07	IN*TOTAL IMAGE-WORKINGMAWINCHESTER VA	24692161220100062851394	5399	75.98	
08/16	08/13	GIANT MARTINS #6558 BERRYVILLE VA	24892161225100634182408	5411	18.71	
08/18	08/16	BERRYVILLE AUTO PARTS INC BERRYVILLE VA	24767891229124500092505	5533	18.85	
08/20	08/19	BERRYVILLE TRUE VALUE BERRYVILLE VA	24801971232091402000055	5251	8.79	
						Total Activity
						24,892.04
TYRRELL, DAVE						
Account Number: [REDACTED]						
08/02	07/29	COYNE CHEMICAL 215-785-3000 PA	24137481211500925456028	5189	710.20	
08/02	07/29	COYNE CHEMICAL 215-785-3000 PA	24137481211500925456109	5189	479.84	
08/02	07/31	IN*JOINER LABS, LLC 540-3477212 VA	24692161212100892132288	8734	170.00	
08/02	07/31	IN*JOINER LABS, LLC 540-3477212 VA	24692161212100892132304	8734	220.00	
08/02	07/31	IN*JOINER LABS, LLC 540-3477212 VA	24692161212100892132312	8734	220.00	
08/02	07/31	IN*JOINER LABS, LLC 540-3477212 VA	24692161212100892132312	8734	220.00	
08/03	08/02	IN*CONSOLIDATED ELECTRIC540-8625994 VA	24692161214100381257048	1731	4,353.00	
08/03	08/02	WATER - COFFEE DELIVERY 800-4928377 GA	24717051214282146015107	5199	64.76	
08/03	08/02	GRAINGER 877-2022594 IL	24755421216122153111206	5085	93.16	
08/03	07/29	MERRITT SANITATION 540-8895309 VA	24073141219900011800024	2842	1,210.00	
08/10	08/09	IN*JOINER LABS, LLC 540-3477212 VA	24692161221100800640793	8734	220.00	
08/10	08/09	IN*JOINER LABS, LLC 540-3477212 VA	24692161221100800640801	8734	85.00	
08/10	08/09	REPUBLIC SERVICES TRASH 868-576-5548 AZ	24941661222083726017212	4900	4,030.58	
08/11	08/10	IN*CONSOLIDATED ELECTRIC540-8625994 VA	24692161222100809680838	1731	1,103.00	
08/11	08/10	IN*JOINER LABS, LLC 540-3477212 VA	24692161222100809662112	8734	225.00	
08/11	08/10	WEED MAN WINCHESTER 540-5452010 VA	24684801223900011054252	0780	500.00	
08/12	08/10	WEED MAN WINCHESTER 540-5452010 VA	24684801223900011054575	0780	900.00	
08/12	08/10	ATCO MANUFACTURING COMPAN770-4247650 GA	24275391223900010415498	2842	110.50	
08/12	08/11	IN*CONSOLIDATED ELECTRIC540-8625994 VA	24692161223100385387800	1731	917.00	
08/12	08/11	PDF ELECTRIC AND SUPPLY 019-5353180 NC	24073141229900010158103	5065	1,715.00	
08/18	08/16	KYM INDUSTRIES INC 334-886-7772 AL	24431061231083337807216	5533	3,440.32	
08/20	08/19	CUMMINS C83NA - EV 812-377-4357 IN	24943001232838000127432	5085	989.67	
08/20	08/19	AMZN Mktp US*2D30G80X2 Amzn.com/billWA	24092161232100744120503	5942	169.93	
08/20	08/20	IN*JOINER LABS, LLC 540-3477212 VA	24692161236100008292533	8734	170.00	
08/25	08/24	IN*JOINER LABS, LLC 540-3477212 VA	24692161236100006292541	8734	220.00	
08/25	08/24	IN*JOINER LABS, LLC 540-3477212 VA	24692161236100006292541	8734	220.00	
08/25	08/24	IN*JOINER LABS, LLC 540-3477212 VA	24692161236100006292558	8734	220.00	
08/25	08/24	IN*JOINER LABS, LLC 540-3477212 VA	24692161236100006292558	8734	220.00	
08/27	08/26	HARBOR FREIGHT TOOLS 688 WINCHESTER VA	24231681239400024491678	5251	124.99	
08/30	08/27	IN*SELECT SPECIALTY PROD434-2983937 VA	24892161239100927644324	5169	127.51	
08/31	08/30	IN*JOINER LABS, LLC 540-3477212 VA	24692161242100150194190	8734	220.00	
08/31	08/30	IN*JOINER LABS, LLC 540-3477212 VA	24692161242100150194206	8734	220.00	
08/31	08/30	IN*JOINER LABS, LLC 540-3477212 VA	24692161242100150194214	8734	105.00	
08/31	08/30	IN*JOINER LABS, LLC 540-3477212 VA	24692161242100150194222	8734	85.00	



BERRYVILLE TOWN OF
 August 01, 2021 - August 31, 2021
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Transactions

Posting Date	Transaction Date	Description	Reference Number	MCC	Charge	Credit	
08/31	08/30	IN* JOINER LABS, LLC 540-3477212 VA	24692161242100150194230	8734	170.00		
08/31	08/30	IN* JOINER LABS, LLC 540-3477212 VA	24692161242100150194248	8734	220.00		
08/31	08/30	WATER - COFFEE DELIVERY 800-4820377 GA	24717051242172427667636	8199	33.48		
						Total Activity	6,421.04
WHITE, NEAL							
Account Number: [REDACTED]							
08/08	08/05	BIKT UNIFORMS INC ROANOKE VA	24013391217000785159317	5137	777.15		
08/08	08/05	AT&T PREMIER EBILL 800-331-0500 TX	24055231218812492008181	4814	458.88		
08/06	08/05	ATLANTIC TACTICAL (ACCT R717-7743339 PA	24100851217900016006350	5137	124.89		
08/06	08/05	RADIAL TIRE DISTRIB URBANURBANA MD	24137461217300801091610	7538	1,628.10		
08/09	08/05	BERRYVILLE AUTO PARTS INC 800-4498012 VA	2476789121807000108554	6533	138.62		
08/16	08/13	JAMAR TECHNOLOGIES INC 215-3612244 PA	24512391226900017600012	5046	1,095.00		
08/28	08/24	KUSTOM SIGNALS 913-492-1400 KS	24247601237600826183654	5085	238.00		
08/28	08/24	FBI LEEDA INC 077-7727712 PA	24559301237900014738002	8398	695.00		
08/26	08/25	AT&T PREMIER EBILL 800-331-0500 TX	24055231238812430392545	4814	229.44		
08/31	08/30	AMZN Mktp US*2D4HVSVD2 Amzn.com/billWA	24692161242100930837710	5942	36.16		

Finance Charge Calculation

Your Annual Percentage Rate (APR) is the annual interest rate on your account.

	Annual Percentage Rate	Balance Subject to Interest Rate	Finance Charges by Transaction Type
PURCHASES	0.00%	\$0.00	\$0.00
CASH	0.00%	\$0.00	\$0.00

V = Variable Rate (rate may vary), Promotional Balance ≠ APR for limited time on specified transactions.

Pages 207-221 are
omitted, as we discovered
duplication of previous
material.

TOWN COUNCIL
MOTION FOR APPROVAL:
ADOPTION OF RESOLUTION TO CHARGE OFF
DELINQUENT PERSONAL PROPERTY TAXES FOR TAX YEAR 2015

Date: September 14, 2021

Motion By:

Second By:

I hereby move that the Council of the Town of Berryville adopt the attached resolution to charge off delinquent personal property taxes for Tax Year 2015.

VOTE:

Aye:

Nay:

Absent:

ATTEST: _____
Erecka L. Gibson, Recorder

TOWN OF BERRYVILLE
TOWN COUNCIL
RESOLUTION

WHEREAS, Section 58.1-3940 of the Code of Virginia, 1950, as amended, provides the collection of local personal property taxes shall only be enforceable for five years following December 31 of the year for which such taxes were assessed, and

WHEREAS, the attached personal property taxes assessed by the Town of Berryville, Virginia for tax year 2015, have remained delinquent for the year for which such taxes were assessed and are therefore rendered unenforceable,

NOW, THEREFORE, BE IT RESOLVED, by the Council of the Town of Berryville, Virginia, in meeting duly assembled this fourteenth day of September, 2021, that the attached list of delinquent personal property taxes for tax year 2015 shall be charged off the tax records of the Town of Berryville as uncollectible.

Harry Lee Arnold, Jr., Mayor

I hereby certify that the foregoing Resolution was duly adopted by the Council of the Town of Berryville in meeting assembled September 14, 2021.

ATTEST:

Erecka L. Gibson, Recorder

PERSONAL PROPERTY TO BE CHARGED OFF
2015 DELINQUENT PERSONAL PROPERTY

8/30/2021

FY 2021-2022

<u>Tax Year</u>	<u>Billing Name</u>	<u>Amount</u>
2015	ANDERSON JEROME D	\$104.91
2015	ANDREJKO DANIELLE PENDLETON	\$119.22
2015	ANDREJKO DAVID ALAN	\$49.31
2015	BOWIE LARRY E	\$38.49
2015	BROWN STEVEN M	\$98.90
2015	CLEMENTS CHRISTOPHER LEE	\$49.72
2015	COCONIS DAVID H	\$84.37
2015	CRIM TRACEY L	\$89.96
2015	DAVIS TINA M	\$149.52
2015	DIETHRICH JOHN WILLIAM	\$56.26
2015	FOCACCIA ITALIAN GRILL	\$679.09
2015	FORD TIMOTHY SPENCER	\$176.39
2015	GALLAGHER MICHAEL J	\$70.57
2015	HALL CIPPORA-KARRENA E	\$22.94
2015	HOLLINGSWORTH CHRISTOPHER JOHN	\$62.79
2015	JACKSON JAIME N	\$28.13
2015	KERNS KEVIN M	\$103.07
2015	LA ROCHE KATHRYN A	\$18.66
2015	LEE BRIAN ANTHONY	\$50.01
2015	LEE BRIAN ANTHONY	\$50.00
2015	MASQUITH MICHAEL JOSEPH	\$53.81
2015	MAYNARD BRETT S	\$101.54
2015	MICALISTER GLENN ALLEN	\$38.49
2015	MCMANAMAY AIMEE MICHELLE	\$88.00
2015	MILBOURNE DALTON T II	\$261.51
2015	MILLER PAUL GERHARD	\$62.07
2015	MONTGOMERY CLIFFORD G III	\$89.25
2015	NIX MALCOLM E	\$98.05
2015	PETERSON AFTON ENGELINA	\$60.04
2015	PIERCE MOLLY CATHRYN	\$150.84
2015	POOLE JAMES E III	\$69.10
2015	POWELL JESSE P JR	\$104.27
2015	QUEÉN DAVID BRUCE	\$108.34
2015	ROBERTS ANTONIO FRANKLIN	\$95.05
2015	SHIPLEY JAMES ROBERT	\$49.19
2015	STRADY MARY L	\$62.49
2015	TABB LORETTA H	\$16.28
2015	THOMPSON PHILLIP CHRISTOPHER	\$54.36
2015	VICHARE SAPTARSHI VIVEK	\$15.98
2015	WHITE ANTHONY REINARD	\$101.69
2015	WHITE ANTHONY REINARD	\$95.88
	TOTAL:	\$3,878.54

Date: 8/30/2021

Tax Master Balance Listing

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TOWN OF BERRYVILLE

Customer Status: Both

Source Date: 8/30/2021

Totals By Year:

Tax Year:	Amount:
2015	\$3,878.54
Total:	\$3,878.54

Totals By Year And Revenue:

Tax Year:	Revenue Name:	Amount:
2015	DMV FEE	\$400.00
2015	MC LICENSE FEE	\$36.00
2015	PERSONAL ADVERTISING	\$304.29
2015	PERSONAL INTEREST	\$550.99
2015	PERSONAL PENALTY	\$23.03
2015	PERSONAL PRINCIPAL	\$1,089.23
2015	VEH LICENSE FEE	\$995.00
2015	VLF LATE FEE	\$480.00
	Total:	\$3,878.54
	Total:	\$3,878.54

Totals By Revenue:

Revenue Name:	Amount:
DMV FEE	\$400.00
MC LICENSE FEE	\$36.00
PERSONAL ADVERTISING	\$304.29
PERSONAL INTEREST	\$550.99
PERSONAL PENALTY	\$23.03
PERSONAL PRINCIPAL	\$1,089.23
VEH LICENSE FEE	\$995.00
VLF LATE FEE	\$480.00
Total:	\$3,878.54
Total:	\$3,878.54

**Berryville Town Council Item Report Summary
September 14, 2021**

Item Title

Town Manager - Update: American Rescue Plan Act of 2021

Prepared By

Background/History/General Information

Findings/Current Activity

Financial Considerations

Schedule/Deadlines

Other Considerations

Attachments

1. Manager

Recommendation

Sample Motion

Monthly UpdateStaff efforts in August 2021

- Staff continued developing documents necessary for distribution of grants established in the Plan.
- Staff began working with the public on elimination of connections to the Town's sewer collection system that introduce storm water into the system.
- Staff continued efforts to secure necessary utility easements for one project.
- Staff has ordered and received most of the supplies for the meter replacement.
- Staff has ordered and received most of the supplies for the Ridge Road water project.
- The Town's engineer continued their work developing utility project plans.
- Staff is developing an RFP for security improvements at critical infrastructure sites.

Funds expended over the past month

The August 2021 expenditure report is attached.

Staff initiatives expected in the near-term

- Staff will finalize the housing grant process (to be finalized and posted on website by September 30, 2021 (changed from September 15)).
- Staff will finalize the remaining non-profit grant process (to be finalized and proposed recipients notified by October 18, 2021).
- Staff will continue to develop the first group of infrastructure projects and purchases.
- Staff will begin to develop façade improvement reimbursement grant process (expected to be finalized and posted by November 15, 2021).
- Staff will continue efforts to secure necessary easements for utility projects.
- Meter replacement project is expected to begin in October.
- Ridge Road water project is expected to begin in October and be completed by mid-November.

Attachments:

- August 2021 ARPA Expenditure Report

Water and sewer bill accounts

		<u>BUDGETED</u>		<u>USED</u>		<u>BALANCE</u>		<u>PERCENT USED</u>	
Estimated cost of these actions:									
- Payment of delinquent accounts	\$	10,000.00	\$	4,069.34	\$	5,930.66		41%	\$ 10,000.00
- Water and sewer account credits	\$	169,100.00	\$	21,401.05	\$	147,698.95		13%	\$ 169,100.00
- Total			\$	25,470.39					\$ 179,100.00
Funds used from first payment									\$ 153,629.61

Signage

Estimated cost of these actions									
- Signage	\$	140,000.00	\$	-	\$	140,000.00		0%	\$ 140,000.00
- Total			\$	-					\$ 140,000.00
Funds used from first payment									\$ 60,000.00
Funds used from second payment									\$ 80,000.00

Improvements in Central Business District

Estimated cost of these actions									
- Facades, signs, accessibility	\$	250,000.00	\$	-	\$	250,000.00		0%	\$ 250,000.00
- Total			\$	-					\$ 250,000.00
Funds used from first payment									\$ 125,000.00
Funds used from second payment									\$ 125,000.00

Non- Profits

Estimated cost of these actions									
- John H Enders FD	\$	80,000.00	\$	-	\$	80,000.00		0%	\$ 80,000.00
- Barnes of Rose Hill	\$	40,000.00	\$	-	\$	40,000.00		0%	\$ 40,000.00
- Housing assistance	\$	120,000.00	\$	-	\$	120,000.00		0%	\$ 120,000.00
- Total			\$	-					\$ 240,000.00
Funds used from first payment									\$ 160,000.00

Funds used from second payment \$ 80,000.00

Purchase of equipment and supplies

Estimated cost of these actions
 - Purchase of equipment, etc \$ 25,000.00 \$ - \$ 25,000.00 0% \$ 25,000.00
 - Total \$ \$ - \$ 25,000.00

Funds used from first payment \$ 25,000.00

Improve Communications

Estimated cost of these actions
 - Website \$ 8,000.00 \$ - \$ 8,000.00 0% \$ 8,000.00
 - Radios \$ 60,000.00 \$ - \$ 60,000.00 0% \$ 60,000.00
 - Other imp. \$ 60,000.00 \$ - \$ 60,000.00 0% \$ 60,000.00
 - Total \$ \$ - \$ 128,000.00

Funds used from first payment \$ 128,000.00

Premium Pay

Estimated cost of these actions
 - Provide premium pay \$ 172,000.00 \$ 174,323.86 \$ (2,323.86) 101% \$ 172,000.00
 - Total \$ \$ 174,323.86 \$ 172,000.00

Funds used from first payment \$ (2,323.86)

Complete necessary water and sewer infrastructure projects

Estimated cost of these actions
 - Cost of the projects \$ 3,077,986.00 \$ 14,699.64 \$ 3,063,286.36 0.48% \$ 3,077,986.00
 - Total \$ \$ 14,699.64 \$ 3,077,986.00

Funds used from first payment \$ 1,263,693.36
 Funds used from second payment \$ 1,792,493.00

Pay for administrative costs

Estimated cost of these actions
 - Administrative costs per FY (5.5) \$ 60,000.00 \$ 3,892.24 \$ 56,107.76 6% \$ 60,000.00
 - Total \$ \$ 3,892.24 \$ 330,000.00

Funds used from first payment \$ 136,107.76
 Funds used from second payment \$ 193,892.24

NOTES:

Administrative Costs: August Admin \$1405.54