

Department of Environmental Quality

ORSANCO Update

Buchanan County Sewage Discharge



Melanie Davenport
Director Water Division

Buchanan County PSA's Conway Wastewater Treatment Plant

- The WWTP is located one mile south of the Kentucky state line just of Route 460.
- The collection system consists of approximately 50 miles of gravity line that conveys approximately 1.5 million gallons per day (MGD).
- Approximately 30 miles of interceptor is along the Levisa Fork River and subject to flooding damage.



Late Winter 2015 Weather

Heavy Rain and Snow Received in Buchanan County During Late February/Early March

- Total snowfall for February – 19.71 inches
- With ~ 12 inches of snow an additional 2 inches of rain fell on March 5
- Total precipitation for March 2015 – 6.18 inches
- Normal precipitation for March – 3.43 inches

Source : usclimatedata.com



Initial Reports

- March 5, 2015: PSA staff reported a loss of flow to the plant.
- Floodwaters were covering most of the manholes along Levisa Fork and Slate Creek.
- PSA staff were unable to access lines to assess damage until March 24.



VA/KY State Line

This topographic map shows a section of the border between Virginia and Kentucky. The state line is marked by a yellow dashed line in the upper left. A blue line represents a waterway, starting from the top left and flowing generally south and east. Key locations include Conaway WWTP, marked with a green triangle. Several areas are highlighted with blue boxes and arrows, indicating overflow zones: 'Tracks End Overflow Area', 'Electrical Substation Overflow Area', 'Health Dep. Overflow Area', 'Magic Mart Overflow Area', and 'Enoch Branch Overflow Area'. The map also shows 'Slate Creek' in orange and various geographical features like 'Turkey Pen Ridge' and 'Mill Branch Ridge'. Towns such as Grundy, Royal City, and Tockland are labeled. The map includes contour lines and various road markers.

Tracks End
Overflow Area

Electrical
Substation
Overflow
Area

Health Dep.
Overflow
Area

Enoch
Branch
Overflow
Area

Magic Mart
Overflow
Area

Slate Creek

Damage Assessment

- PSA determined they needed specialized equipment
- The county began the process of acquiring a vacuum truck on April 14.
 - By May 6, a vacuum truck was leased by the county and put into service.
- Due to the nature of the blockages, work proved slow and tedious.

Damage Assessment



Manhole in the Levisa Fork located ~7 miles upstream from the WWTP. Found to be missing its casting and lid and full of rock.



Overflowing manhole on the Levisa Fork off Route 460 near Vansant (Magic Mart area).

Tough Work.....



1000 ft of line filed with rock and sand



Numerous Manholes filed



Rock was removed from the line
using a jetter and vac truck.



Follow up by DEQ and VDH

- May 8, 2015: a meeting was held at the DEQ's Southwest Regional Office attended by Buchanan County PSA, DEQ SWRO staff and VDH.
 - PSA staff provided a status update of completed work and plans for future work.
- VDH discussed the need to post the river with signage since the river is used for recreational activities during the warmer months.
- DEQ SWRO notified Kentucky DEP on May 12 of the situation.

Additional Follow Up

- May 18: joint sampling of the Levisa Fork was conducted by DEQ SWRO and Kentucky DEP. The following data was received for bacteria levels:
 - VA data—well upstream of the discharge E. coli = **135 MPL/100ml**
 - VA data--at the KY State Line E. coli = **336 MPL/100ml**
 - KY data--1 mile into KY E. coli = **197 MPL/100ml**
 - KY data--9 mile into KY E. coli = **292 MPL/100ml**
- It was determined by both states that, although elevated, bacteria levels did not pose much of a concern at this point.
- May 21: DEQ issued a Notice of Violation to the PSA for the discharge of untreated wastewater to Virginia state waters.

VDH posted signage along the Levisa Fork warning of the possibility of high bacteria levels and advising against the recreational use of the river until further notice.





Tracks End area restored May 25
(20%) to the WWTP

Electrical Substation area
restored June 1
(50%) flow to the WWTP

Magic Mart area restored June 3
Entire Levisa Fork interceptor
on line (90%) flow to the
WWTP



June 2 PSA received additional funding
from Buchanan County and DMME
and hired a contractor to assist with
the Slate Creek interceptor

June XXX Slate Creek interceptor
cleared and 100% of wastewater
flow delivered to plant

Upcoming actions for DEQ

- Meet with the PSA on 6/17 to discuss the NOV. We have requested that the PSA critique the event and present their plans to better address future events. They have already discussed the need for specialized equipment, emergency funds, enhanced procedures.
- DEQ and KY DEP to sample Levisa Fork on both sides of the state line one additional time in June after the event during normal river conditions.
- DEQ and KY to discuss notification procedures for future events.

Frequently Asked Questions

- Why are the collection lines installed in the stream beds?
 - The topography of the county consists of very steep ridges and narrow valleys leaving very minimal options as to where the collection system could be installed.
- Why did the VDH issue an advisory for the Levisa Fork River?
 - With warmer weather and Memorial Day weekend approaching, VDH determined that the advisory should be posted.

FAQs

- Why did it take so long to notify downstream users. DEQ received negative publicity on this issue
 - In March, stream flows were too high to allow safe access
PSA not sure where discharges existed.
 - Once the blockages were located, plans developed to repair system
 - Specialized equipment rented with delayed delivery
 - Recreation season approaching DEQ and VDH notified VA residents and KY officials on May 12

FAQs

- Why has it taken so long to clear the blockages and resolve the overflow issue?
 - In March, stream flows were too high to allow safe access to the sewer lines or even locate the overflows and line blockages.
 - Once the blockages were located, the PSA determined scope of work
 - Specialized equipment rented with delayed delivery
 - Work began end of April.
 - Tough Work. Very slow and tedious.



Additional Questions?