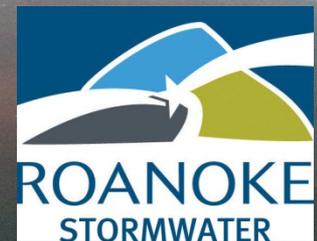


Roanoke Stormwater Utility



Governor's Infrastructure Financing Conference
April 4, 2019

Dwayne R. D'Ardenne, Stormwater Utility Manager



What?

Why?

How?

3



Drainage Projects



Maintenance

WARNING
UNSAFE
FOR
SWIMMING
AND
DRINKING

WARNING
Health advisory on eating fish

Eating some fish from this location may be harmful to your health. These fish may contain chemicals called PCBs. Eating fish that contain PCBs may increase your risk for cancer.

Women who are pregnant or may become pregnant, nursing mothers and young children should not eat the fish listed in the table. Others should follow the directions in the table on the type and amount of fish to eat.

For more information:
Virginia Department of Health
804-864-8182
www.vdh.virginia.gov

VDH VIRGINIA DEPARTMENT OF HEALTH
DEQ DEPARTMENT OF ENVIRONMENTAL QUALITY

**Roanoke River
PCB Advisory Locations**

Roanoke River (upper section) from the confluence of the North Fork and South Fork of the Roanoke River near Gaging Station at Lafayette downstream to Niagara Dam, including its tributaries Peters Creek up to the Route 460 bridge crossing and Tinker Creek up to the confluence with Deer Branch Creek near Route 115

Affected localities: Montgomery and Roanoke counties, and Salem and Roanoke

The warning applies to the fish listed below:
No more than two meals per month:

- Carp
- Redbreast Sunfish
- Redhorse Sucker species
- Smallmouth Bass
- Largemouth Bass
- Rock Bass
- Bluehead Chub

Water Quality



Why Need a Utility?

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VADEQ MS4 Permit



Caretaker of the Roanoke River

1+13

Sediment TMDL:

1. Roanoke River
2. Back Creek
3. Barnhardt Creek
4. Mason Creek
5. Mudlick Creek
6. Murray Run
7. Peters Creek
8. Tinker Creek

PCB TMDL:

1. Roanoke River
2. Peters Creek
3. Tinker Creek

Bacteria TMDL:

1. Roanoke River
2. Back Creek
3. Carvin Creek
4. Glade Creek
5. Lick Run
6. Mason Creek
7. Mudlick Creek
8. Murray Run
9. Ore Branch
10. Peters Creek
11. Tinker Creek



The River is "Listed" - Who Cares?

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Signs are gone = Safe, Right?



Caretaker of the Roanoke River



**94% of Citizens: Improving Water
Quality in the Roanoke River is
Important to our Community**

What?

Why?

How?

REMODELING
ROANOKE



*Report to the Committee on
Civic Improvement by John
Nolen, Landscape Architect*
CAMBRIDGE, MASSACHUSETTS

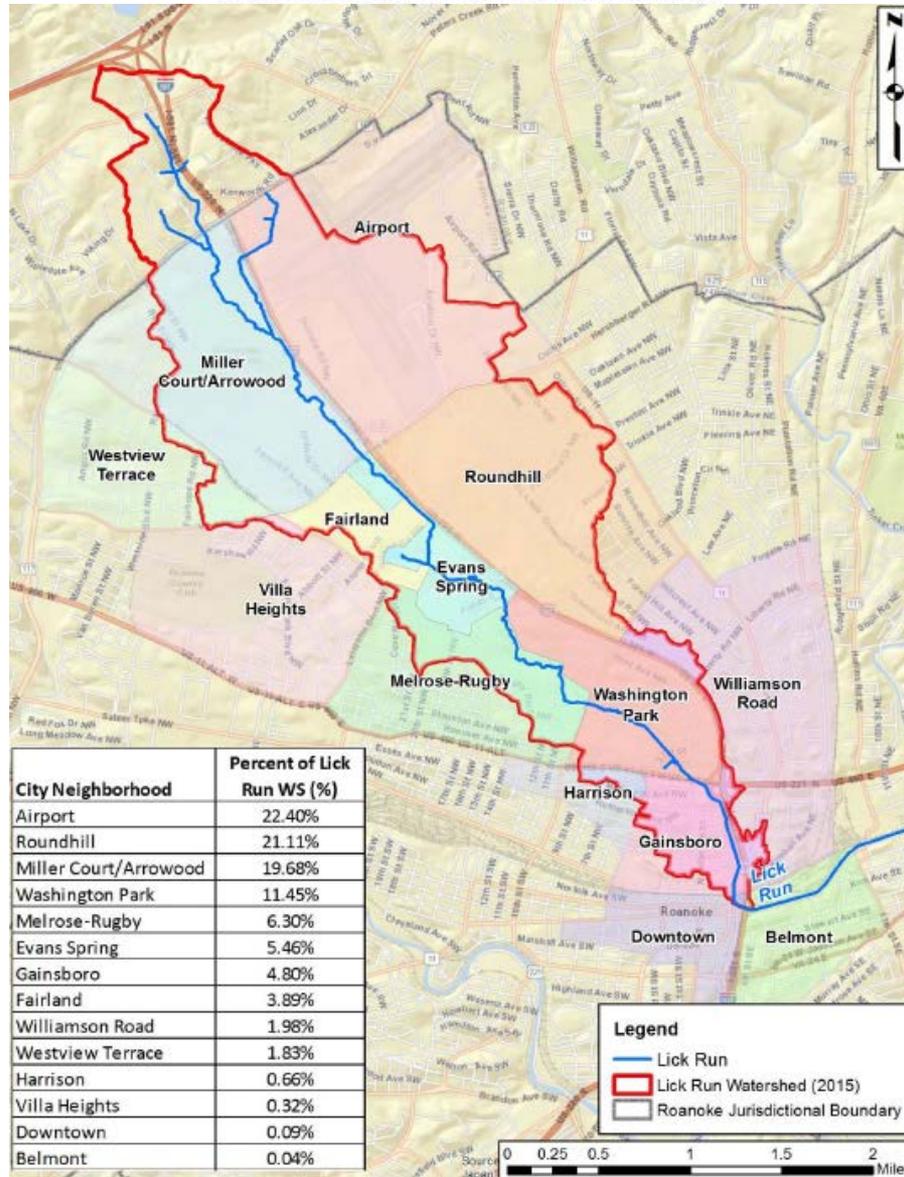
x

“... Roanoke has a **golden opportunity**, one that any city in the land might envy.

Its **rivers, hills, and rural country, its creeks and the views** of its surrounding mountain ridges are singularly available and beautiful beyond description.”

LICK RUN

WATERSHED MASTER PLAN



Randel L. Dymond, Ph.D., P.E.; Marcus F. Aguilar, EIT; Paul Bender, EIT; Clayton Hodges, P.E.

Via Department of Civil and Environmental Engineering

Virginia Tech

**“Transform the
Roanoke River into a
community asset, focal
point, and source of
pride for those that
live, work, learn, and
play in its watershed.”**

3

- 1. Maximize** watershed resiliency and sustainability;
- 2. Minimize** watershed hazard to public health, safety, and property;
- 3. Connect** citizens, businesses, students, and others to their watershed



Roanoke's Stormwater Utility

- Created in November 2013
- July 1, 2014 Utility Fee Effective
- 3-Year Fee Phase in:
 - FY2014-2015 - \$0.30/mo/billing unit
 - FY2015-2016 - \$0.60/mo/billing unit
 - FY2016-2017 - \$0.90/mo/billing unit

Annual Fee Revenue/Credits

- 39,220 Utility Customers
- \$6.3M Gross Stormwater Fee
- 311 Fee Credits = Apx \$200K
- \$6.0M Net Fee Revenue (99% Collected)
- **\$5.40/Mo. Average Residential Fee**

Apx. Annual Expenditures

- **\$4M (50%) Drainage Projects**
(also includes Bond, VDOT Revenue Share, & DEQ SLAF Funds)
- **\$1.75M (22%) Maintenance**
- **\$1.75M (22%) Water Quality**
- **\$500K (6%) Administrative**
- **\$8M Total Expenditures**



215 Drainage Projects - \$140M

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VDH VIRGINIA DEPARTMENT OF HEALTH

**100 Water Quality
Projects - \$125M**

Capital Needs

- \$140M for 215 Drainage Projects
- \$125M for 100 Water Quality Projects
- **\$265M Identified Capital Needs**
- \$4.0M Capital Spend / Fiscal Year
- **When will we get there? 66 years?**

2018 VAMSA Utility Survey

- 23 of 29 VA Stormwater Utilities Reported
- High Monthly Fee = \$21.00 (Falls Church)
- Low Monthly Fee = \$2.08 (Chesterfield Co)
- Median = \$5.86 (Roanoke is \$5.40/month)
- Most fund both O&M and Stormwater CIP
- Most collect from religious/tax-exempt parcels
- Most collect from railroads and airports

2018 B&V Utility Survey

- **75 Utilities from 21 states**
- **High Monthly Fee = \$40.07 (Seattle)**
- **Low Monthly Fee = \$0.75 (Hamilton Co, TN)**
- **Median Fee = \$5.48**
- **Median residential impervious/parcel = 2618 sf**
(Roanoke is 3,200 sq ft)
- **Avg Stormwater CIP Budget = \$7,623,005**

2018 WKYU Utility Survey

- **1681 U.S. Utilities (SWUs) + 29 in Canada**
- **Conversely, 22,322 communities in NFIP**
- **6 states with 100 or more SWUs**
- **40 states and DC have at least one SWU**
- **High Monthly Fee = \$69.25 (Winston-Salem)**
- **Low Monthly Fee = \$0.00 (Davis, CA)**
- **Median Fee = \$4.00**
- **Most Fees increase reflecting CPI**
- **Some tie the monthly fee to the CPI**

B&V Utility Emphasis

- **Clear nexus** among Program, Cost of Service, User Fees, and Customer Benefit.
- **Stormwater credits offer nexus** between Fee and Demand on the stormwater system.
- Exercise caution in **defining credit program** to foster stormwater management stewardship, while making sure that the potential revenue loss doesn't burden customers without credits.



**“Be Part of the Solution,
Not the Pollution”**



**Create a Clean Water Legacy
for the Citizens of Tomorrow**