Monongahela River TMDL
Calibrations

Hydrology Calibration
Gauge Height Comparisons
Fecal Coliform Water Quality Calibration
Hydrology Calibration
Group D3
Monongahela River EFDC Model
Hydrology Calibration
November 15, 2017

Note: Orange line on the graph represents daily average modeled flow. Blue dots show daily average flow observations from USGS stream gage on Monongahela River at Flaggy Meadow.
Gage is located at approximately River Mile 113
Modeled Daily Average Flow vs. Observed Daily Average Flow
MONONGAHELA RIVER AT FLAGGY MEADOW, WV

Flow in Cubic Meters per Second (cms)

- Modeled Daily Average Flow (cms)
- Observed Daily Average Flow (cms)
Gauge Height Comparisons
Group D3
Monongahela River EFDC Model
USGS Gage Height Comparison
November 14, 2017

Note: Orange lines on the graph represent water level model output for model grid cells above and below locks and dams. Blue lines show gage height observations at USGS stream gages at locks and dams on the Monongahela River.
MONONGAHELA RIVER AT OPEKISKA LOCK & DAM (LOWER), WV

Observed Stage vs. Modeled Stage
MONONGAHELA RIVER AT HILDEBRAND LOCK & DAM (LOWER), WV
Observed Stage vs. Modeled Stage

HILDEBRAND Downstream Observed Stage (Meter)  Modeled Stage (Meter)
MONONGAHELA RIVER AT MORGANTOWN LOCK & DAM (UPPER), WV
Observed Stage vs. Modeled Stage

- MORGANTOWN Upstream Observed Stage (Meter)
- Modeled Stage (Meter)
Group D3
Monongahela River EFDC Model
Fecal Coliform Water Quality Calibration Plots
January 29, 2018

The TMDL model was run under baseline conditions with nonpoint sources, NPDES permitted point sources, MS4 areas, CSOs, and failing septic systems represented at 100% of loading rates. Flows from tributaries with previously developed 2014 TMDLs were represented at unreduced baseline conditions.

Note: Blue lines in graphs represent model output. Red circles show pre-TMDL monitoring field data observations.