

# Issue Analysis Form (rev. July 2013)



**Date:** April 10, 2018  
**Item:** ADOPTION OF AN ORDINANCES TO AMEND THE CODE OF THE COUNTY OF PRINCE GEORGE, VIRGINIA, 2005, AS AMENDED, TO REVISE WATER AND SEWER USER  
**Lead Department(s):** Engineering/Utilities  
**Contact Person(s):** Dickie Thompson

## Description and Current Status

Request to consider adoption of Ordinances to amend the Code of the County of Prince George, Virginia, 2005, as amended, to revise water and sewer user charges by amending sections 82-262 and 82-537. The Department of Engineering and Utilities with the help of GettingGreatRates.com, LLC completed a Water and Sewer Rate Analysis in January 2017. The goals of the Rate Analysis were to ensure rates that: are adequate to cover current costs and those that can be predicted for about ten years, will enable the building of responsible reserves to hedge against future costs, and will be fair and equitable to all ratepayers. Several rate scenarios were modeled during the rate analysis, and it was recommended to establish annual rate increases after the initial increase (recommended 20% water and 30% sewer, adopted April 2017 - 10% and 20% respectively). The proposed increases to be effective July 1, 2018 are 5% water and 7.5% sewer.

## Government Path

Does this require IDA action?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Does this require BZA action?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Does this require Planning Commission action?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Does this require Board of Supervisors action?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does this require a public hearing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If so, before what date?	<b>July 1, 2018</b>	

## Fiscal Impact Statement

An increase of 5% for and 7.5% for sewer would be equal to approximately \$5.21 additional per month based on 5,000 gals per month (increase of \$10.42 for 10,000 per two months). The estimated revenues from this increase totals approximately \$373,000 to help preserve Utility Fund balance.

## County Impact

Additional funds to support future projects for rehab/replacement of utilities and to continue day to day operation/maintenance of existing facilities.

## Notes

Board of Supervisors  
County of Prince George, Virginia

Resolution

At a regular meeting of the Board of Supervisors of the County of Prince George held in the Boardroom, Third Floor, County Administration Building, 6602 Courts Drive, Prince George, Virginia this 10<sup>th</sup> day of April, 2018:

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Present:

Alan R. Carmichael, Chairman  
Donald R. Hunter, Vice-Chairman  
Floyd M. Brown, Jr.  
Marlene J. Waymack  
T. J. Webb

Vote:

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On motion of \_\_\_\_\_, seconded by \_\_\_\_\_, which carried unanimously, the following Resolution was adopted:

ADOPTION OF AN ORDINANCES TO AMEND THE CODE OF THE  
COUNTY OF PRINCE GEORGE, VIRGINIA, 2005, AS AMENDED,  
TO REVISE WATER AND SEWER USER CHARGES AND FEES

NOW, THEREFORE, BE IT RESOLVED That the Board of Supervisors of the County of Prince George this 10<sup>th</sup> day of April, 2018, does hereby authorize the adoption of ordinances to amend The Code of the County of Prince George, Virginia, 2005, as amended, by amending sections to revise water and sewer user charges.

A Copy Teste:

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Percy C. Ashcraft  
County Administrator

ORDINANCE TO AMMEND THE CODE OF THE COUNTY OF PRINCE GEORGE, VIRGINIA, 2005, AS AMENDED, BY AMENDING SECTION 82-537 TO REVISE SEWER USER CHARGES

BE IT ORDAINED by the Board of Supervisors of Prince George County:

*(1) That The Code of the County of Prince George, Virginia, 2005, as amended, is amended and re-codified to read as follows:*

**Sec. 82-537. - Wastewater user charge schedule.**

Bills for wastewater disposal and the use of the wastewater collection system shall be rendered to residential and nonresidential users based on the following monthly rates:

(1) Fixed minimum charge. The fixed minimum charge shall be as follows:

Meter Size	Minimum Charge Per Month
5/8"	<del>\$11.54</del> <u>\$12.41</u>
¾"	<del>\$11.54</del> <u>\$12.41</u>
1"	<del>\$18.18</del> <u>\$19.54</u>
1½"	<del>\$31.79</del> <u>\$34.17</u>
2"	<del>\$50.84</del> <u>\$54.65</u>
3"	<del>\$105.29</del> <u>\$113.19</u>
4"	<del>\$181.50</del> <u>\$195.11</u>
6"	<del>\$399.25</del> <u>\$429.19</u>
8"	<del>\$704.10</del> <u>\$756.91</u>

For uses metering wastewater flow, contracted capacity shall be used to determine equivalent water meter size for computation of minimum monthly fees.

(2) Commodity charge. For all water delivered or wastewater collected a unit charge of ~~\$8.24~~ \$8.83 per 1,000 gallons shall apply.

- (3) Owner's responsibility for rental dwelling unit. Whenever wastewater service is provided to a rental dwelling which has water service provided by an individual well, the utility service will have to be kept in the name of the owner of the dwelling, and he will be responsible for the payment of the bill.
- (4) Strength charges. In accordance with the procedures defined in section 82-507, the following charges per 1,000 gallons shall be assessed against the users whose wastes exceed the strength of normal domestic wastewater. All residential users shall be assumed to be in category I:

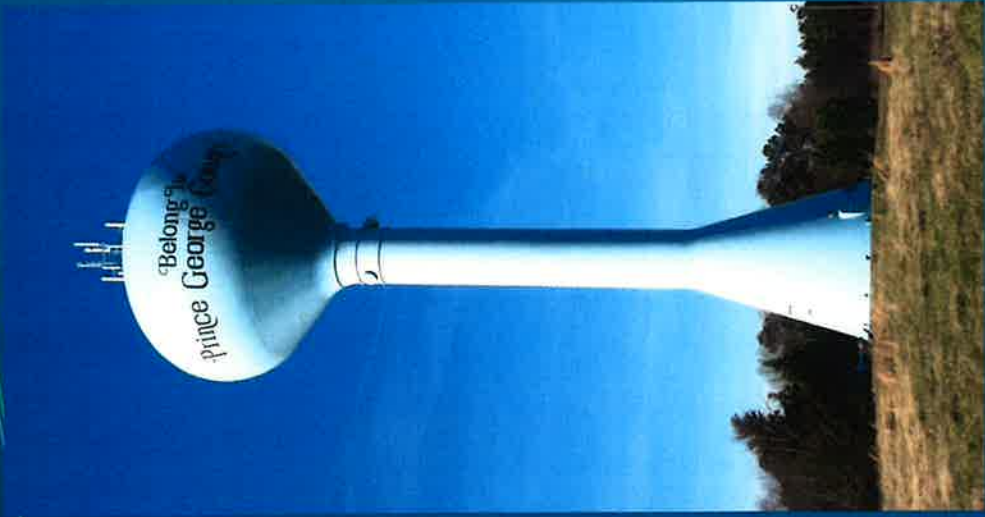
Category Designation	Range of Strength (standard strength units)	Strength Charge (\$ per 1,000 gallons)
I	0—300	0.00
II	301—600	<u>\$0.0830</u>
III	601—1,000	<u>\$0.1650</u>
IV	1,001—1,400	<u>\$0.2650</u>
V	1,401 and over	*

\* Subject to determination by the director based on actual strength units in the user's wastes.

*(2) That this ordinance shall be effective July 1, 2018 for Cycle 2 customers, and August 1, 2018 for Cycle 1 customers.*



# 2018 Utility Rate Increases





# Previous Rate Increase

- 2017 Rate Increases
  - Estimated \$731,200 in New Revenue
    - Water: 10% Increase
    - Sewer: 20% Increase
  - \$11 Per Month Increase for Average Residential Customer \*
    - Water: \$2.24 Per Month Increase
    - Sewer: \$8.76 Per Month Increase

\*For a residential home using an average of 5,000 gallons per month.



# Proposed Rate Increase

- 2018 Proposed Rate Increases
  - Estimated \$373,000 in New Revenue
    - Water: 5.0% Increase
    - Sewer: 7.5% Increase
  - \$5.21 Per Month Increase for Average Residential Customer \*
    - Water: \$1.24 Per Month Increase
    - Sewer: \$3.97 Per Month Increase

\*For a residential home using an average of 5,000 gallons per month.





# Minimum Monthly Charges w/Proposed Increase

## WATER

## SEWER

Meter Size	Minimum Charge Per Month	Meter Size	Minimum Charge Per Month
5/8"	<del>\$9.10</del> \$9.56	5/8"	<del>\$11.54</del> \$12.41
3/4"	<del>\$9.10</del> \$9.56	3/4"	<del>\$11.54</del> \$12.41
1"	<del>\$16.51</del> \$17.34	1"	<del>\$18.18</del> \$19.54
1 1/2"	<del>\$31.74</del> \$33.33	1 1/2"	<del>\$31.79</del> \$34.17
2"	<del>\$53.04</del> \$55.69	2"	<del>\$50.84</del> \$54.65
3"	<del>\$113.93</del> \$119.62	3"	<del>\$105.20</del> \$113.19
4"	<del>\$199.13</del> \$209.09	4"	<del>\$181.50</del> \$195.11
6"	<del>\$442.63</del> \$464.76	6"	<del>\$399.25</del> \$429.19
8"	<del>\$783.53</del> \$822.71	8"	<del>\$704.10</del> \$756.91

**\$0.46**

**\$0.87**



# Commodity Charges (Consumption/Usage rate)

	\$ per 1000 Gallons	Commodity (Existing)	Commodity (Proposed)	
Tier 1 - 0 to <6000 gal	Water Tier 1	\$ 2.83	\$ 2.97	+ \$0.14/1000
Tier 2 - 6000 to 20000 gal	Water Tier 2	\$ 3.54	\$ 3.72	+ \$0.18/1000
Tier 3 - 20,000 gal and greater	Water Tier 3	\$ 4.42	\$ 4.64	+ \$0.22/1000
	Sewer	\$ 8.21	\$ 8.83	+ \$0.62/1000

\*Flat rate sewer customers (not on County water but connected to County sewer) would see an increase of \$7.50 in their bi-monthly bill with the proposed 7.5% increase.



# Why increase utility rates??

- Analysis from the 2016 utility rate study (Carl Brown with GettingGrateRates.com)
  - “The big driver of the overall level of rates that you need is debt service that you will incur in the next few years to make system improvements. Your outside water provider and sewer treatment providers also have significant improvement needs, the cost of which you will be required to shoulder a proportionate share of.”
    - ARWA/SCWWA (in plant/transmission/distribution upgrades/rate increases), Hopewell sewer services (potential rate increase), Petersburg water/sewer services, Virginia American Water services
  - “Time is money, often very big money, when it comes to rate setting. A rate increase delayed is a rate increase that must be even higher to reach the same reserve target.”
  - Current and future rehab needs projected over next 10 years to sustain existing infrastructure and existing capacity.

# Rate comparison based on a bi-monthly bill of 10,000 gallons consumption (water & sewer) on a 5/8" meter

Municipality	Rate Increase for FY19	Water Customers	Sewer Customers	Bill Amt Current Rates	Bill Amt with Increase	Overall Increase
Isle of Wight	unknown	4,300	4,300	198.14		
Prince George	Proposed - 5% W, 7.5% S	4,500	4,500	154.52	164.88	6.3%
Dinwiddie	No	3,500	3,500	134.90	N/A	N/A
Petersburg	unknown	12,000	12,000	130.24		
Sussex	Proposed - % unknown	< 2,000	< 2,000	128.00		
Hopewell - WTR VAAM/SWR Hopewell	VAAM Unknown/Sewer No	10,116	8700	124.16		
Chesterfield	Proposed	107,000	92,000	107.63	111.46	3.6%
Colonial Heights	Yes	7,300	7,300	85.94	90.68	5.5%

# Reserve Balance Projections

Water with 2.5% increase every other year starting July 1, 2018

Sewer with 2.5% increase every other year starting July 1, 2018

Chart 8 - Sum of All Reserves

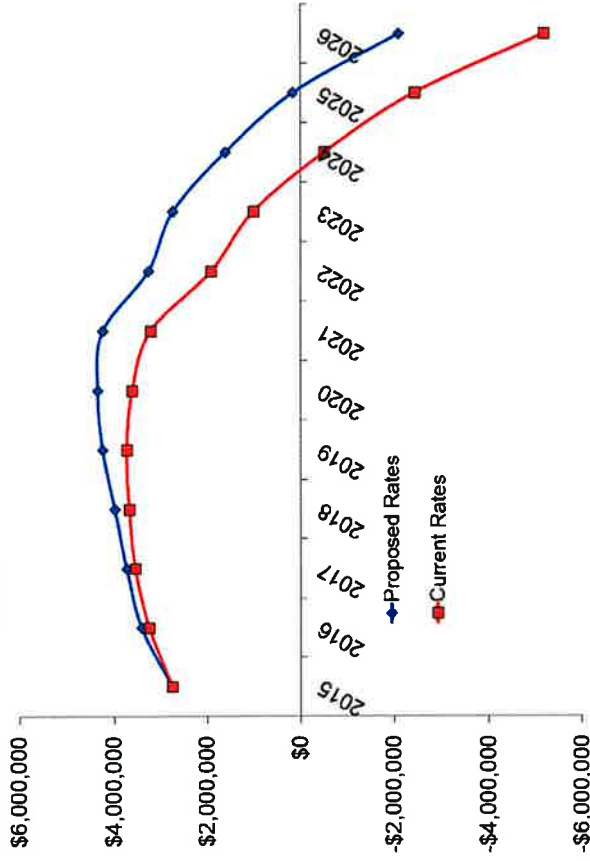
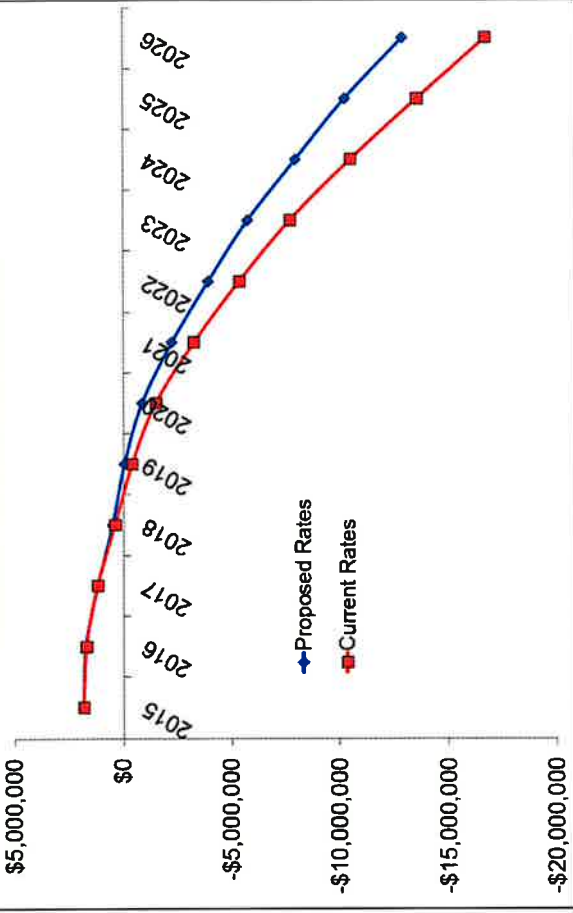


Chart 8 - Sum of All Reserves



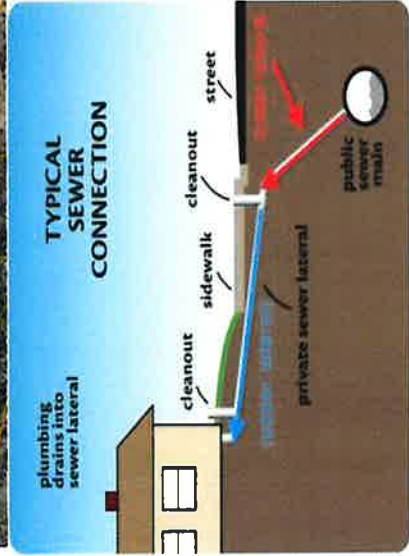




# Planned Capital Improvement Projects

- Wildwood Farms sewer lateral repairs – I&I control \$300,000
- Rehab of station wet wells and sewer manholes – \$200,000
- SCADA - \$200,000
  - Monitoring/control of additional water systems (JOJ/Beechwood Manor, River's Edge, Cedarwood, Richard Bland College)
  - Monitoring of critical sewer pump stations
- Valve installation/replacement - \$200,000
  - Richard Bland College (inline check valve – outside contractor) and Jordan on the James (replace original shut off valves – in house)
- Water meter replacement with radio read meters - \$200,000
  - To improve accuracy of data collection for billing and improve safety of employees collecting readings

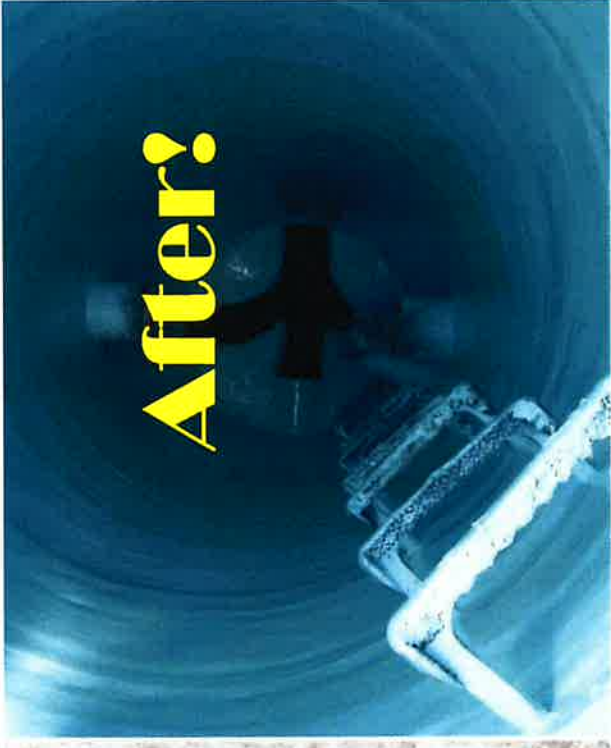
# Wildwood Farms Sewer Lateral repairs





# Station wet well rehab/manhole repair

Groundwater infiltration = money spent to convey and treat clean water in addition to sanitary wastewater??





# SCADA

## PRINCE GEORGE COUNTY - OVERVIEW

Tank Pressures:  
 Courthouse - 83.5  
 Middle Road - 62.6  
 Southpoint - 37.9

### Booster Pumps

Pump 1	Pump 2	Pump 3
HOA In Auto	In Auto	In Auto
SCADA HOA Status	Active	Active
Pump Control State	Off	Off
Pump Lockouts	Normal	Normal
Lockout Resets	Reset	Reset

### Elevated Tanks

Courthouse	Middle Rd	Southpoint	Crater Road
Percent Full: 87	87	85	0.5
Level In Ft: 148.9	157.6	133.7	0.5
Bowl In Ft: 33.9	39.8	29.8	0.5
Power: Normal	Normal	Normal	Off F
Comm: Green	Green	Green	Red

### Flow Meters

Current Flow	Comm
Bailey's Ridge: 0.5	Red
Cedar Creek: 0.5	Red
Iron Road: 0.5	Red
London Road: 0.5	Red
Manchester Run: 0.5	Red

### PUMP STATION STATUS

NOTE: Overhaul lockout conditions for each pump are:  
 - Pump in alarm  
 - Pump in lockout  
 - Pump in manual  
 - Station pressure is alarm  
 - Lockout present in alarm

Pump Call	On
Selected Tank	Available
Station Flow	0.0
SPS Suction Pressure	0.0
SPS Discharge Pressure	0.0
SCADA Power	Normal
Generator Status	Normal
Communication	Normal

### Alarms

Generator: Normal  
 SCADA Power: Normal

## PRINCE GEORGE COUNTY - ELEVATED TANKS

Selected Tank: Middle

- Tank Levels Report
- Courthouse Levels Report
- % Levels Only Plot
- Middle Rd Levels Report
- Pressures Only Plot
- Southpoint Levels Report
- Crater Road Levels Report

Overflow: TBD	Overflow: 65.30 PSI	Overflow: 67.64 PSI	Overflow: 66.17 PSI
%: 0.5	%: 90	%: 87	%: 85
Ft: 148.9	Ft: 147.0	Ft: 151.6	Ft: 133.6
HL SP: 0.5	HL SP: 90	HL SP: 90	HL SP: 90
LL SP: 0.5	LL SP: 85	LL SP: 82	LL SP: 76
PSI: 63.6	PSI: 65.6	PSI: 57.9	
S. Crater Road Tower	Courthouse Tower	Middle Road Tower	Southpoint Tower
Power: Normal	Power: Normal	Power: Normal	Power: Normal

## CENTRAL BPS

- BPS History Report
- Pump Counts Report
- Pump 1 History Report
- Pump 2 History Report
- Pump 3 History Report
- Pump Run Status Plot

### Booster Pumps

HOA In Auto  
 SCADA HOA  
 Control Status  
 Controls  
 Valve Status

Pump 1	Pump 2	Pump 3
In Auto	In Auto	In Auto
Active	Active	Active
On	Off	Off
HOA	HOA	HOA
Open	Closed	Closed

### Pump Stats

Today's Starts	Today's Runtime	Total Runtime
Pump 1: 1	Pump 1: 1.25	Pump 1: 2.204.8
Pump 2: 0	Pump 2: 0.00	Pump 2: 2.810.2
Pump 3: 1	Pump 3: 1.54	Pump 3: 2.22.6

### Station Status

Suction Pressure	Discharge Pressure	Flow Rate	Today's Flow	Yesterday's Flow	Total Flow
41	80	0	0	0	0



# Radio Read Meter Installation

Prince George County Utilities

Data Logging Report Daily

Meter Combination: WATER, 5/8" - 1" T-10, GALLONS

Interval Date Range: 11/25/2017 - 03/01/2018

MIU ID: 1547358250

Prince George County Utilities  
Route Detail

Page 1 of 2  
02/02/2018

Route: 0-0-02-59 Sched Date: 02/02/2018

Read Seq	Address	Hi Limit	Low Limit	Reading	ID Captured	ID Override	Type Read	Read Over	Comment Codes	Date/ Time
001300	1 EAGLE	0000999999	0000153632	0153632	1820150703			01536328		02/02/2018 10:01:12
001560	1400 EAGLE	0000999999	0000375800	0376172	1852635714			03761721		02/02/2018 10:08:51
001580	1300 EAGLE	0000999999	0000181762	0188403	1542925314			01884038		02/02/2018 10:01:14
001590	1340 EAGLE	0000999999	0000129385	0137438	1544390714			01374385		02/02/2018 10:01:59
001600	1330 EAGLE	0000999999	0000307638	0309076	1852638674			03090767		02/02/2018 10:08:32
001600	1330 EAGLE	0000999999	0000187870		1330					
001610	1310 EAGLE	0000999999	0000216450	0218946	1820149820			02189463		02/02/2018 10:01:10
001610	1310 EAGLE	0000999999	0000040260		1310					
001620	1280 EAGLE	0000999999	0000374787	0383163	1820150013			03831636		02/02/2018 10:01:41
001620	1280 EAGLE	0000999999	0000054730		1280					
001630	1260 EAGLE	0000999999	0000251045	0257473	1853016240			02574737		02/02/2018 10:02:42
001630	1260 EAGLE	0000999999	0000086940		1260					
001640	1240 EAGLE	0000999999	0000196339	0202823	1542983470			02028234		02/02/2018 10:02:00
001650	1220 EAGLE	0000999999	0000117366	0117366	1820148836			01173669		02/02/2018 10:02:48
001650	1220 EAGLE	0000999999	0000018900		0122000					
001660	1200 EAGLE	0000999999	0000201493	0207176	1820144185			02071767		02/02/2018 10:02:28
001660	1200 EAGLE	0000999999	0000102240		20801200					
001670	1185 EAGLE	0000999999	0000346490	0354884	1540252548			03548843		02/02/2018 10:03:07
001680	1205 EAGLE	0000999999	0000154018	0162983	1544372492			01629832		02/02/2018 10:01:50
001680	1205 EAGLE	0000999999	0000035980		1205					

12/07/2017 12/01/2017 12/15/2017 12/25/2017 01/05/2018 01/15/2018 01/25/2018 02/05/2018 02/15/2018 02/25/2018 03/01/2018



# Questions?

**PUBLIC NOTICE  
COUNTY OF PRINCE  
GEORGE**

**The Prince George  
County**

**Board of Supervisors  
will hold a public  
hearing on Tuesday,  
April 10, 2018  
beginning at 7:30 p.m.  
concerning the  
following matter:**

PROPOSED ADOPTION  
OF AN ORDINANCE TO  
AMEND THE CODE OF  
THE COUNTY OF PRINCE  
GEORGE, VIRGINIA,  
BY AMENDING SEC-  
TIONS 82-262 TO IN-  
CREASE ALL WATER  
USER CHARGES BY FIVE  
PERCENT, AND BY  
AMENDING SECTIONS  
82-537 TO INCREASE  
ALL SEWER USER  
CHARGES BY SEVEN  
AND A HALF PERCENT,  
PURSUANT TO  
AUTHORITY CON-  
TAINED IN VIRGINIA  
CODE §15.2-2119.

The meeting will be held in the Board of Supervisors Meeting Room, third floor, County Administration Building. A copy of the proposed Ordinance, as well as information concerning the documentation for the proposed increases, may be examined at the Prince George County website at <http://www.princegeorgecountyva.gov> and/or at the Engineering and Utilities Department (804-722- 8706) in the County Administration Building, second floor, open from 8:30 a.m. to 5:00 p.m., Monday – Friday. All interested persons shall have the opportunity to be heard at such public hearing.

Percy C. Ashcraft  
County Administrator