



## HB 2506 weakens drinking water protections.

It allows more of the most harmful toxins to human health to be dumped into drinking water supplies.

### What does HB 2506 change?

### It increases the amount of toxic pollutants discharged by industrial sites.

To calculate permit limits, "critical design flow" is used to determine the amount of pollution a stream can hold without posing a threat to human health. It proposes to force permit writers to use a much higher critical design flow, <u>harmonic mean</u>, instead of the flow that has been used for years. Permits would be based on the assumption that rivers are larger and have additional dilution available, which is not the case. *Reject changes to the critical design flow that will allow permittees to discharge more toxins and cancer-causing chemicals in our waters.* 

### It allows more toxic dischargers to locate closer together and create larger toxic hot spots.

"Mixing zones" are currently used in the permitting process to give leeway to use dilution as a way to discharge toxins in higher amounts. But current rules are carefully designed to prevent multiple industrial sites from discharging in close vicinity and to protect drinking water sources from these toxins.

## Reject removing mixing zone protections that are essential for controlling the concentration of harmful toxins in our rivers.

### Why increase toxins in our water?

### Allowing more toxins in our water is not attractive for the state's image or economic future.

Perceptions of West Virginia are already negative when it comes to protecting water – a lax regulatory culture, catastrophic spills, unsafe drinking water, discolored streams, fish consumption advisories, raw sewage and littered streams paint a bleak picture. People want to raise families where drinking water safety is a priority and clean water is there for their children to enjoy.

### Increasing toxins in our water sends the wrong message.

### No data or examples are available to show that weakening water protections will increase jobs.

West Virginia needs clean water and economic opportunities that support long-term prosperity. There is no evidence these changes will meet our needs for advancing economic growth. West Virginia should take pride in clean water as one of its most valuable assets.

# Increasing toxins in our water does not promise a pay-off, it only promises we will have more pollution threatening the health of our people.





## HB 2506 Fact Sheet

Claim: These changes bring us into conformity with the surrounding states.\*

**Fact:** This is simply not true. Unlike HB 2506, surrounding states handle carcinogens and noncarcinogens differently. Virginia uses a design flow of 30Q5 for noncarcinogens. Kentucky and Pennsylvania use 7Q10 for non-carcinogens. Ohio uses 10% of harmonic mean flow for direct discharges of carcinogens to the Ohio River and 7Q10 for direct discharges of non-carcinogens to the Ohio River.

Claim: HB 2506 will create jobs.

**Fact:** There is no way to objectively evaluate this claim. Under oath, a representative of the WV Manufacturers Association admitted he could not identify one job that had been lost due to current regulations, nor could he identify any specific number of jobs that could be created. Furthermore, water contamination events and a reputation for poor quality have an enormous impact on our economy. Poor water quality in the Cheat River caused multiple rafting companies in Preston County to close during the 1990s, even when paddle-sport tourism grew 33% nationwide during the same period. The 2014 Freedom Industries MCHM spill is estimated to have cost West Virginia \$61 million over a single weekend, negatively impacting the employment of 75,000 West Virginians.

Claim: HB 2506 does not change existing water quality standards.

**Fact:** This bill will require changes to West Virginia's Water Quality Standards rule (47 CSR 2). While it is technically true that the bill does not change the numeric water quality criteria values, it does change how effluent limits are calculated and will allow for an increase in the total mass of pollutants that can be discharged. These changes will worsen overall water quality. Furthermore, because the less conservative "harmonic mean" model assumes more water available for dilution, the discharger runs a greater risk of exceeding instream water quality criteria far downstream from discharge locations.

Claim: These changes are recommended by the EPA.\*

**Fact:** EPA has issued several guidance documents on this issue over many years. When read in context, it is clear that EPA recommends harmonic mean flow for pollutants that affect people over a long period of time, and EPA recommends lower flows (such as 30Q5 or 7Q10) for pollutants that affect people over the short-term. Referencing a single EPA letter from 2016, as supporters of HB 2506 have done, takes that letter out of its full context. Further, EPA gives the states significant discretion to design their permit guidelines in the way that best protects its citizens. West Virginia's current streamflow calculation has been accepted by the EPA and has been in place for over 20 years. EPA recommends that mixing zones not overlap—contrary to what is proposed in HB 2506.

\*See attachments for more detail.

### Design flows for human health in neighboring states

Evan Hansen, March 3, 2017

Design flows for human health in neighboring states are more stringent than what is proposed in HB 2506. Virginia, Kentucky, Ohio, Pennsylvania, and the Ohio River Valley Water Sanitation Commission (ORSANCO) do not solely use harmonic mean flow. Maryland uses the mean annual flow.

### Design flows for human health in neighboring states

| State        | Carcinogens                      | Non-carcinogens                  | Other/Exceptions                 | Source                          |
|--------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------|
| ORSANCO      | Harmonic mean flow               | 7Q10                             | N/A                              | Ohio River Valley Water         |
|              |                                  |                                  |                                  | Sanitation Commission,          |
|              |                                  |                                  |                                  | Pollution Control Standards for |
|              |                                  |                                  |                                  | Discharges to the Ohio River,   |
|              |                                  |                                  |                                  | 2015 Revision.                  |
| Virginia     | Harmonic mean flow               | 30Q5                             | N/A                              | 9 VAC 25-260-140.               |
|              |                                  |                                  |                                  | Criteria for surface water.     |
| Kentucky     | Harmonic mean flow               | 7Q10                             | Fish consumption and             | 401 KAR 10:031. Surface water   |
|              |                                  |                                  | radionuclides: Harmonic mean     | standards.                      |
|              |                                  |                                  | flow.                            |                                 |
|              |                                  |                                  |                                  |                                 |
|              |                                  |                                  | Aesthetics: 7Q10.                |                                 |
| Ohio         | Direct discharges to Ohio River: | Direct discharges to Ohio River: | Aesthetics, Direct discharges to | Chapter 3745-2                  |
|              | 10% of harmonic mean flow        | 7Q10                             | Ohio River: 10% of harmonic      | Attainment and Protection of    |
|              |                                  |                                  | mean flow                        | Surface Water Quality           |
|              | Discharges in other locations:   | Discharges in other locations:   |                                  | Standards (WQS)                 |
|              | Harmonic mean flow               | Harmonic mean flow               | Aesthetics, Discharges in other  |                                 |
|              |                                  |                                  | locations: Harmonic mean flow    |                                 |
| Pennsylvania | Harmonic mean flow               | 7Q10                             | N/A                              | Chapter 96. Water Quality       |
|              |                                  |                                  |                                  | Standards                       |
|              |                                  |                                  |                                  | Implementation                  |
| Maryland     | N/A                              | N/A                              | Toxic substance criteria: Mean   | 26.08.02.05. Surface Water      |
|              |                                  |                                  | annual flow                      | Mixing Zones.                   |

## Design flows for human health in U.S. EPA guidance

Evan Hansen, March 3, 2017

U.S. EPA guidance, when read in totality, suggests using harmonic mean flow for pollutants that affect people over a lifetime of exposure, and recommends lower flows (or at least acknowledges the applicability of lower flows) for pollutants that affect people over the short-term. U.S. EPA guidance is also very clear that West Virginia has the prerogative to implement more protective design flows.

#### Design flows for human health in U.S. EPA guidance

| U.S. EPA document                   | Carcinogens   | Non-carcinogens                | Other/Exceptions   |
|-------------------------------------|---------------|--------------------------------|--|
| Technical Support Document for      | Harmonic mean | 30Q5                           | Certain non-carcinogens that affect people over a lifetime of  |
| Water Quality-based Toxics Control. | flow          |                                | exposure: Harmonic Mean Flow                                   |
| 1991. EPA/505/2-90-001.             |               |                                |  |
| Federal Register (65 FR 66450).     | Harmonic mean | Pollutants that affect people  | Provides example of nitrate as a pollutant that affects people |
| 2000.                               | flow          | over a lifetime of exposure:   | with short-term exposure, and for which 7Q10 or 4Q3 would      |
|                                     |               | Harmonic Mean Flow             | be appropriate. (West Virginia has a human health criterion    |
|                                     |               |                                | for nitrate.)  |
|                                     |               | Pollutants that affect people  |  |
|                                     |               | with short-term exposure: 7Q10 |  |
|                                     |               | or 4Q3                         |  |
| Water Quality Standards Handbook,   | N/A           | N/A                            | Does not distinguish between carcinogens and non-              |
| Chapter 5: General Policies. 2014.  |               |                                | carcinogens. Recommends harmonic mean flow on                  |
| EPA 820-B-14-004.                   |               |                                | assumption that human health is affected via long-term         |
|                                     |               |                                | exposure. Acknowledges that EPA has recommended different      |
|                                     |               |                                | critical low-flows for certain pollutants, such as 30Q5.       |
| Letter to West Virginia DEP. 2016   | Harmonic mean | Harmonic mean flow             | Recommends harmonic mean flow on assumption that human         |
|                                     | flow          |                                | health is affected via long-term exposure. Refers to Federal   |
|                                     |               |                                | Register, which recommends lower flows for pollutants that     |
|                                     |               |                                | affect people with short-term exposure (See above). States     |
|                                     |               |                                | that West Virginia has the prerogative to use 30Q5 for non-    |
|                                     |               |                                | carcinogens.   |

## **Overlapping mixing zones**

Evan Hansen, March 3, 2017

Recent U.S. EPA guidance states: "Due to potential additive or synergistic effects of certain pollutants that could result in the designated use of the waterbody as a whole not being protected, <u>state and tribal mixing zone policies should specify, and permitting authorities should ensure,</u> <u>that mixing zones do not overlap.</u>" (Water Quality Standards Handbook, Chapter 5: General Policies. 2014. EPA 820-B-14-004.)

ORSANCO requires additional conditions for overlapping mixing zones: "If mixing zones from two or more proximate sources interact or overlap, <u>the combined effect must be evaluated</u> to ensure that applicable values will be met in the area where any applicable mixing zones overlap." (Pollution Control Standards for Discharges to the Ohio River, 2015 Revision.)

### Harmonic mean flow compared with 7Q10 in selected West Virginia rivers

Evan Hansen, March 5, 2017

In the selected West Virginia Rivers shown below, harmonic mean flows are between 4 and 57 times larger than 7Q10 flows. Therefore, if harmonic mean flow is used to calculate permit limits, it will appear as if more dilution is available, and more pollution will be allowed to discharge from pipes into rivers.

| Difference between narmonic mean now and 7Q10 in selected west virginia rivers | <b>Difference between</b> | n harmonic mean | flow and 7 | Q10 in sele | cted West \ | /irginia rivers |
|--|---------------------------|-----------------|------------|-------------|-------------|-----------------|
|--|---------------------------|-----------------|------------|-------------|-------------|-----------------|

|          |  |             | Harmonic    |            |
|----------|--|-------------|-------------|------------|
|          |  | 7Q10        | mean flow   |            |
| Senate   |  | (cubic feet | (cubic feet |            |
| District | River  | per second) | per second) | Difference |
| 1        | Wheeling Creek at Wheeling                       | 0.6         | 17.0        | 26x        |
| 2        | Fishing Creek at New Martinsville                | 0.4         | 9.8         | 26x        |
| 3        | Hughes River near Freeport                       | 0.8         | 16.6        | 22x        |
| 4        | Mill Creek near Ripley                           | 0.04        | 2.1         | 57x        |
| 5        | Big Sandy River at Kenova                        | 133.0       | 1,522.3     | 11x        |
| 6        | Tug Fork at Crum                                 | 43.9        | 401.4       | 9x         |
| 7        | Little Coal River at Madison                     | 2.5         | 63.7        | 26x        |
| 8        | Pocatalico River at Poca                         | 0.1         | 5.9         | 50x        |
| 9        | Guyandotte River at Pineville                    | 8.4         | 68.1        | 8x         |
| 10       | Greenbrier River near Lewisburg                  | 38.4        | 331.5       | 9x         |
| 11       | Buckhannon River at Buckhannon                   | 1.9         | 50.6        | 27x        |
| 12       | Elk Creek in Clarksburg                          | 0.4         | 8.9         | 21x        |
| 13       | Deckers Creek at Morgantown                      | 0.5         | 7.5         | 16x        |
| 14       | North Fork Blackwater River at Thomas            | 0.1         | 1.2         | 15x        |
| 15       | North Branch Potomac River near Berkeley Springs | 360.8       | 1,347.6     | 4x         |
| 16       | Bullskin Run at the Shenandoah River             | 0.6         | 4.9         | 9x         |
| 17       | Coal River at St Albans                          | 27.4        | 254.0       | 9x         |

Source: West Virginia Department of Environmental Protection's online flow estimates at http://tagis.dep.wv.gov/streamflow/.