Appendix 2:

Graphs Showing Annual Exceedance Probabilities in Relation to Annual Peak Streamflow, Determined Using the Expected Moments Algorithm and Bulletin 17B Methods, for Selected Streamflow-Gaging Stations for the period of record through 1990, 2015, and 2016 and Annual Peak Streamflow, by Water Year[1] 1900-2016

Annual peak streamflow measurements and annual exceedance probability (AEP) frequency curves are shown for two estimation methods [the Expected Moments Algorithm (EMA) method, and the Bulletin 17B (17B) method], for three time intervals [the period of record (POR) through 1990, through 2015, and through 2016] for each of 18 streamflow-gaging stations. June 2016 flood peaks are highlighted with red circles, and visual comparisons may be made of annual peak streamflow input time series, flood frequency curves, and flood frequency curve confidence intervals produced using the two estimation methods. Annual peak streamflows are expressed in cubic feet per second (ft^3/s).

Graphs on the left-hand side of each page display data points for each measured systematic peak over the POR. Green and pink rectangles identify boundaries of areas where unknown systematic peaks are expected using the EMA method. Red rectangles identify boundaries of areas where systematic peaks are missing using the 17B method.

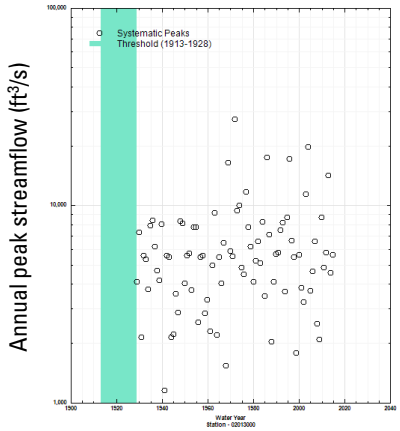
Graphs on the right-hand side of each page display (1) each ranked systematic peak as a data point, (2) a fitted frequency curve (red line) describing AEP, and (3) confidence limits (blue lines) defining an area in which there is 95-percent certainty that an authentic probability-discharge relation may be found.

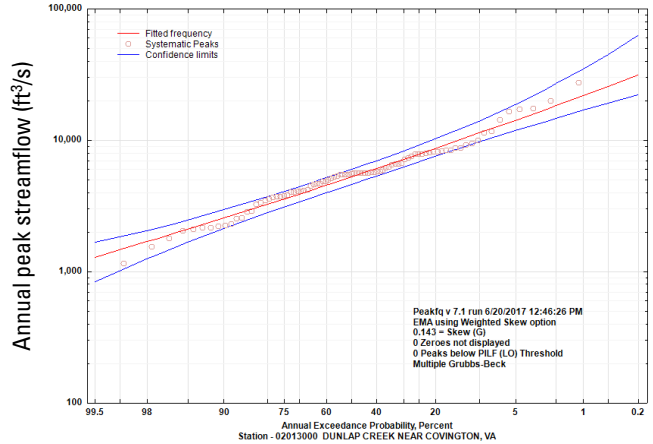
[1]A water year is the 12-month period beginning October 1 and ending September 30. It is designated by the year in which it ends.

02013000 Dunlap Creek Near Covington, Virginia.

EXPLANATION: June 2016 Flood Peak: 23,600 ft³/s; annual exceedance probability (AEP) 0.0224

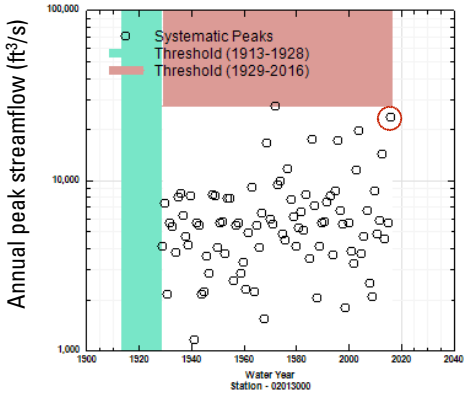
Inputs through 2015

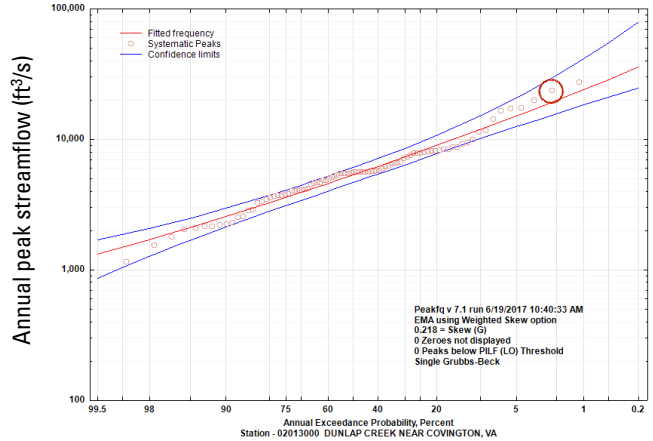




AEP Before 2016 Flooding

Inputs through 2016





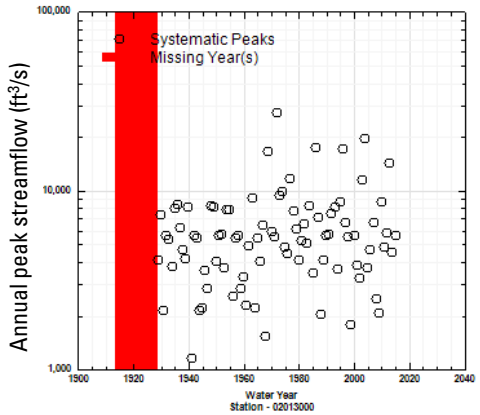
AEP After 2016 Flooding

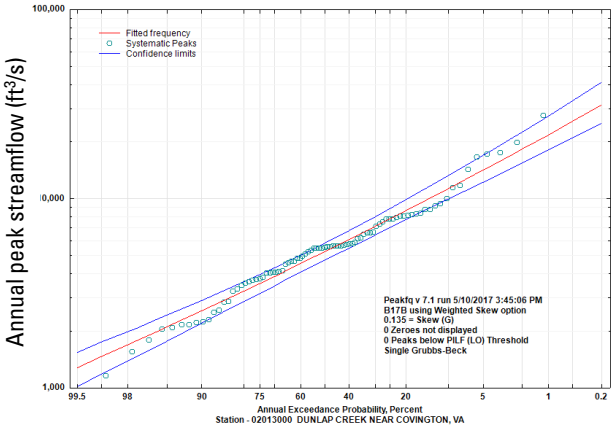
Figure 2-1. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 02013000 Dunlap Creek Near Covington, Virginia, for the period of record through 2015 and 2016.

02013000 Dunlap Creek Near Covington, Virginia.

EXPLANATION: June 2016 Flood Peak: 23,600 ft^3/s; annual exceedance probability (AEP) 0.0225

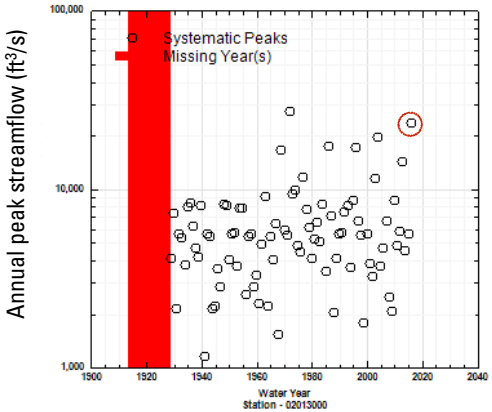
Inputs through 2015

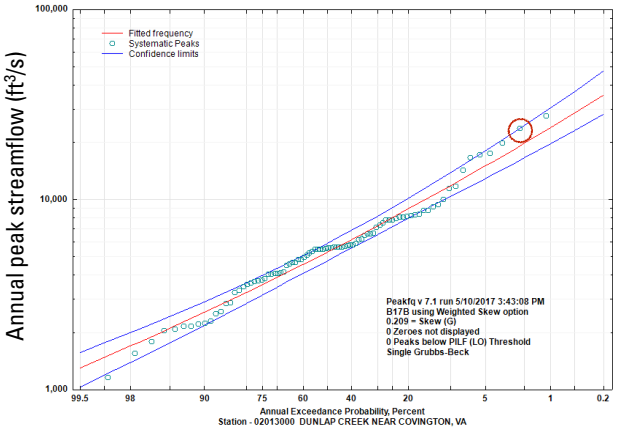




AEP Before 2016 Flooding

Inputs through 2016



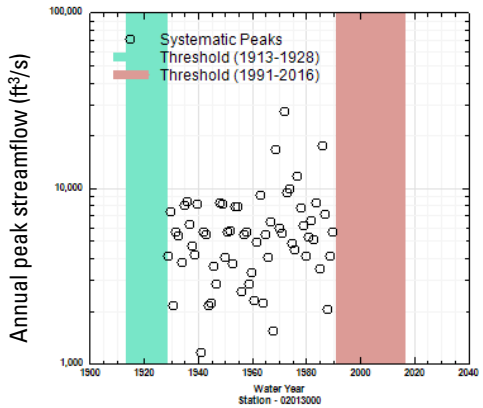


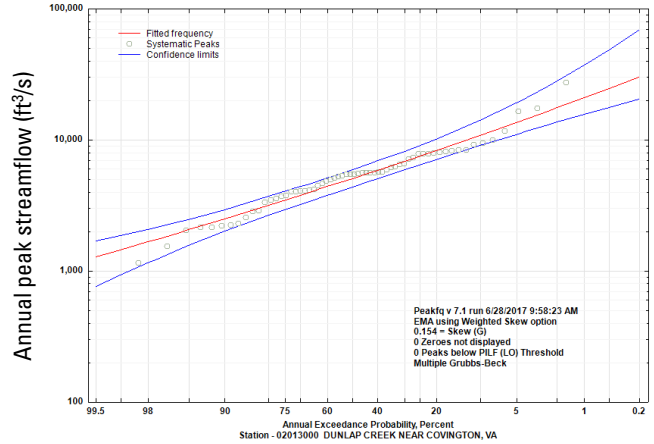
AEP After 2016 Flooding

Figure 2-2. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 02013000 Dunlap Creek Near Covington, Virginia, for the period of record through 2015 and 2016.

02013000 Dunlap Creek Near Covington, Virginia.

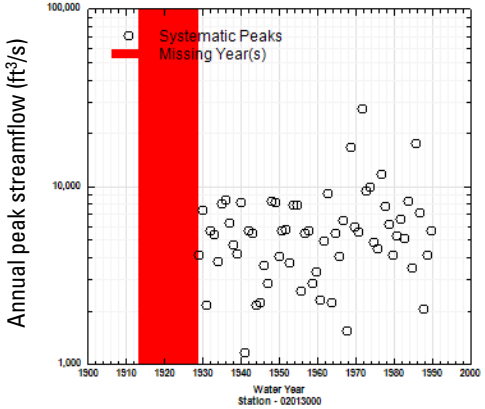
EMA inputs through 1990

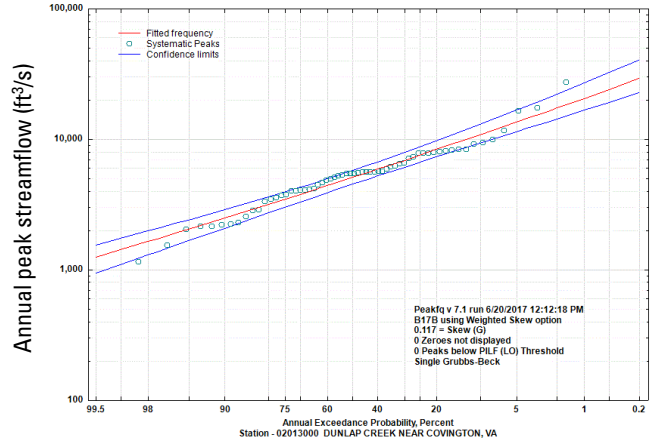




1990 AEP (EMA)

17B inputs through 1990





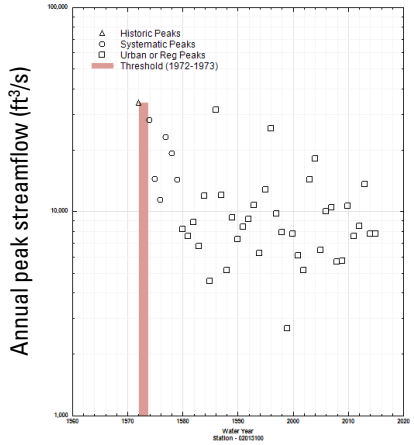
1990 AEP (17B)

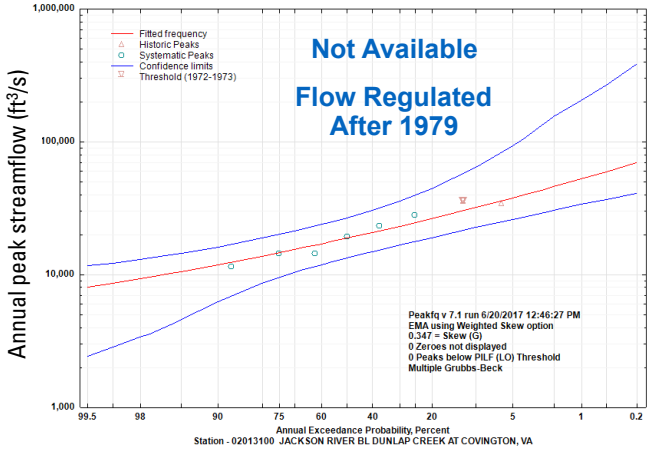
Figure 2-3. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 02013000 Dunlap Creek Near Covington, Virginia, for the period of record through 1990.

02013100 Jackson River Below Dunlap Creek at Covington, Virginia.

EXPLANATION: ◯ June 2016 Flood Peak: 27,100 ft^3/s; annual exceedance probability (AEP) NA

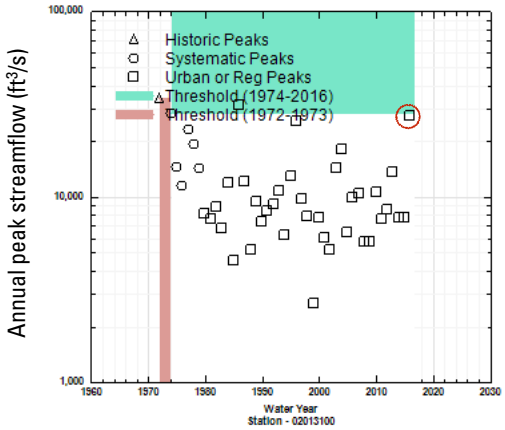
Inputs through 2015

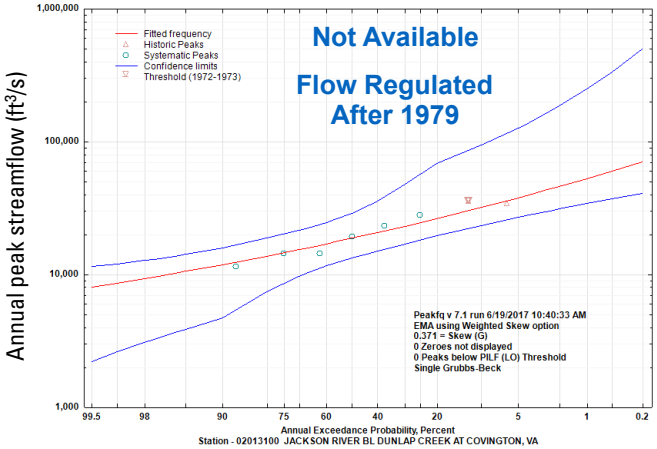




AEP Before 2016 Flooding

Inputs through 2016





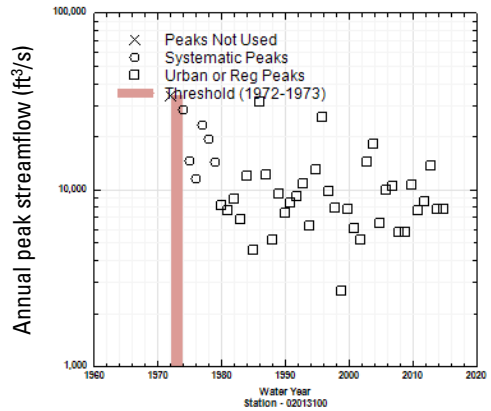
AEP After 2016 Flooding

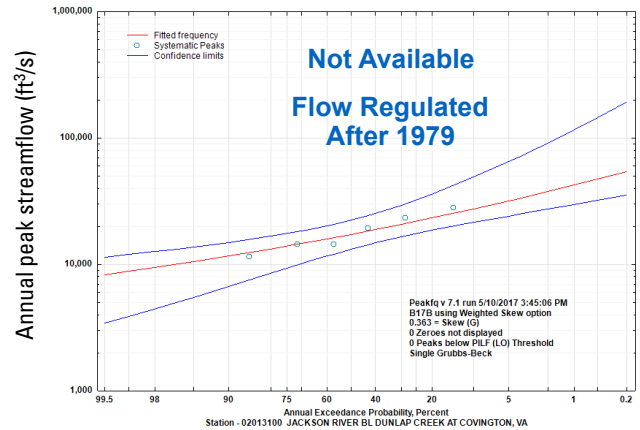
Figure 2-4. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 02013100 Jackson River Below Dunlap Creek at Covington, Virginia, for the period of record through 2015 and 2016.

02013100 Jackson River Below Dunlap Creek at Covington, Virginia.

EXPLANATION: ◯ June 2016 Flood Peak: 27,100 ft^3/s; annual exceedance probability (AEP) NA

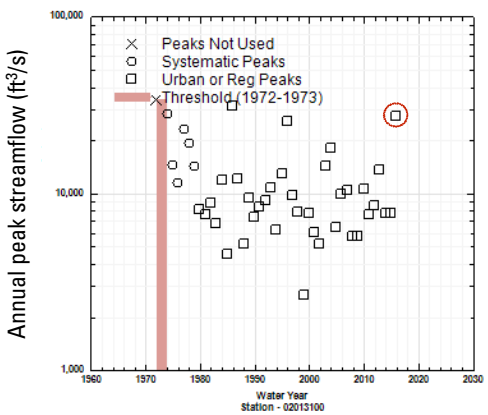
Inputs through 2015

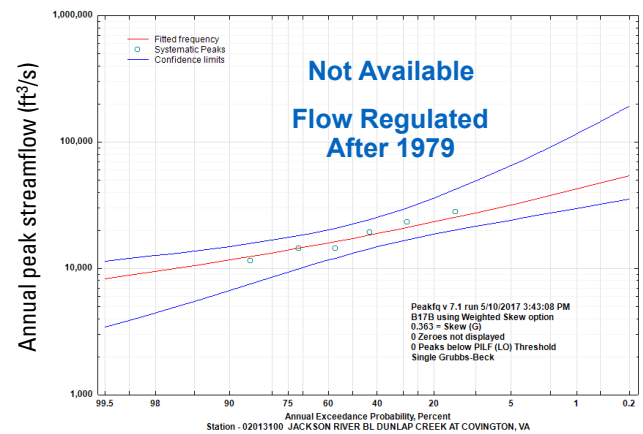




AEP Before 2016 Flooding

Inputs through 2016





AEP After 2016 Flooding

Figure 2-5. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 02013100 Jackson River Below Dunlap Creek at Covington, Virginia, for the period of record through 2015 and 2016.

02013100 Jackson River Below Dunlap Creek at Covington, Virginia.

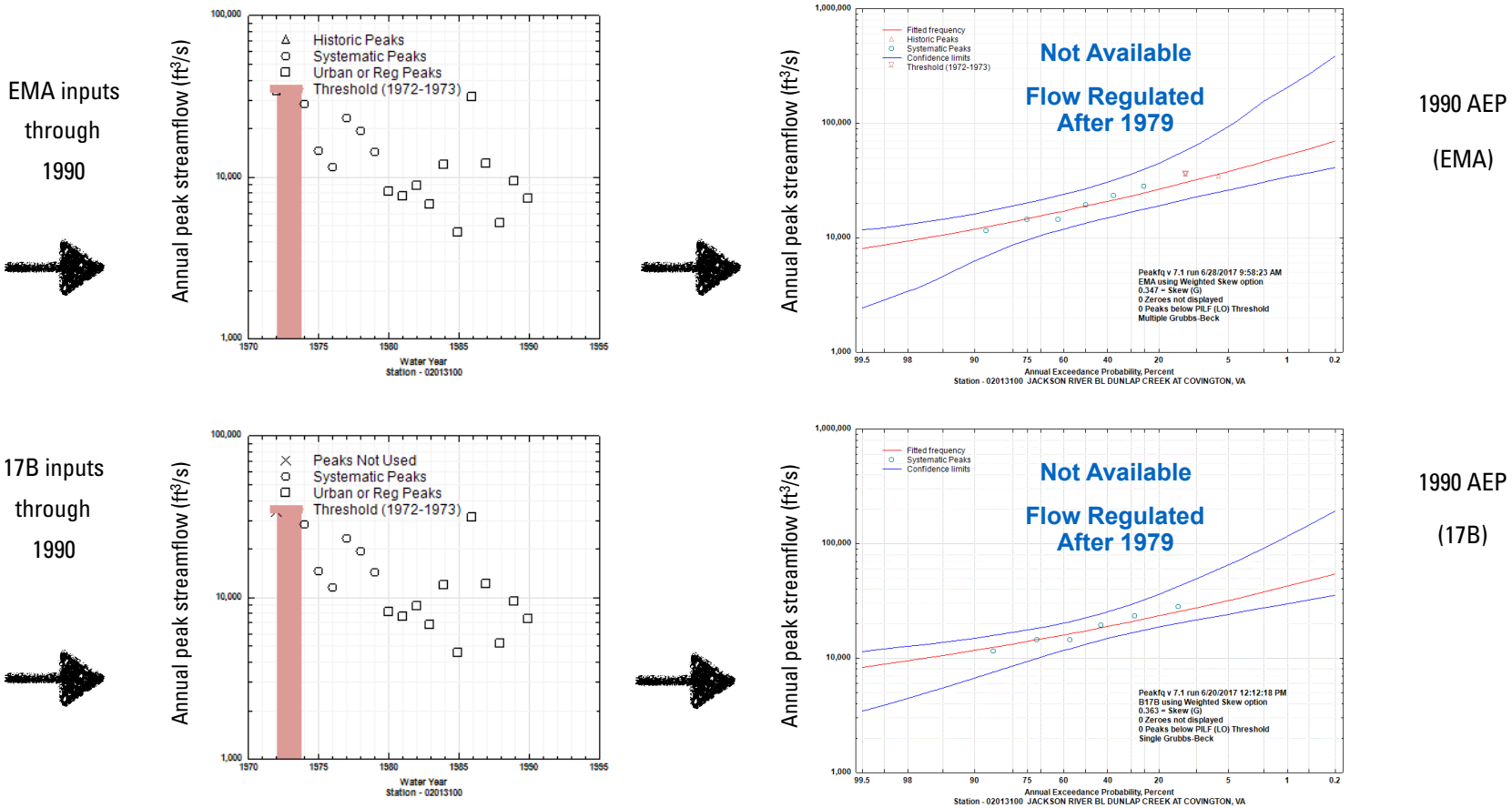


Figure 2-6. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 02013100 Jackson River Below Dunlap Creek at Covington, Virginia, for the period of record through 1990.

03183500 Greenbrier River at Alderson, West Virginia.

EXPLANATION: ◯ 2016 Flood Peak: 80,700 ft^3/s; annual exceedance probability (AEP) 0.0246

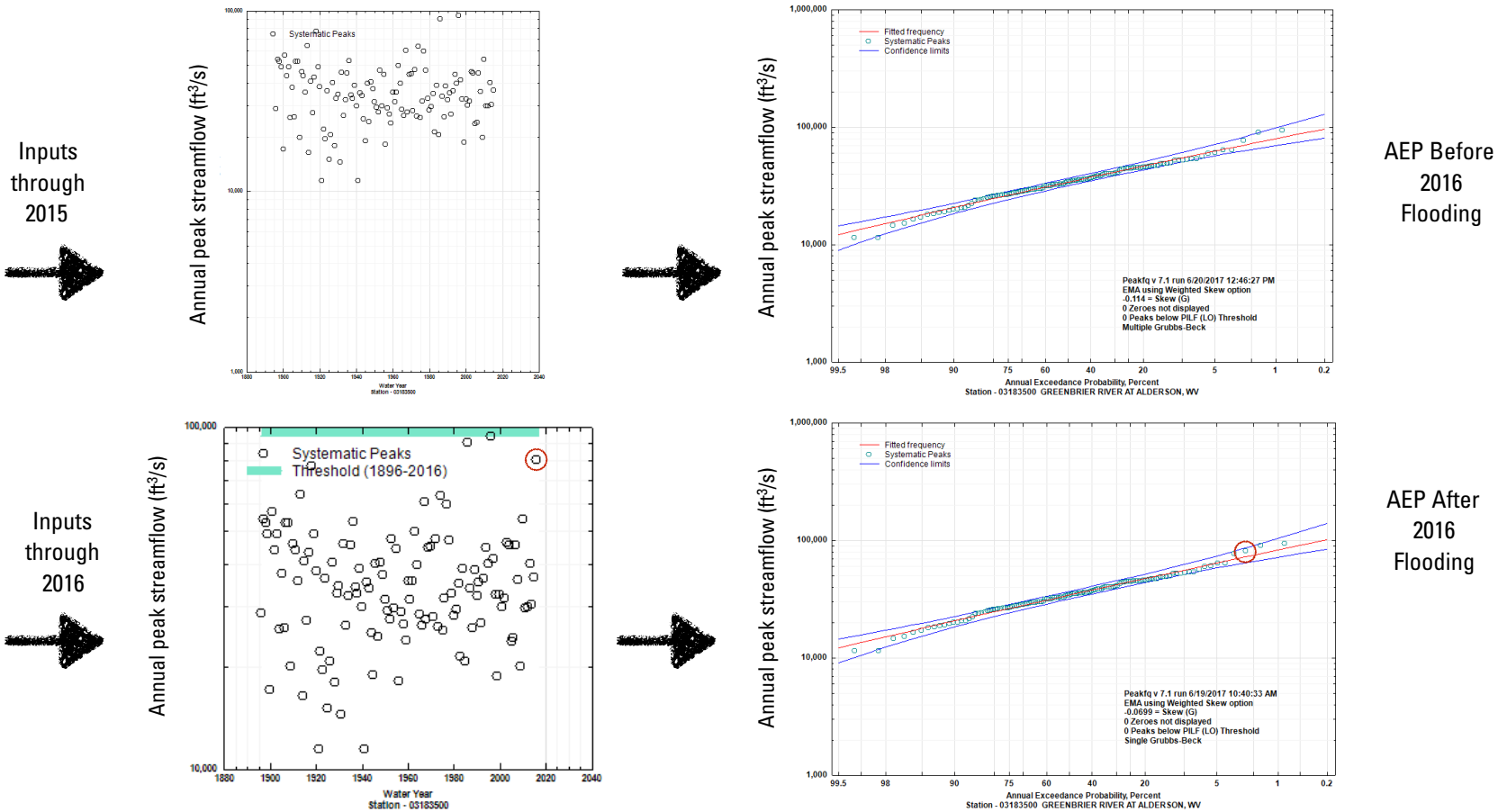


Figure 2-7. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03183500 Greenbrier River at Alderson, West Virginia, for the period of record through 2015 and 2016.

03183500 Greenbrier River at Alderson, West Virginia.

EXPLANATION: ○ June 2016 Flood Peak: 80,700 ft³/s; annual exceedance probability (AEP) 0.0246

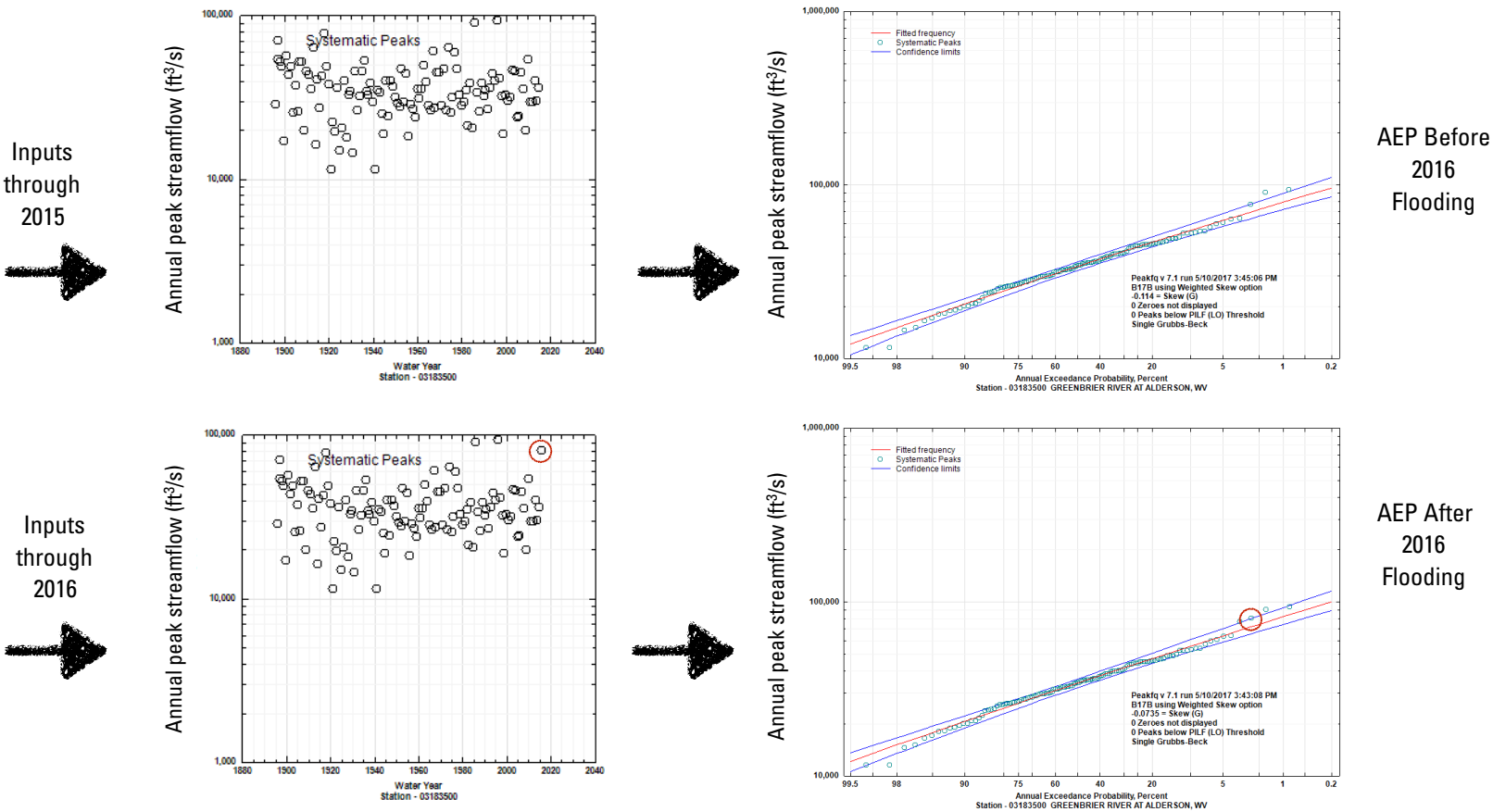
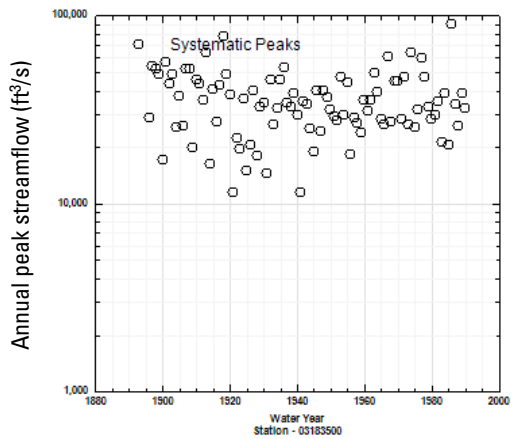
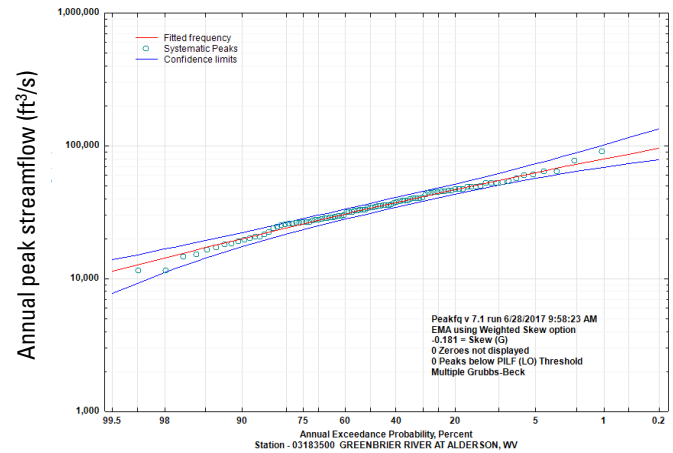


Figure 2-8. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03183500 Greenbrier River at Alderson, West Virginia, for the period of record through 2015 and 2016.

03183500 Greenbrier River at Alderson, West Virginia.

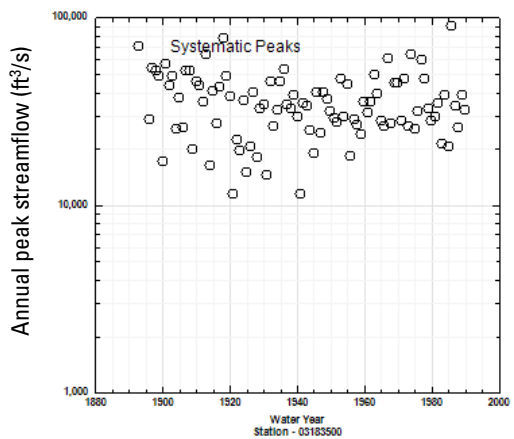
EMA inputs through 1990

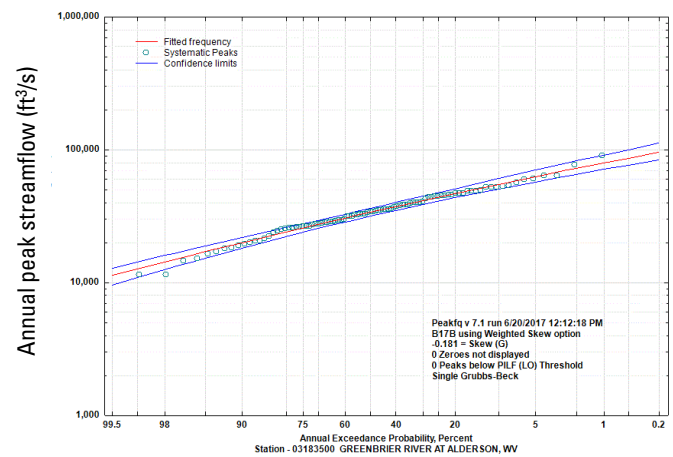




1990 AEP (EMA)

17B inputs through 1990





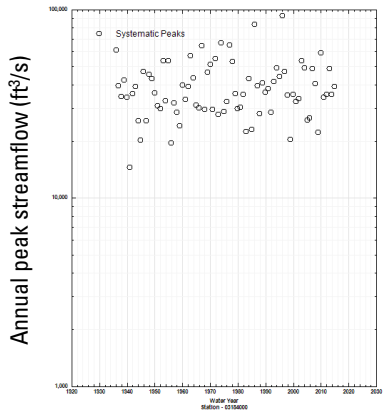
1990 AEP (17B)

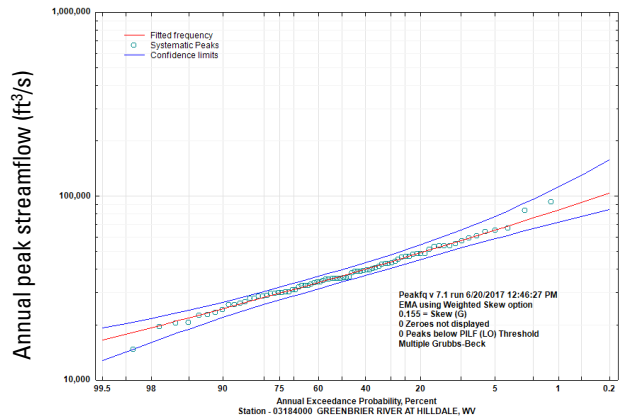
Figure 2-9. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03183500 Greenbrier River at Alderson, West Virginia, for the period of record through 1990.

03184000 Greenbrier River at Hilldale, West Virginia.

EXPLANATION: ○ 2016 Flood Peak: 82,500 ft^3/s; annual exceedance probability (AEP) 0.0365

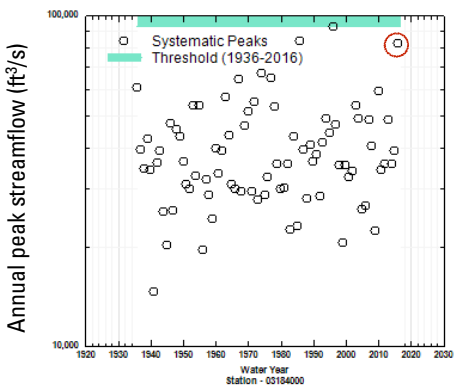
Inputs through 2015

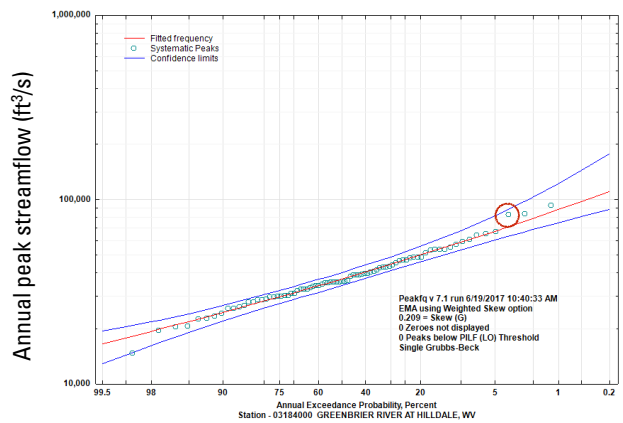




AEP Before 2016 Flooding

Inputs through 2016





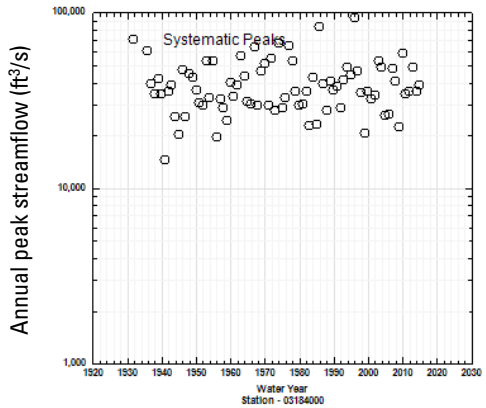
AEP After 2016 Flooding

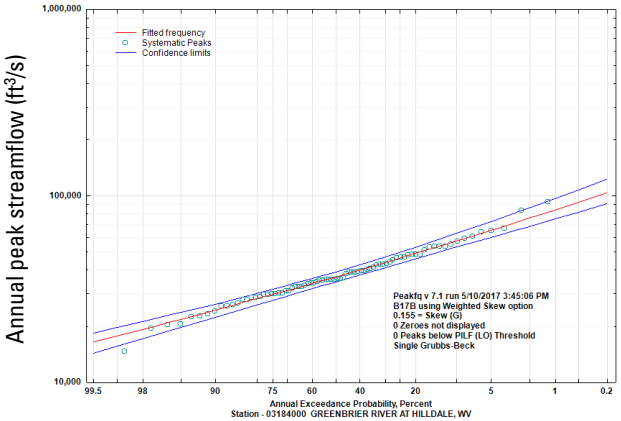
Figure 2-10. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03184000 Greenbrier River at Hilldale, West Virginia, for the period of record through 2015 and 2016.

03184000 Greenbrier River at Hilldale, West Virginia.

EXPLANATION: ○ 2016 Flood Peak: 82,500 ft^3/s; annual exceedance probability (AEP) 0.0366

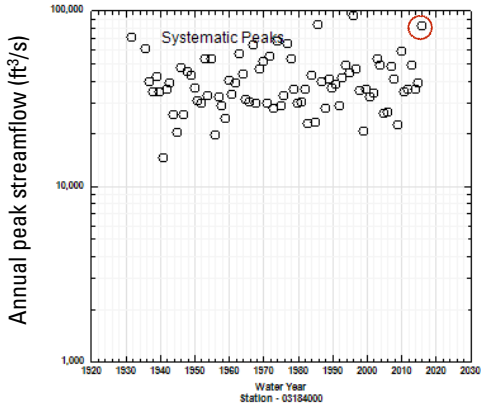
Inputs through 2015

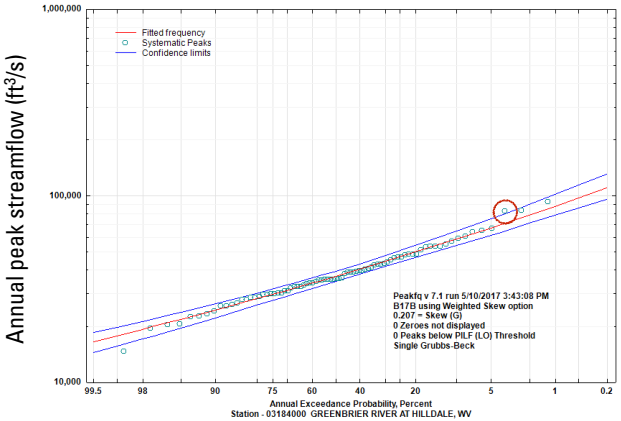




AEP Before 2016 Flooding

Inputs through 2016



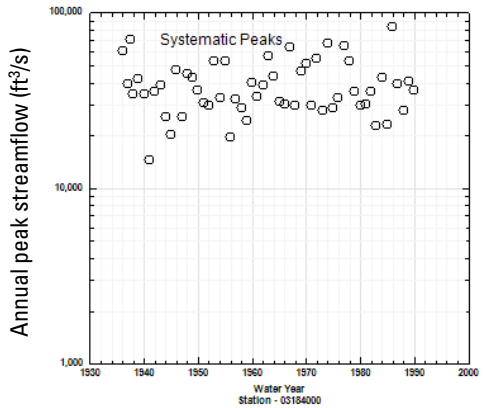


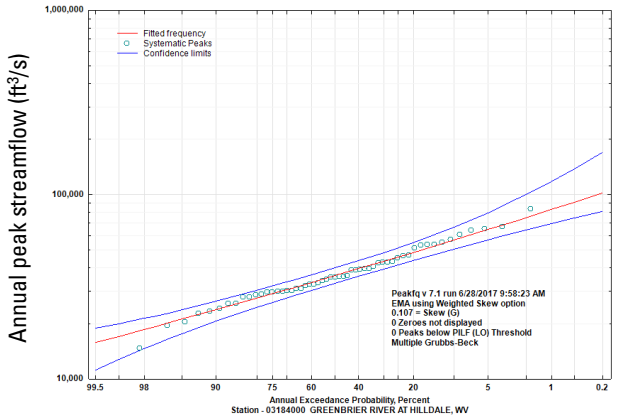
AEP After 2016 Flooding

Figure 2-11. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03184000 Greenbrier River at Hilldale, West Virginia, for the period of record through 2015 and 2016.

03184000 Greenbrier River at Hilldale, West Virginia.

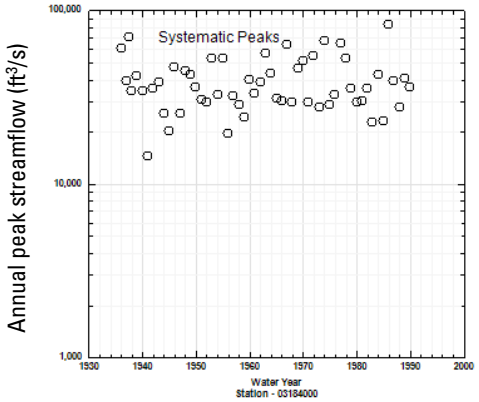
EMA inputs through 1990

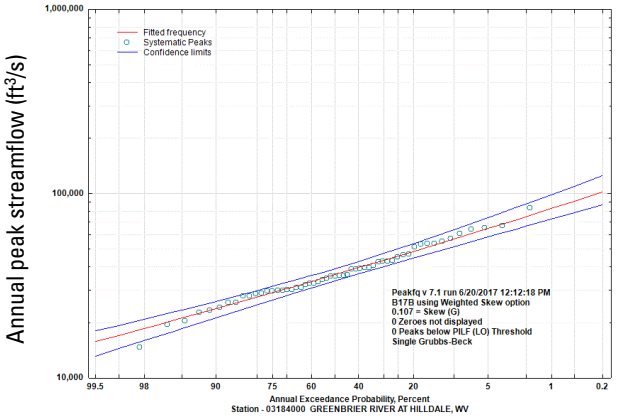




1990 AEP (EMA)

17B inputs through 1990





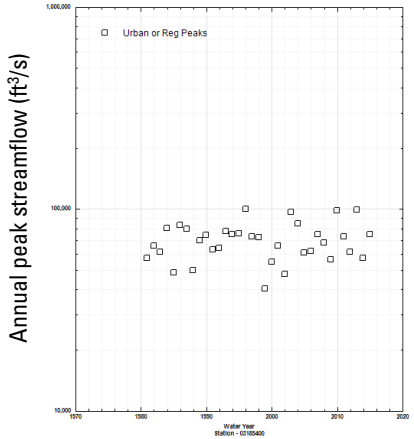
1990 AEP (17B)

Figure 2-12. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03184000 Greenbrier River at Hilldale, West Virginia, for the period of record through 1990.

03185400 New River at Thurmond, West Virginia.

EXPLANATION: June 2016 Flood Peak: 90,500 ft^3/s; annual exceedance probability (AEP) NA

Inputs through 2015



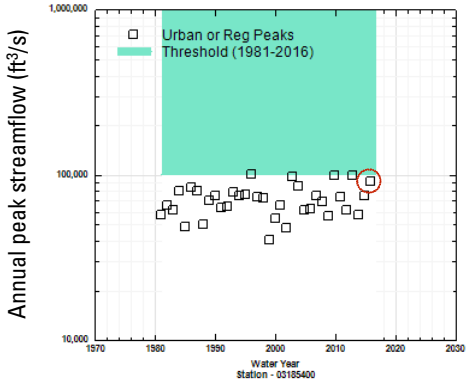
Annual peak streamflow (ft^3/s)

Not Available

Flow Regulated by Bluestone Dam

AEP Before 2016 Flooding

Inputs through 2016



Annual peak streamflow (ft^3/s)

Not Available

Flow Regulated by Bluestone Dam

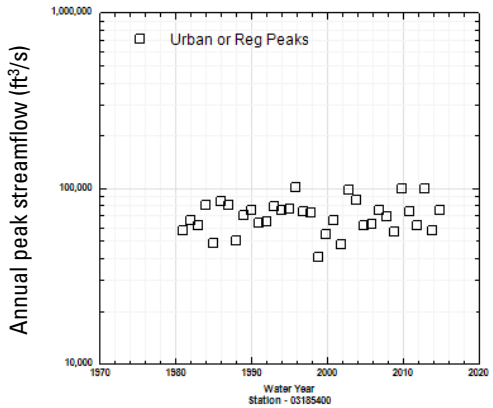
AEP After 2016 Flooding

Figure 2-13. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03185400 New River at Thurmond, West Virginia, for the period of record through 2015 and 2016.

03185400 New River at Thurmond, West Virginia.

EXPLANATION: ◯ June 2016 Flood Peak: 90,500 ft^3/s; annual exceedance probability (AEP) NA

Inputs through 2015



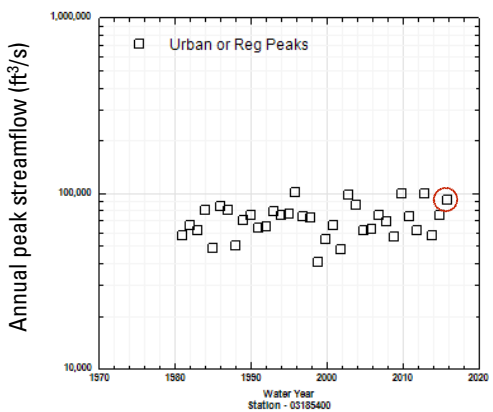
Annual peak streamflow (ft^3/s)

Not Available

Flow Regulated by Bluestone Dam

AEP Before 2016 Flooding

Inputs through 2016



Annual peak streamflow (ft^3/s)

Not Available

Flow Regulated by Bluestone Dam

AEP After 2016 Flooding

Figure 2-14. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03185400 New River at Thurmond, West Virginia, for the period of record through 2015 and 2016.

03185400 New River at Thurmond, West Virginia.

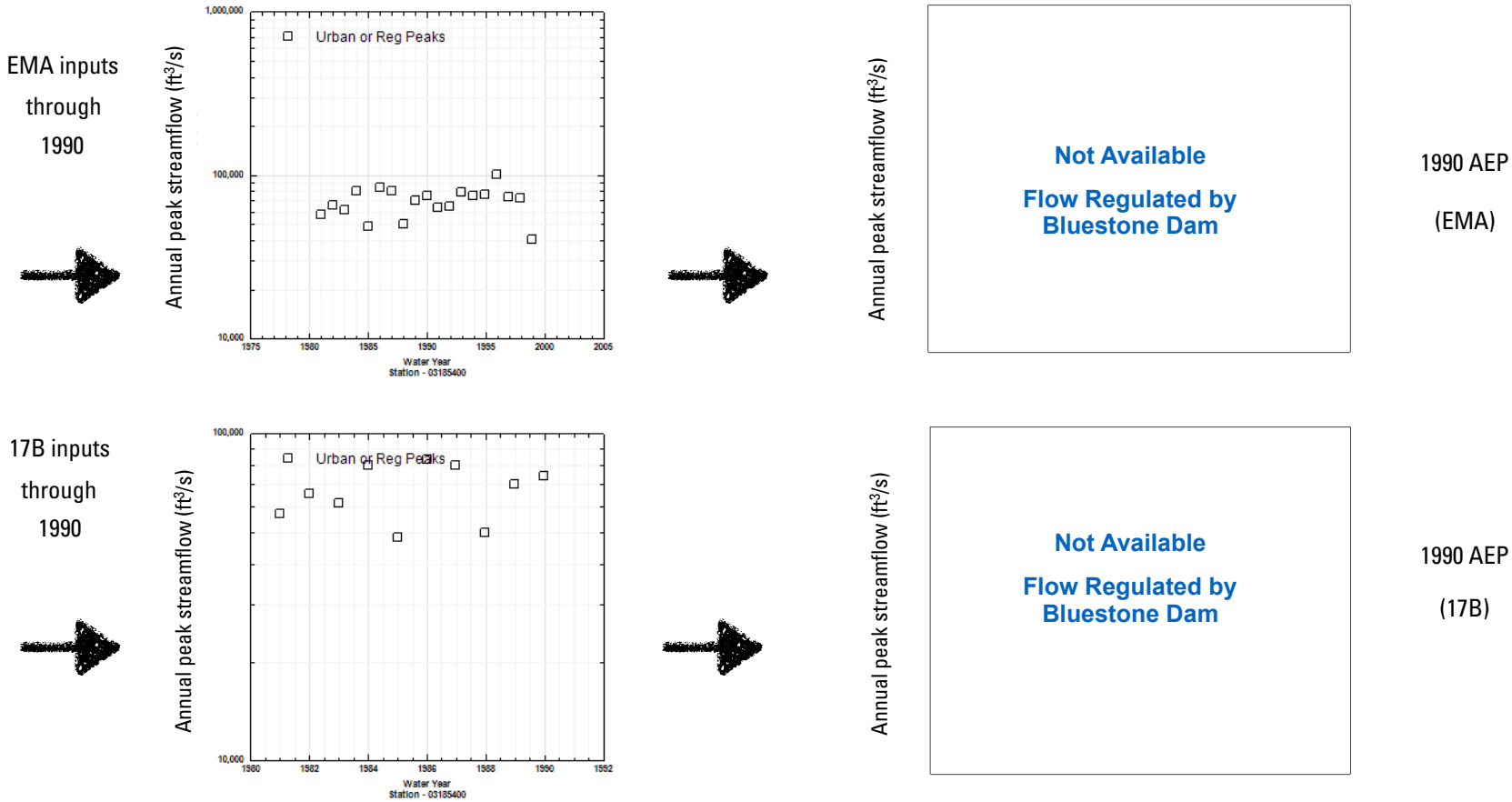


Figure 2-15. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03185400 New River at Thurmond, West Virginia, for the period of record through 1990.

03186500 Williams River at Dyer, West Virginia.

EXPLANATION: June 2016 Flood Peak: 32,300 ft^3/s; annual exceedance probability (AEP) 0.0113

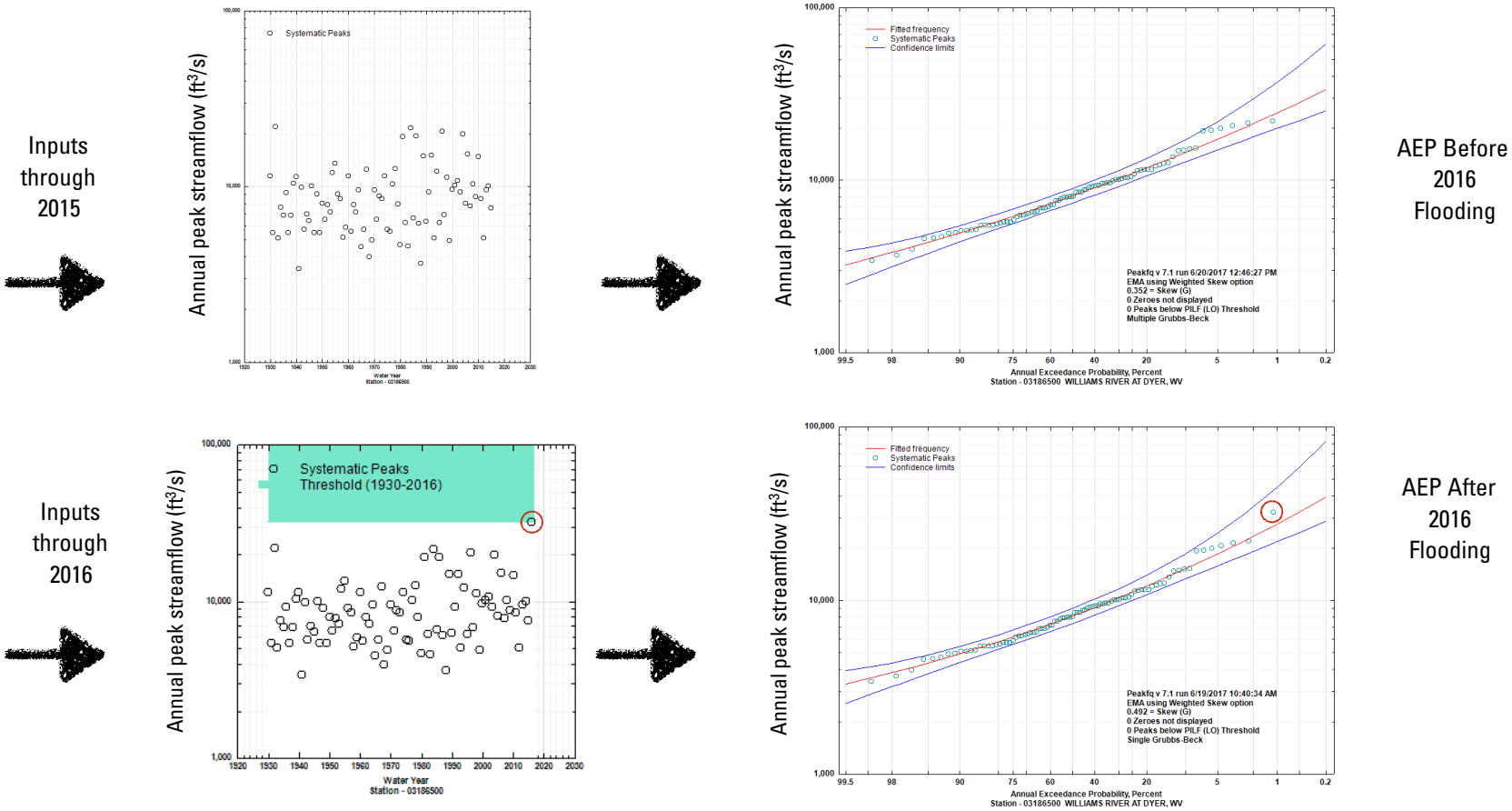
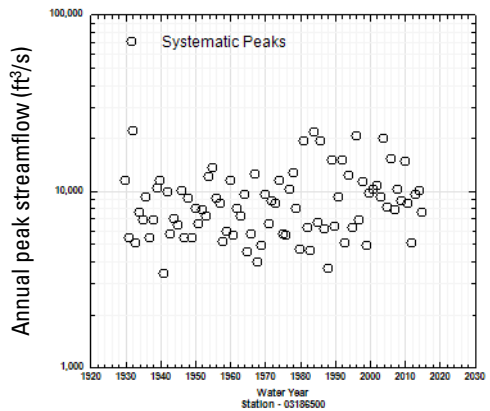


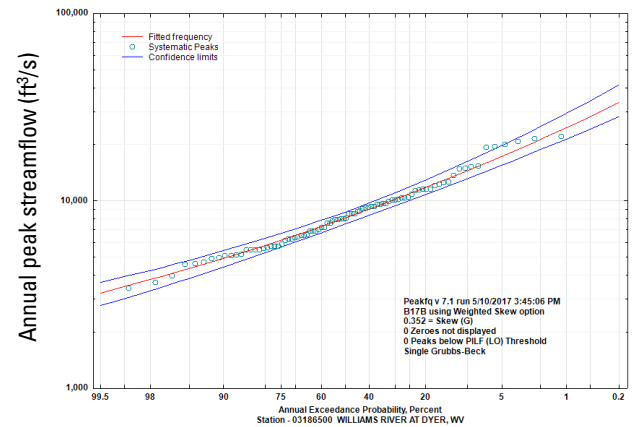
Figure 2-16. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03186500 Williams River at Dyer, West Virginia, for the period of record through 2015 and 2016.

03186500 Williams River at Dyer, West Virginia.

EXPLANATION: June 2016 Flood Peak: 32,300 ft^3/s; a annual exceedance probability (AEP) 0.0114

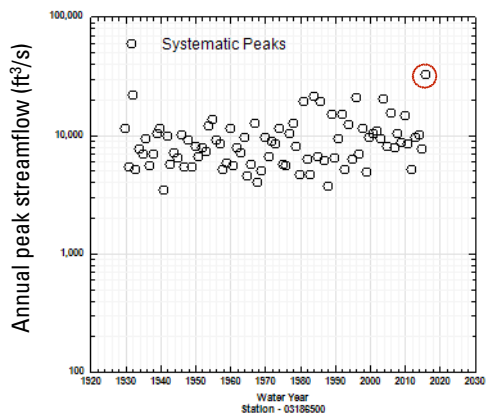
Inputs through 2015

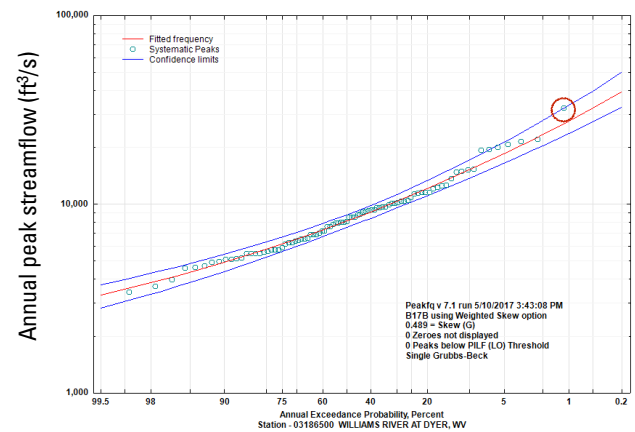




AEP Before 2016 Flooding

Inputs through 2016





AEP After 2016 Flooding

Figure 2-17. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03186500 Williams River at Dyer, West Virginia, for the period of record through 2015 and 2016.

03186500 Williams River at Dyer, West Virginia.

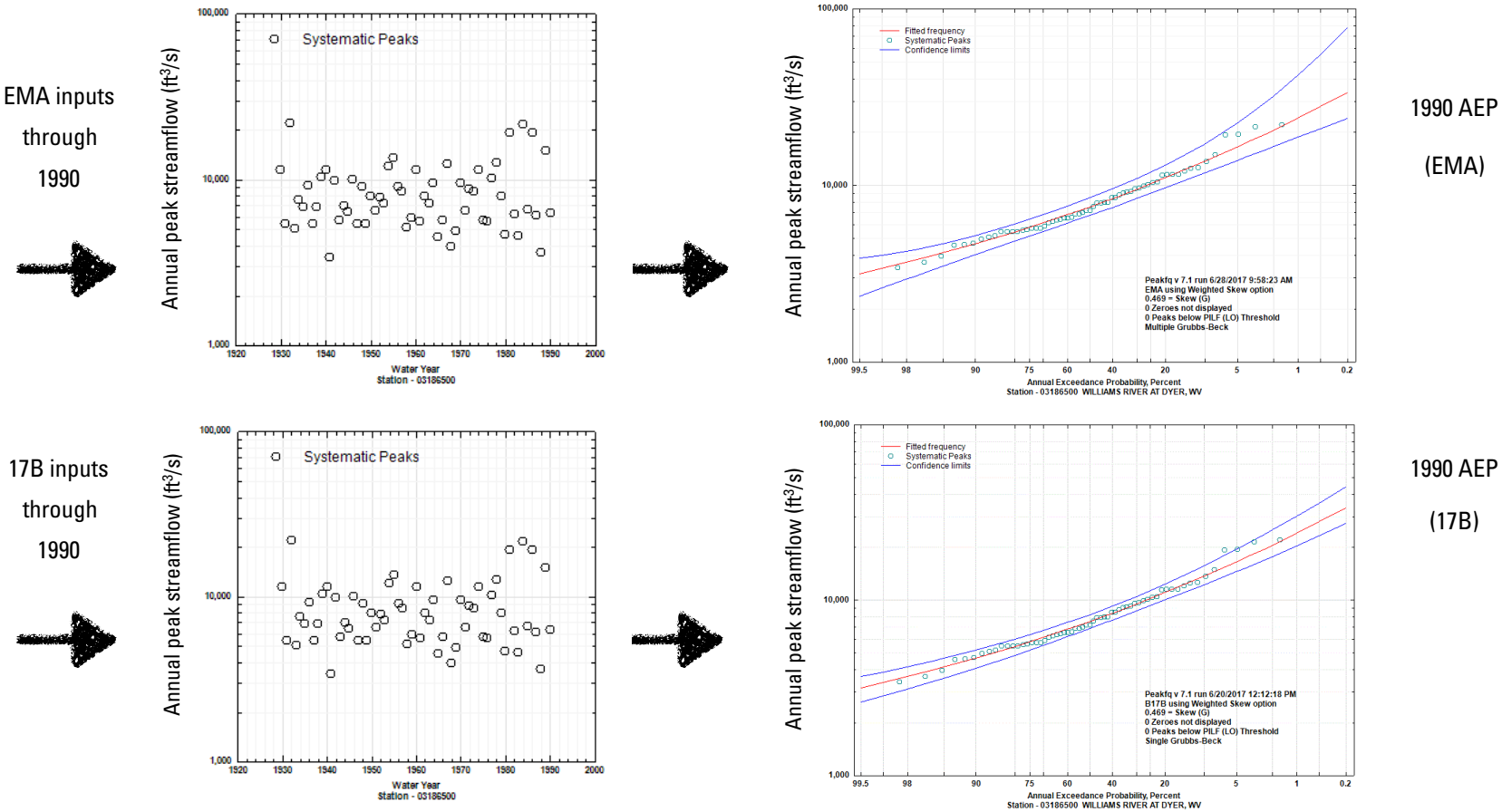
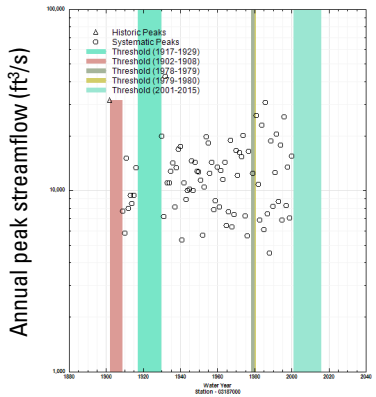


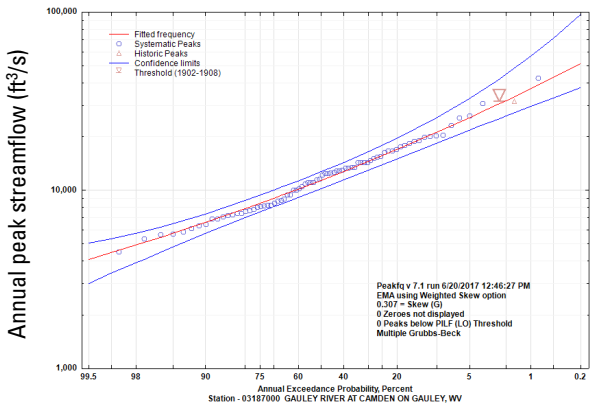
Figure 2-18. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03186500 Williams River at Dyer, West Virginia, for the period of record through 1990.

03187000 Gauley River at Camden-on-Gauley, West Virginia.

EXPLANATION: June 2016 Flood Peak: 37,600 ft^3/s; a annual exceedance probability (AEP) 0.0176

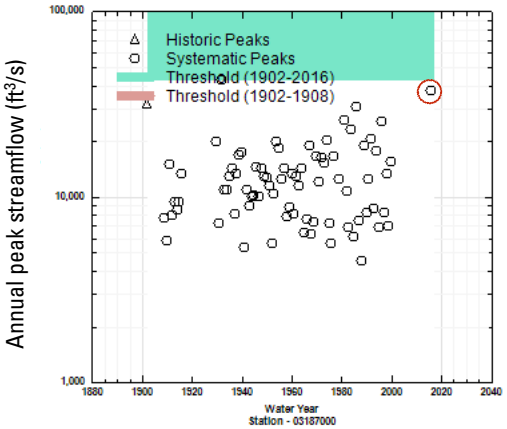
Inputs through 2015

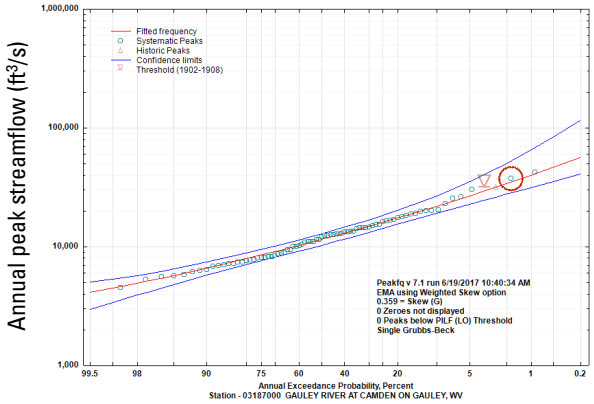




AEP Before 2016 Flooding

Inputs through 2016





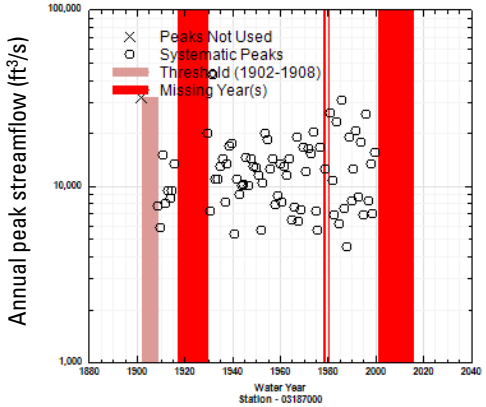
AEP After 2016 Flooding

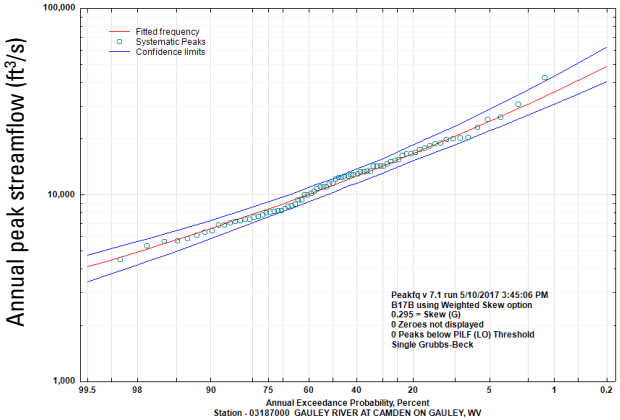
Figure 2-19. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03187000 Gauley River at Camden-on-Gauley, West Virginia, for the period of record through 2015 and 2016.

03187000 Gauley River at Camden-on-Gauley, West Virginia.

EXPLANATION: June 2016 Flood Peak: 37,600 ft³/s; annual exceedance probability (AEP) 0.0253

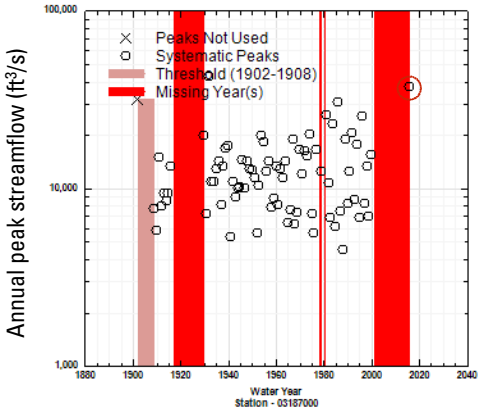
Inputs through 2015

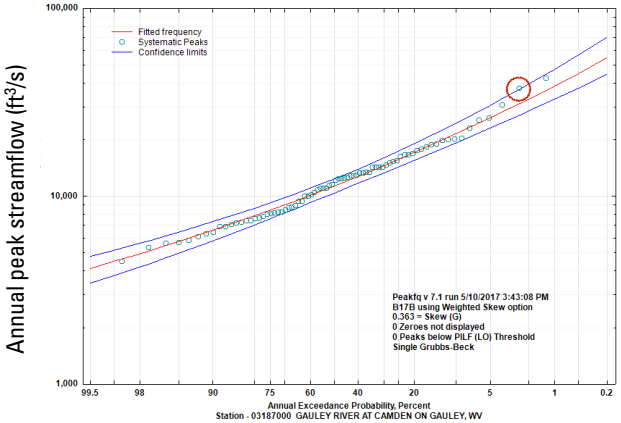




AEP Before 2016 Flooding

Inputs through 2016



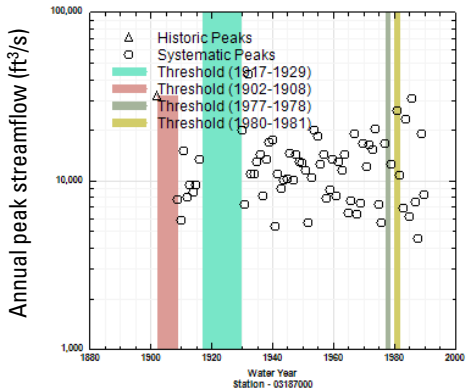


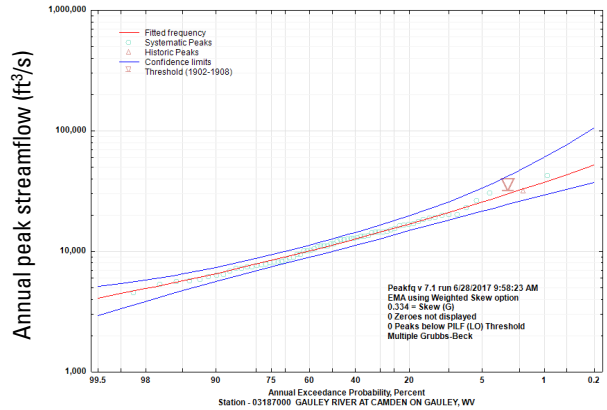
AEP After 2016 Flooding

Figure 2-20. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03187000 Gauley River at Camden-on-Gauley, West Virginia, for the period of record through 2015 and 2016.

03187000 Gauley River at Camden-on-Gauley, West Virginia.

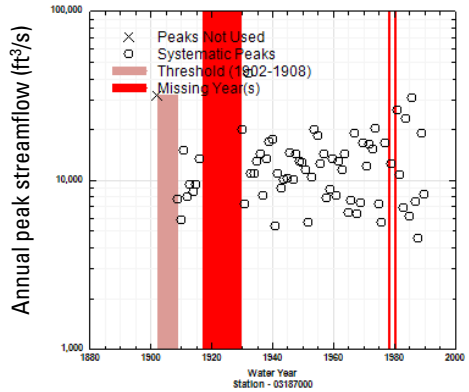
EMA inputs through 1990

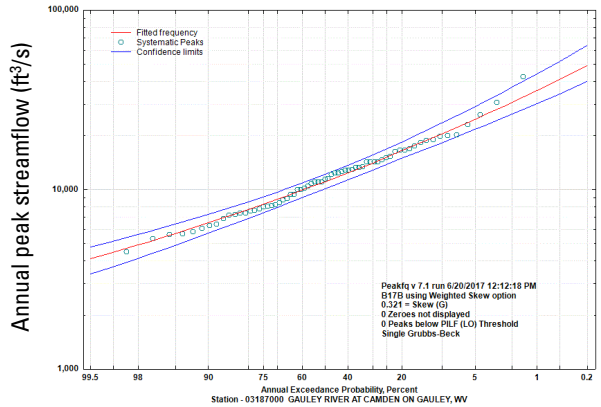




1990 AEP (EMA)

17B inputs through 1990





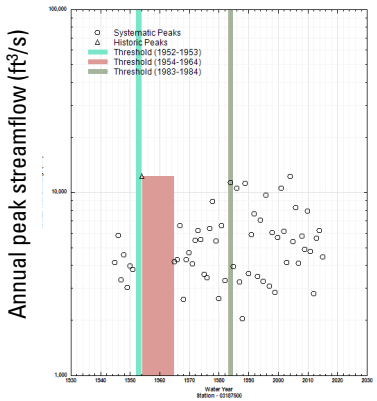
1990 AEP (17B)

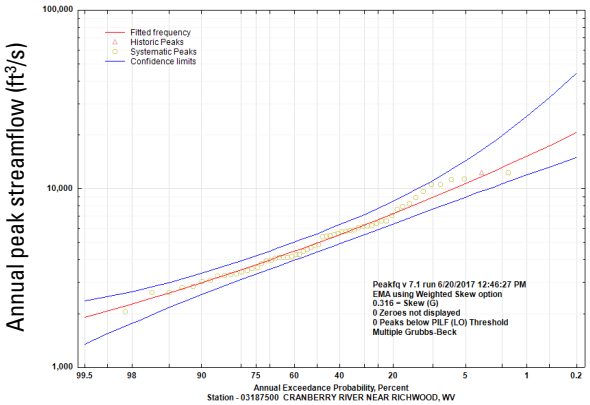
Figure 2-21. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03187000 Gauley River at Camden-on-Gauley, West Virginia, for the period of record through 1990.

03187500 Cranberry River near Richwood, West Virginia.

EXPLANATION: June 2016 Flood Peak: 10,700 ft^3/s; annual exceedance probability (AEP) 0.0791

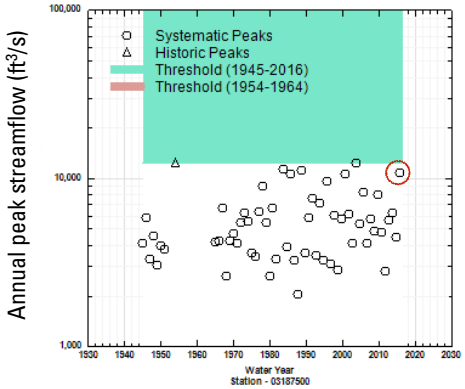
Inputs through 2015

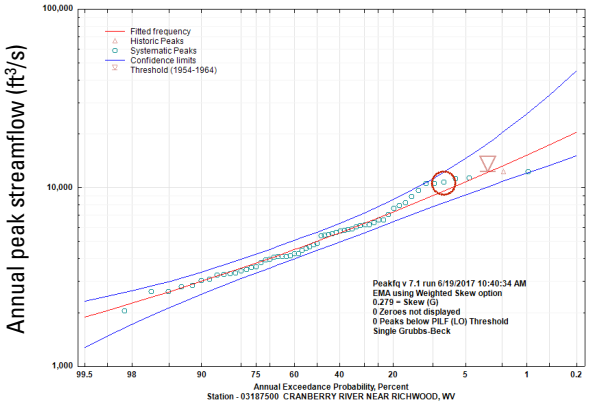




AEP Before 2016 Flooding

Inputs through 2016





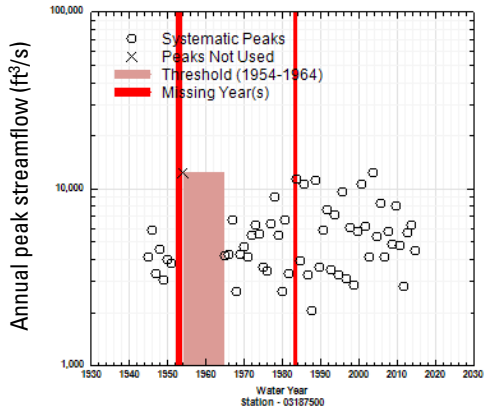
AEP After 2016 Flooding

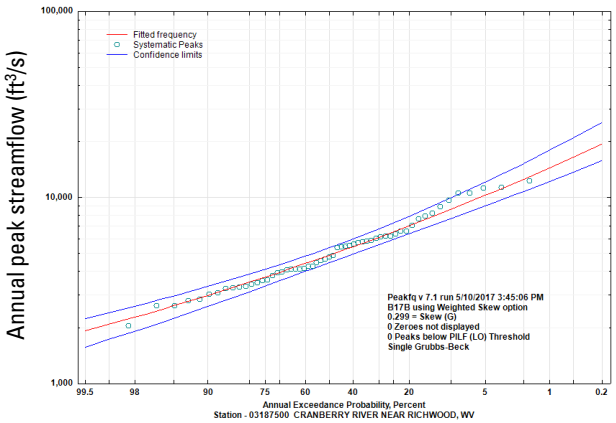
Figure 2-22. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03187500 Cranberry River near Richwood, West Virginia, for the period of record through 2015 and 2016.

03187500 Cranberry River near Richwood, West Virginia.

EXPLANATION: June 2016 Flood Peak: 10,700 ft^3/s; annual exceedance probability (AEP) 0.0678

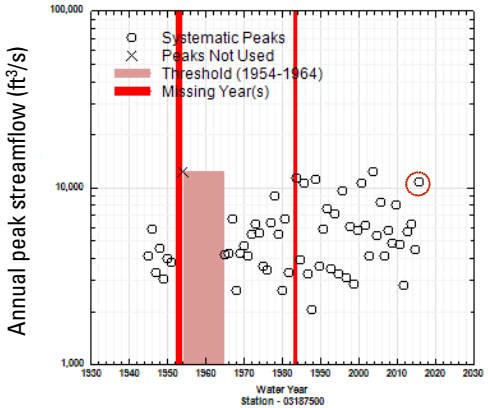
Inputs through 2015

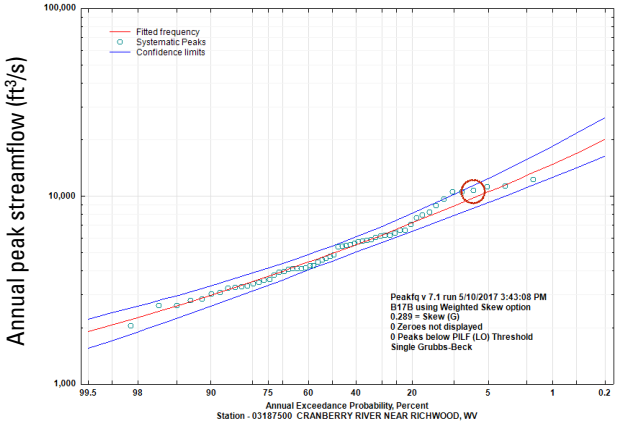




AEP Before 2016 Flooding

Inputs through 2016



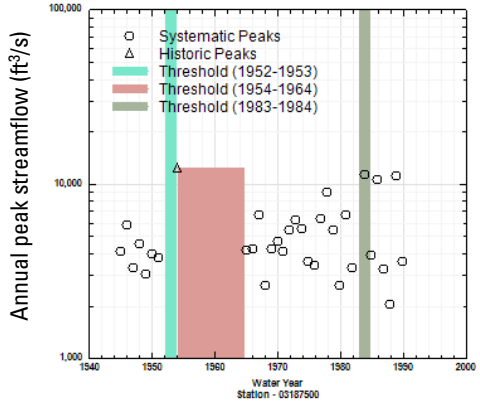


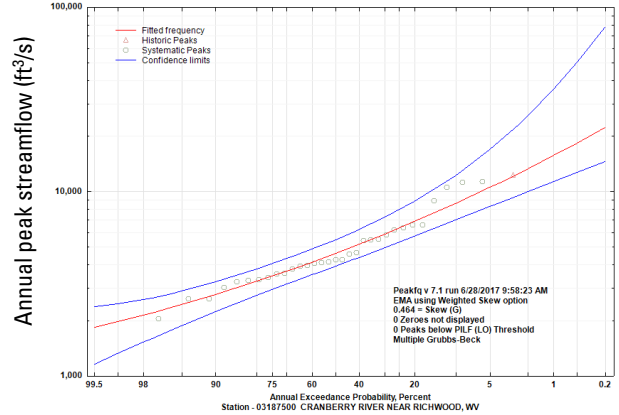
AEP After 2016 Flooding

Figure 2-23. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03187500 Cranberry River near Richwood, West Virginia, for the period of record through 2015 and 2016.

03187500 Cranberry River near Richwood, West Virginia.

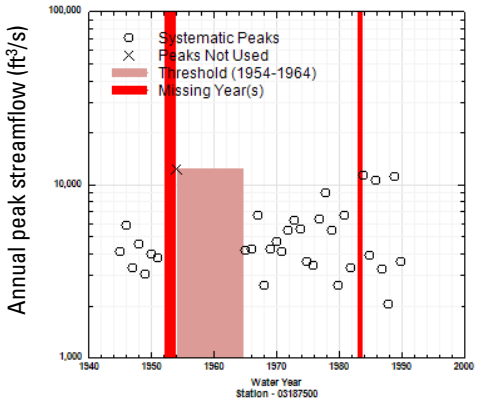
EMA inputs through 1990

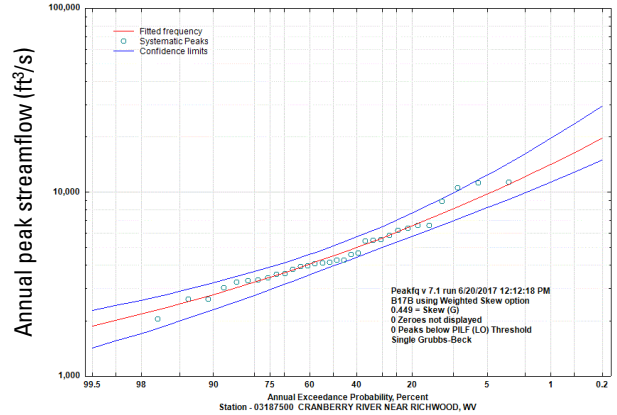




1990 AEP (EMA)

17B inputs through 1990





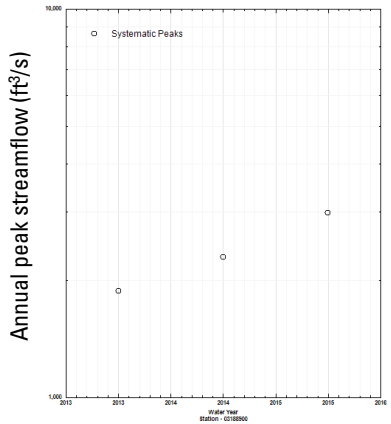
1990 AEP (17B)

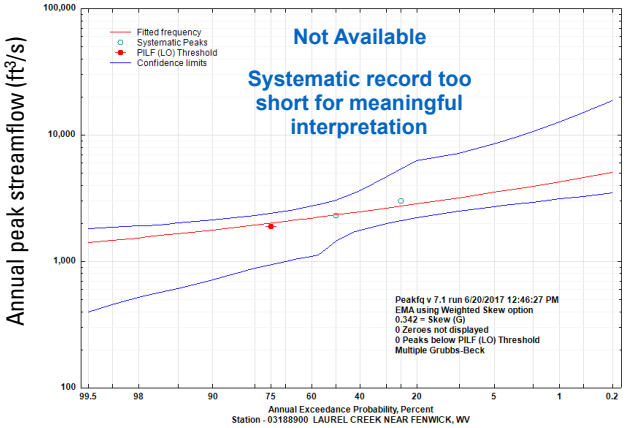
Figure 2-24. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03187500 Cranberry River near Richwood, West Virginia, for the period of record through 1990.

03188900 Laurel Creek near Fenwick, West Virginia.

EXPLANATION: June 2016 Flood Peak: 15,000 ft^3/s; annual exceedance probability (AEP) NA

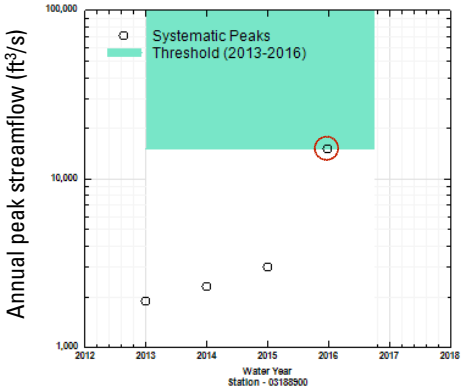
Inputs through 2015

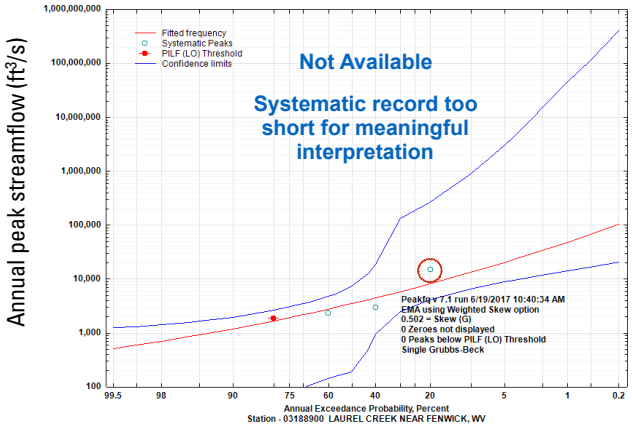




AEP Before 2016 Flooding

Inputs through 2016





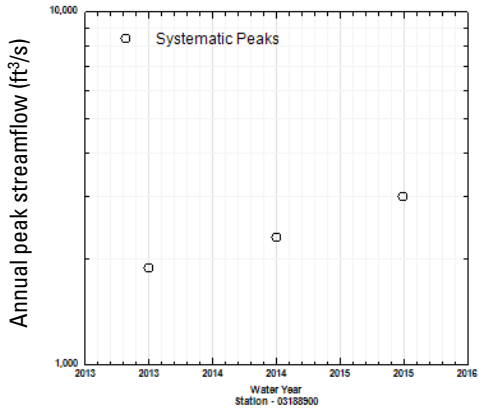
AEP After 2016 Flooding

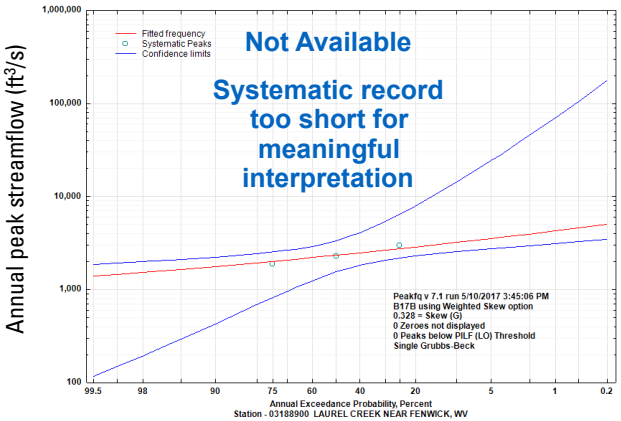
Figure 2-25. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03188900 Laurel Creek near Fenwick, West Virginia, for the period of record through 2015 and 2016.

03188900 Laurel Creek near Fenwick, West Virginia.

EXPLANATION: June 2016 Flood Peak: 15,000 ft^3/s; annual exceedance probability (AEP) NA

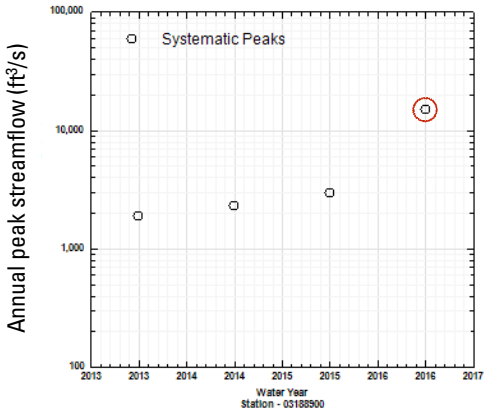
Inputs through 2015

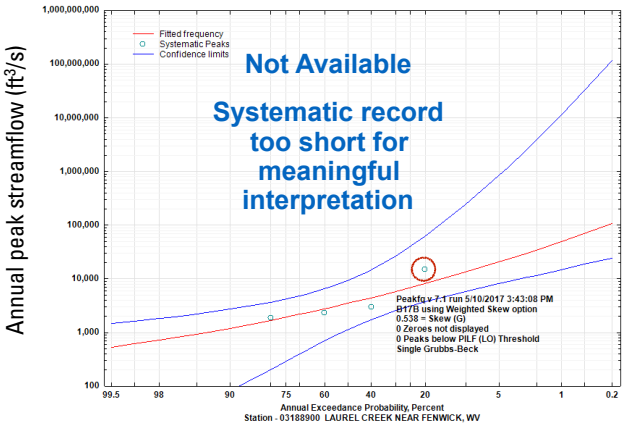




AEP Before 2016 Flooding

Inputs through 2016





AEP After 2016 Flooding

Figure 2-26. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03188900 Laurel Creek near Fenwick, West Virginia, for the period of record through 2015 and 2016.

03188900 Laurel Creek near Fenwick, West Virginia.

EMA inputs through 1990

Not Available

Not Available

1990 AEP (EMA)

17B inputs through 1990

Not Available

Not Available

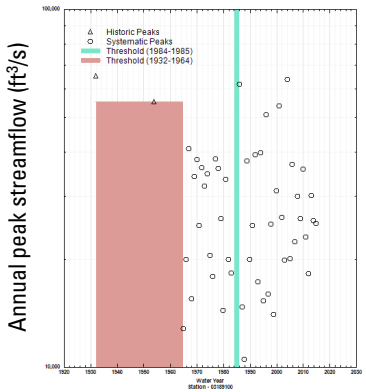
1990 AEP (17B)

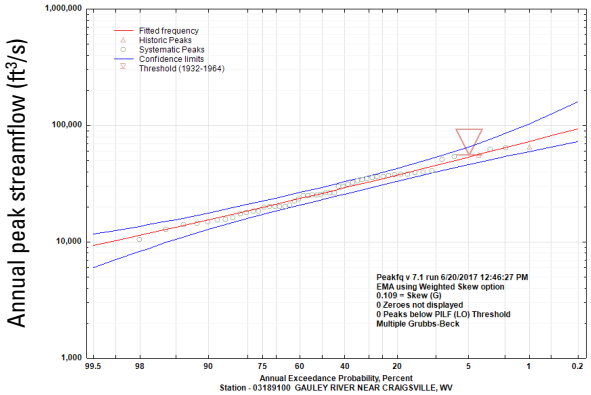
Figure 2-27. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03188900 Laurel Creek near Fenwick, West Virginia, for the period of record through 1990.

03189100 Gauley River near Craigsville, West Virginia.

EXPLANATION: June 2016 Flood Peak:80,000 ft^3/s; annual exceedance probability (AEP) 0.0100

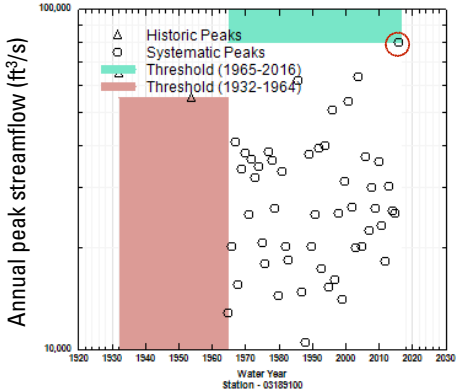
Inputs through 2015

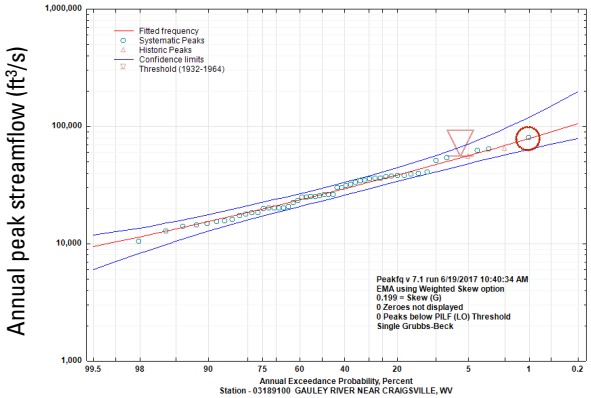




AEP Before 2016 Flooding

Inputs through 2016





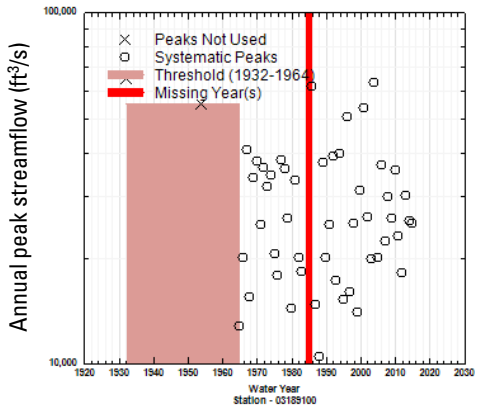
AEP After 2016 Flooding

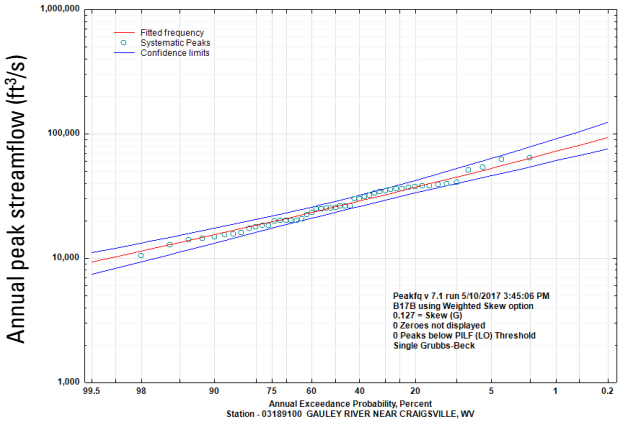
Figure 2-28. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03189100 Gauley River near Craigsville, West Virginia, for the period of record through 2015 and 2016.

03189100 Gauley River near Craigsville, West Virginia.

EXPLANATION: June 2016 Flood Peak:80,000 ft³/s; annual exceedance probability (AEP) 0.0196

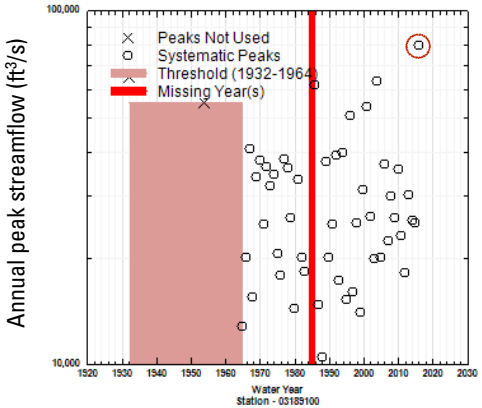
Inputs through 2015

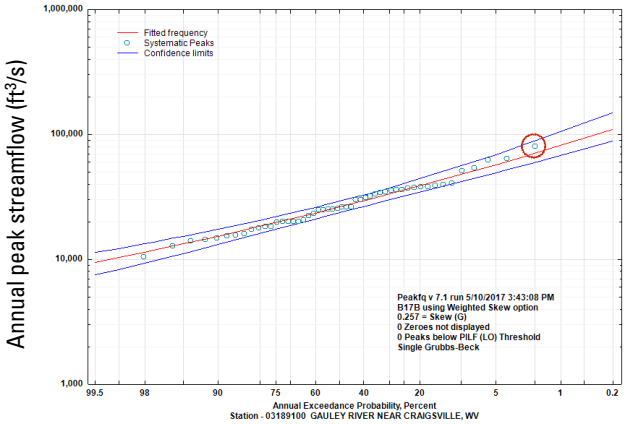




AEP Before 2016 Flooding

Inputs through 2016



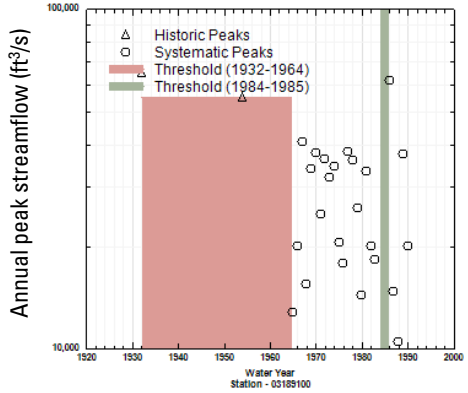


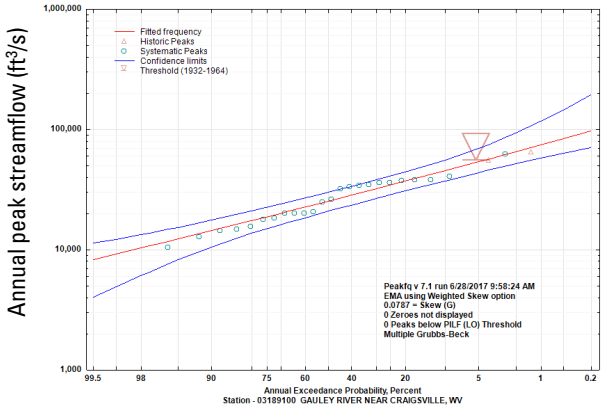
AEP After 2016 Flooding

Figure 2-29. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03189100 Gauley River near Craigsville, West Virginia, for the period of record through 2015 and 2016.

03189100 Gauley River near Craigsville, West Virginia.

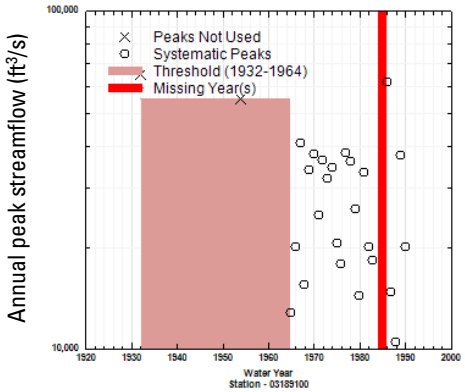
EMA inputs through 1990

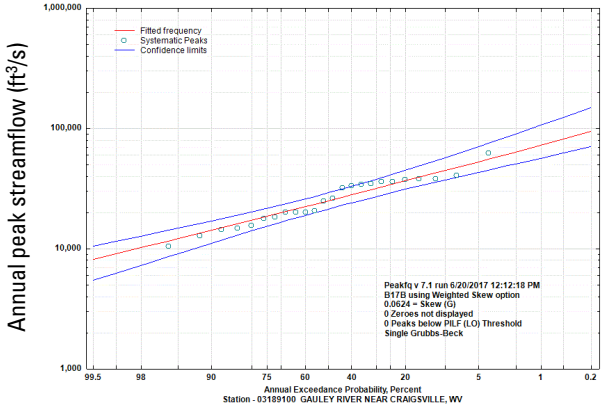




1990 AEP (EMA)

17B inputs through 1990





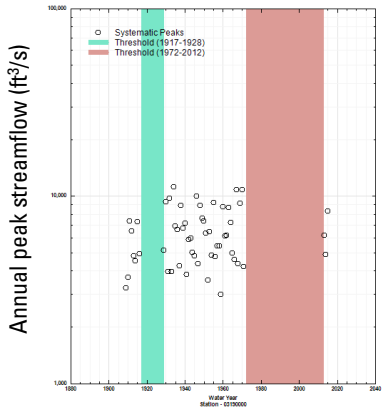
1990 AEP (17B)

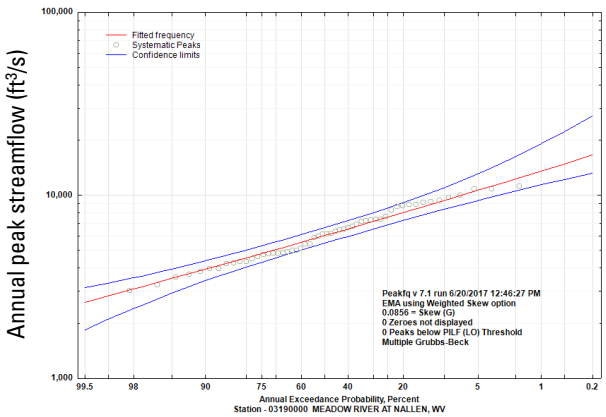
Figure 2-30. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03189100 Gauley River near Craigsville, West Virginia, for the period of record through 1990.

03190000 Meadow River at Nallen, West Virginia.

EXPLANATION: June 2016 Flood Peak: 39,300 ft^3/s; annual exceedance probability (AEP) 0.0178

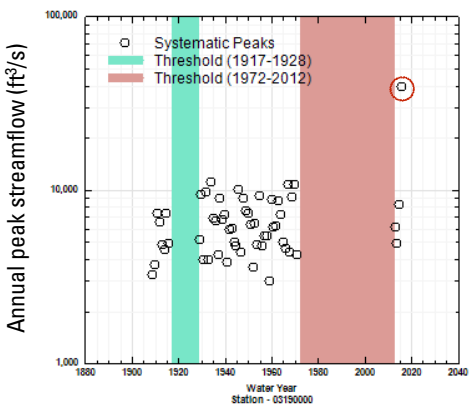
Inputs through 2015

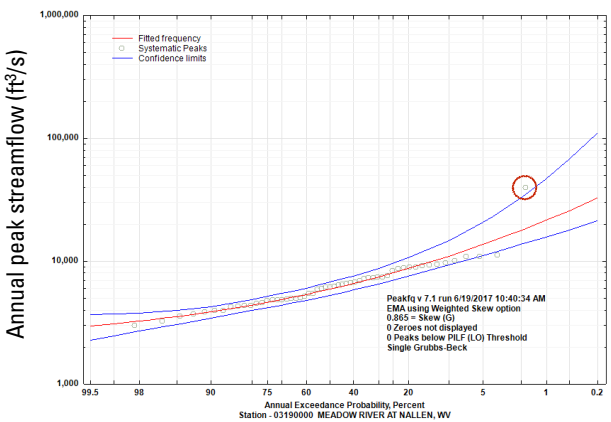




AEP Before 2016 Flooding

Inputs through 2016





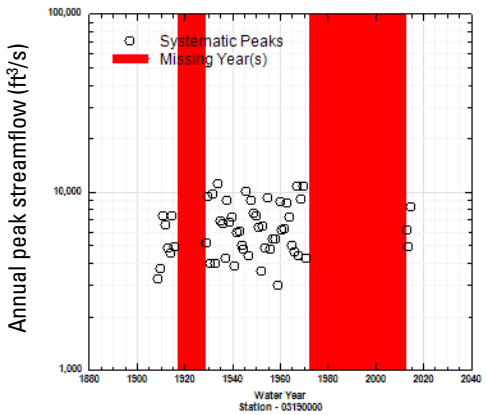
AEP After 2016 Flooding

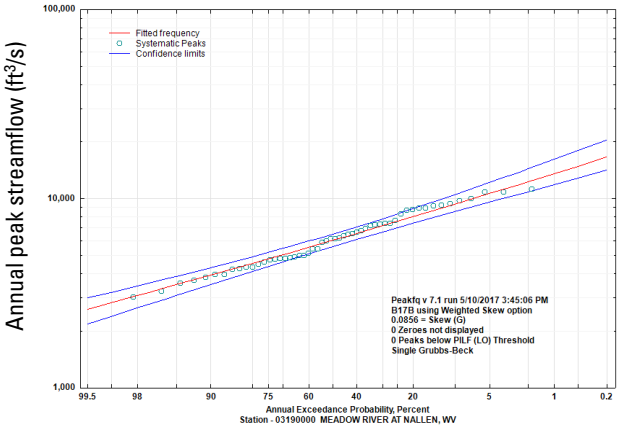
Figure 2-31. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03190000 Meadow River at Nallen, West Virginia, for the period of record through 2015 and 2016.

03190000 Meadow River at Nallen, West Virginia.

EXPLANATION: June 2016 Flood Peak: 39,300 ft^3/s; annual exceedance probability (AEP) 0.0179

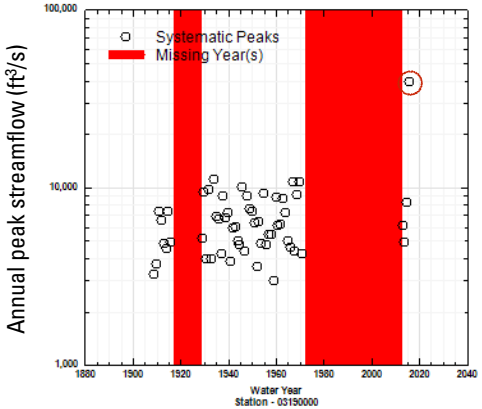
Inputs through 2015

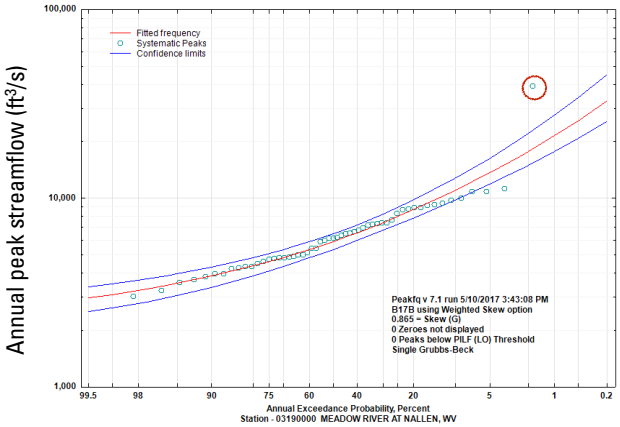




AEP Before 2016 Flooding

Inputs through 2016



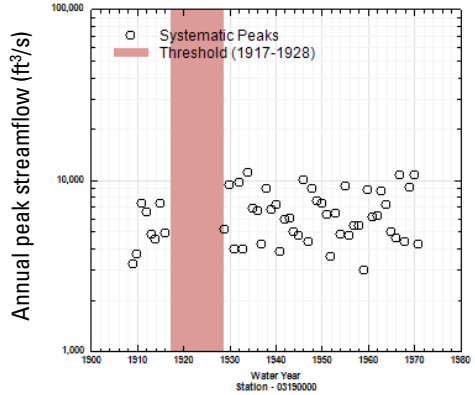


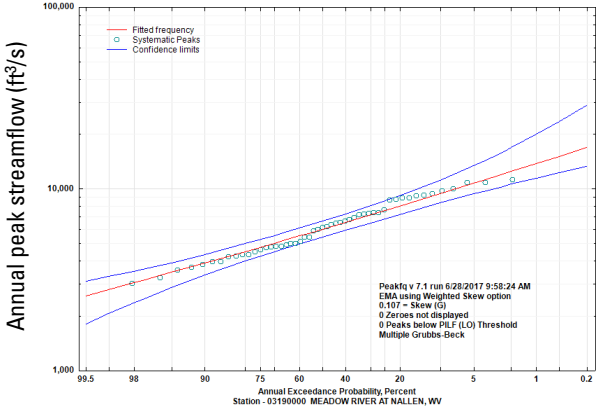
AEP After 2016 Flooding

Figure 2-32. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03190000 Meadow River at Nallen, West Virginia, for the period of record through 2015 and 2016.

03190000 Meadow River at Nallen, West Virginia.

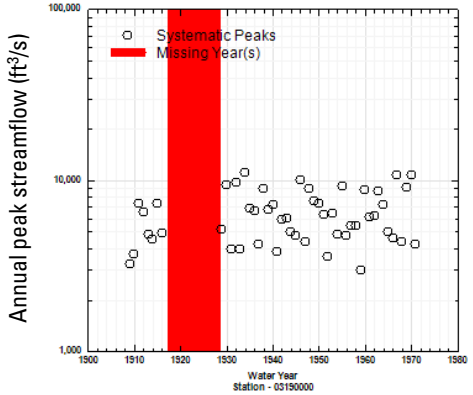
EMA inputs through 1990

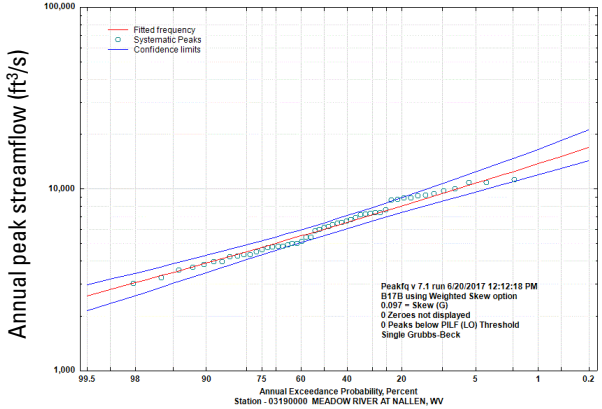




1990 AEP (EMA)

17B inputs through 1990





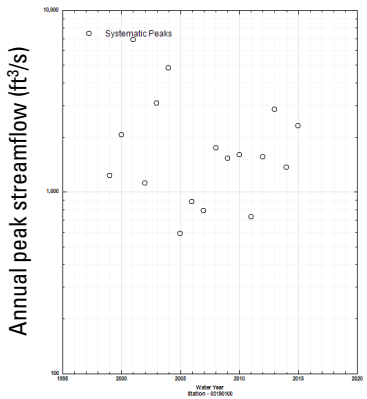
1990 AEP (17B)

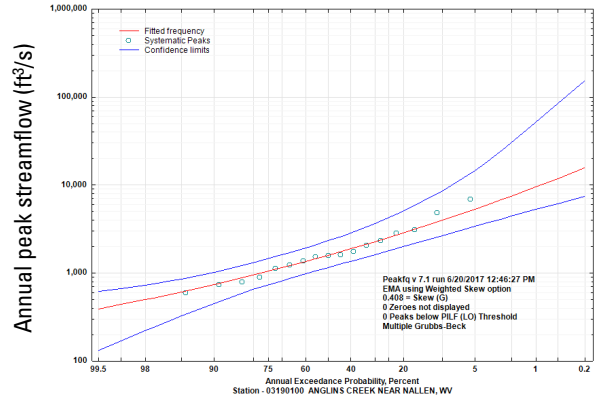
Figure 2-33. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03190000 Meadow River at Nallen, West Virginia, for the period of record through 1990.

03190100 Anglins Creek near Nallen, West Virginia.

EXPLANATION: June 2016 Flood Peak: 10,200 ft^3/s; annual exceedance probability (AEP) 0.0524

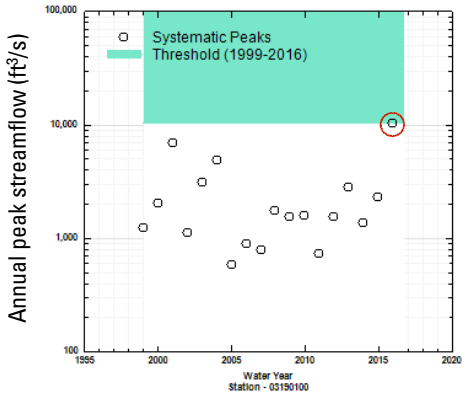
Inputs through 2015

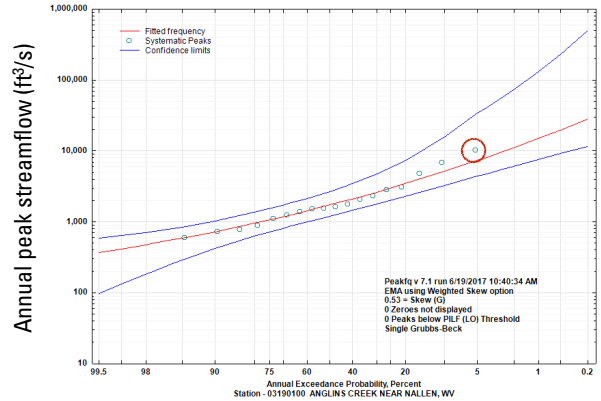




AEP Before 2016 Flooding

Inputs through 2016





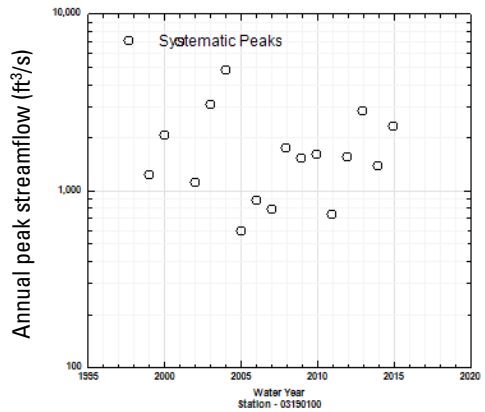
AEP After 2016 Flooding

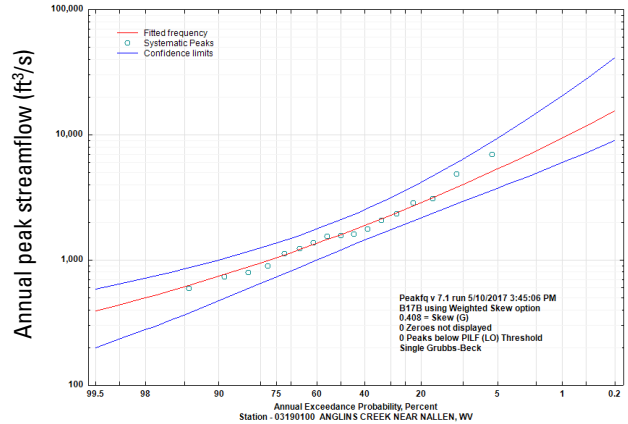
Figure 2-34. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03190100 Anglins Creek near Nallen, West Virginia, for the period of record through 2015 and 2016.

03190100 Anglins Creek near Nallen, West Virginia.

EXPLANATION: June 2016 Flood Peak: 10,200 ft^3/s; annual exceedance probability (AEP) 0.0526

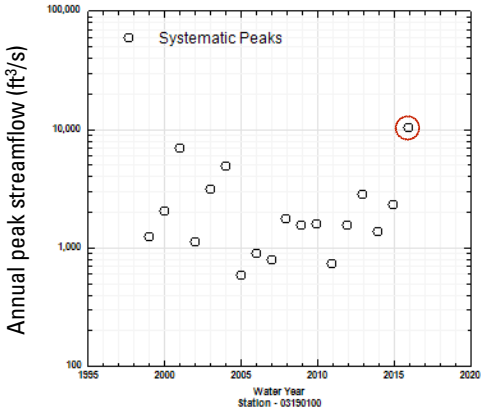
Inputs through 2015

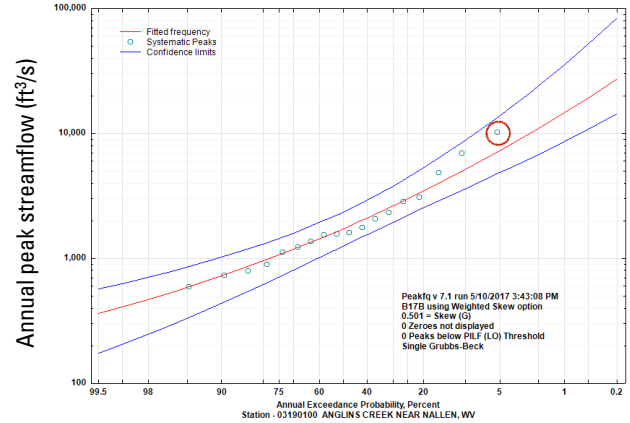




AEP Before 2016 Flooding

Inputs through 2016





AEP After 2016 Flooding

Figure 2-35. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03190100 Anglins Creek near Nallen, West Virginia, for the period of record through 2015 and 2016.

03190100 Anglins Creek near Nallen, West Virginia.

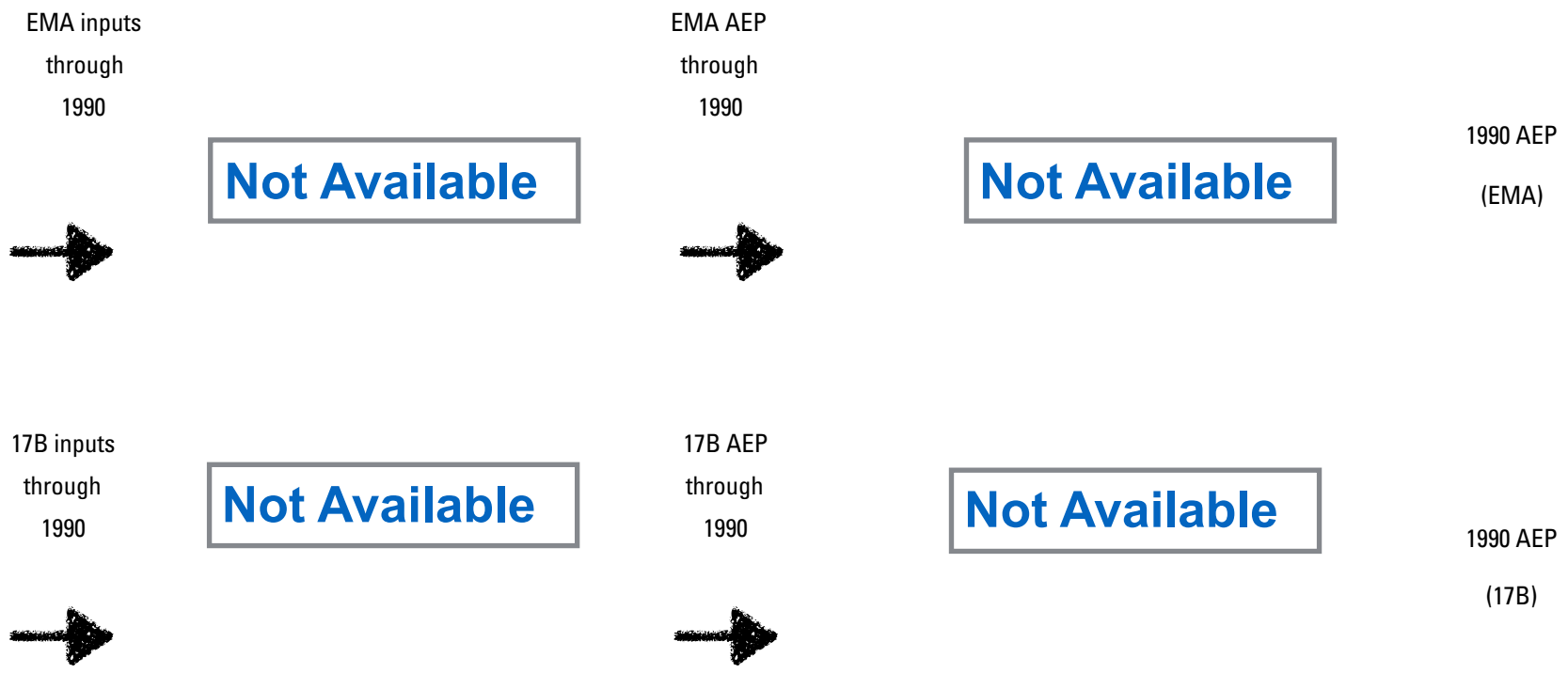
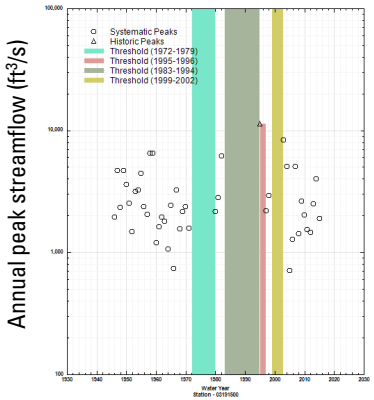


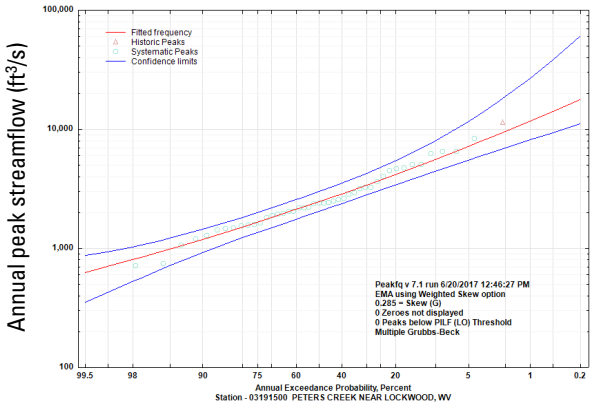
Figure 2-36. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03190100 Anglins Creek near Nallen, West Virginia, for the period of record through 1990.

03191500 Peters Creek near Lockwood, West Virginia.

EXPLANATION: June 2016 Flood Peak: 7,570 ft^3/s; annual exceedance probability (AEP) 0.0637

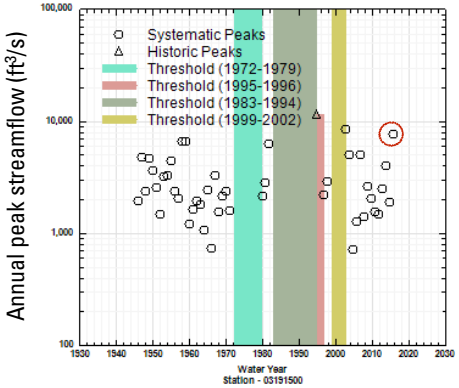
Inputs through 2015

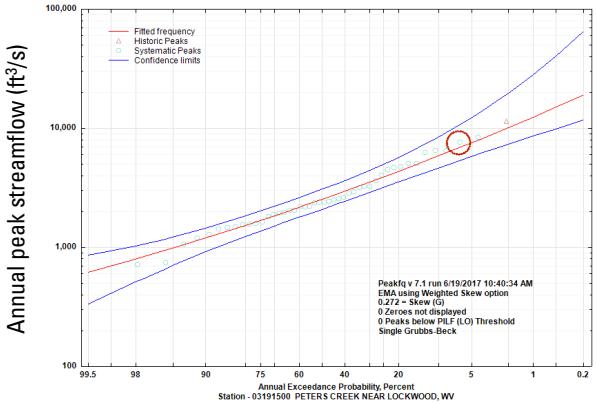




AEP Before 2016 Flooding

Inputs through 2016





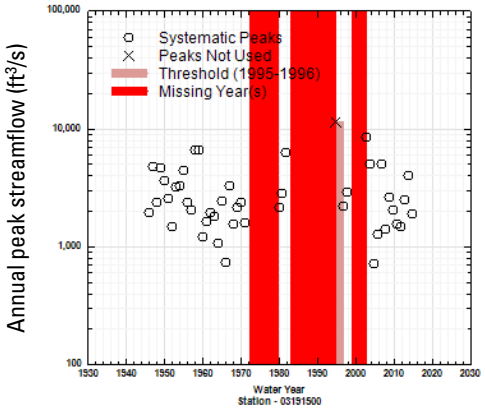
AEP After 2016 Flooding

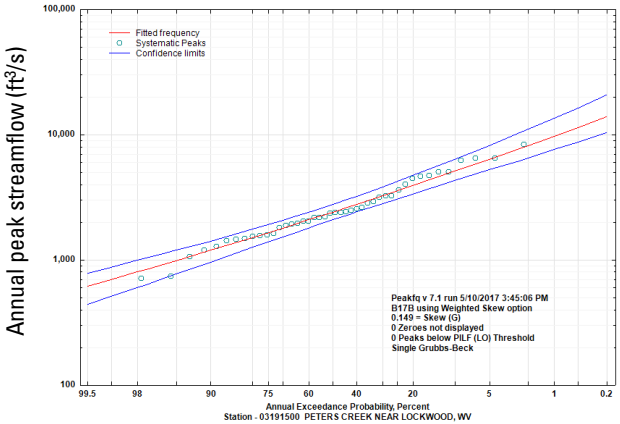
Figure 2-37. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03191500 Peters Creek near Lockwood, West Virginia, for the period of record through 2015 and 2016.

03191500 Peters Creek near Lockwood, West Virginia.

EXPLANATION: June 2016 Flood Peak: 7,570 ft³/s; annual exceedance probability (AEP) 0.0435

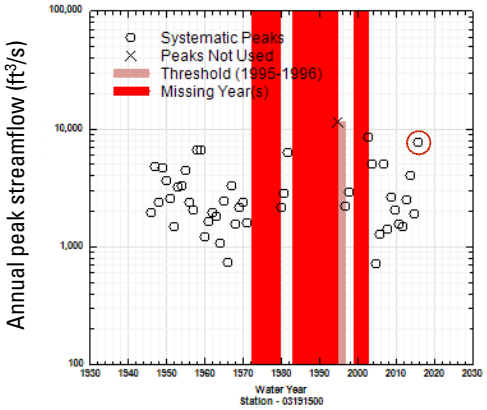
Inputs through 2015

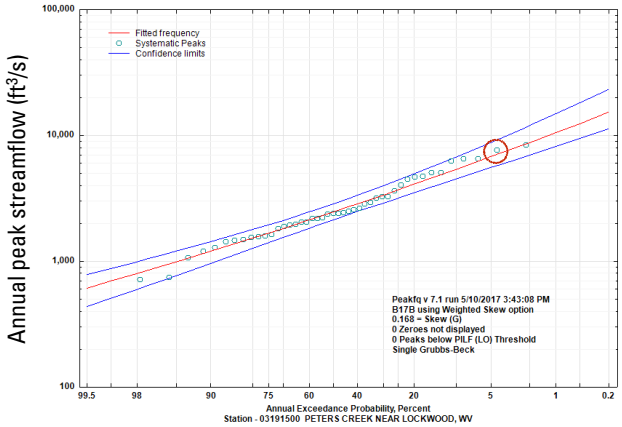




AEP Before 2016 Flooding

Inputs through 2016



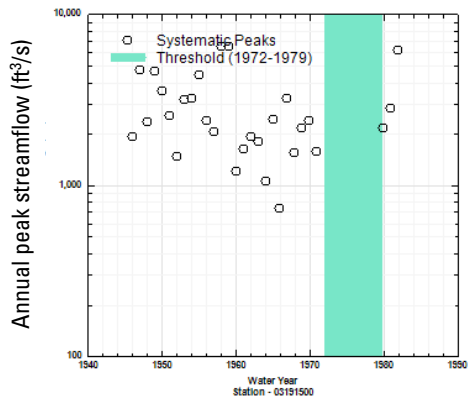


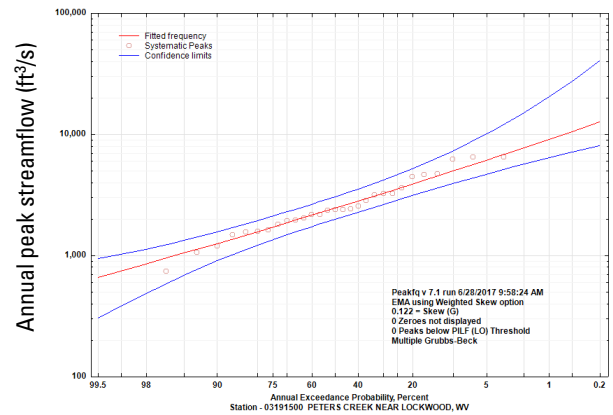
AEP After 2016 Flooding

Figure 2-38. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03191500 Peters Creek near Lockwood, West Virginia, for the period of record through 2015 and 2016.

03191500 Peters Creek near Lockwood, West Virginia.

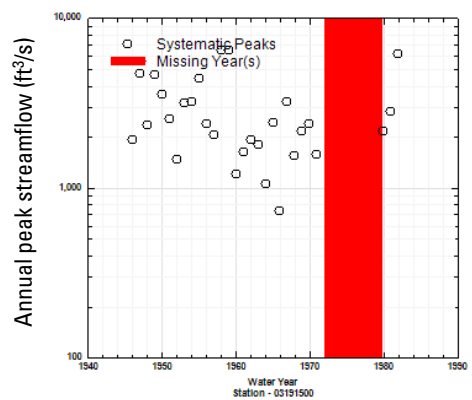
EMA inputs through 1990

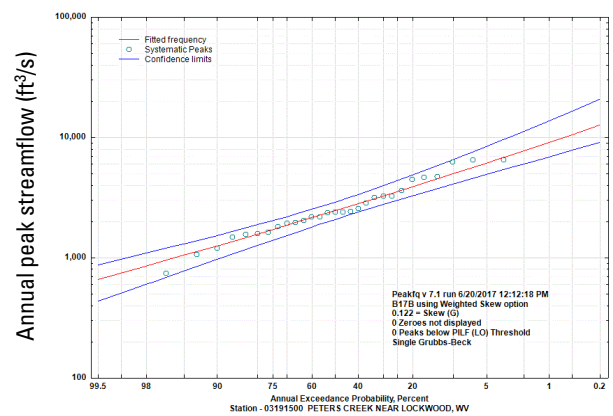




1990 AEP (EMA)

17B inputs through 1990





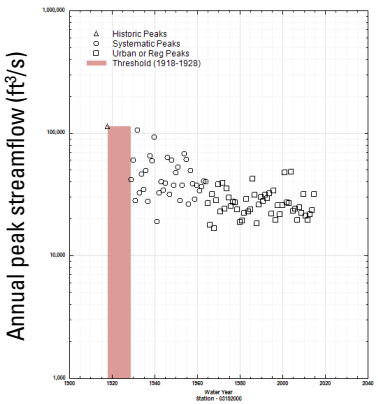
1990 AEP (17B)

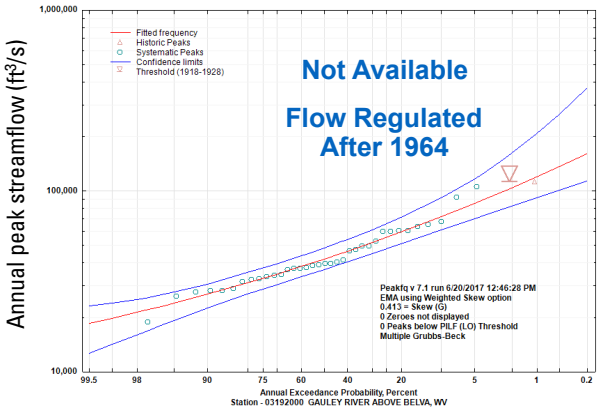
Figure 2-39. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03191500 Peters Creek near Lockwood, West Virginia, for the period of record through 1990.

03192000 Gauley River above Belva, West Virginia.

EXPLANATION: June 2016 Flood Peak: 80,900 ft^3/s; annual exceedance probability (AEP) NA

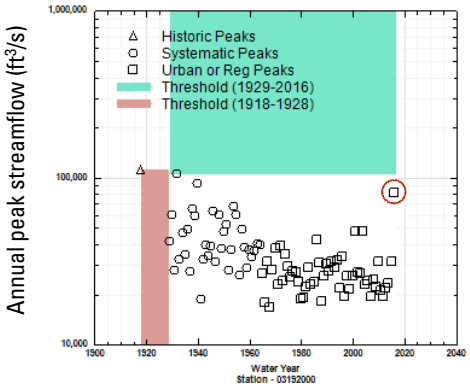
Inputs through 2015

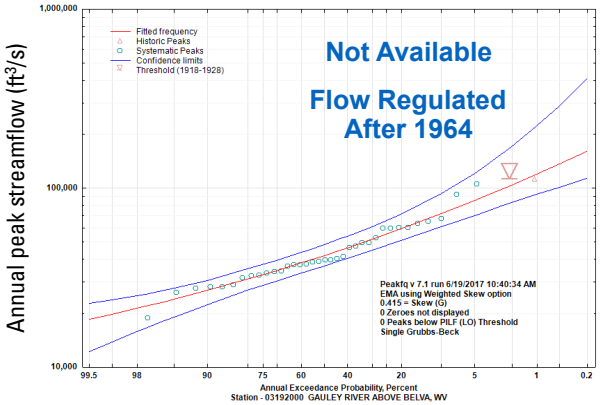




AEP Before 2016 Flooding

Inputs through 2016





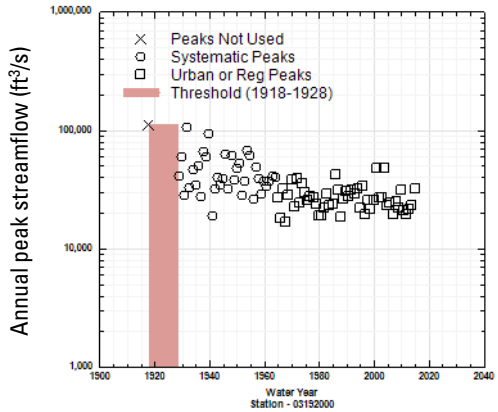
AEP After 2016 Flooding

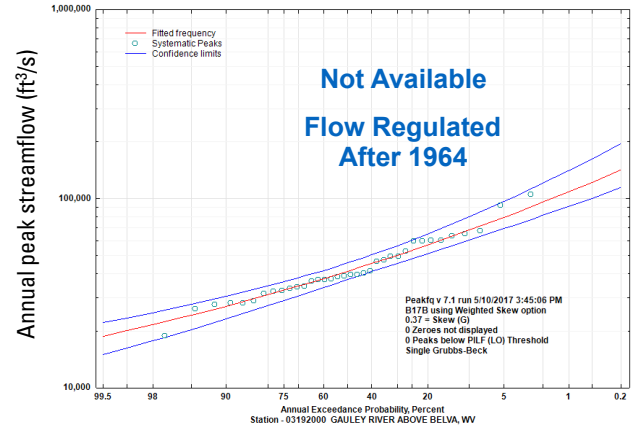
Figure 2-40. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03192000 Gauley River above Belva, West Virginia, for the period of record through 2015 and 2016.

03192000 Gauley River above Belva, West Virginia.

EXPLANATION: June 2016 Flood Peak: 80,900 ft^3/s; annual exceedance probability (AEP) NA

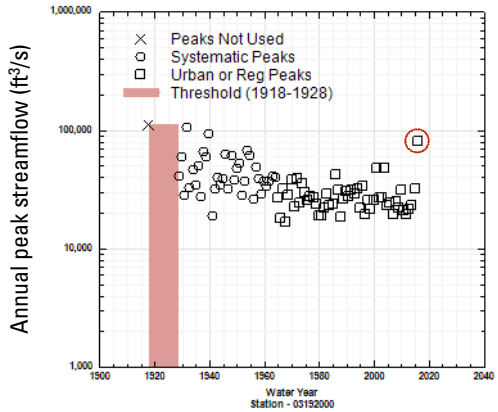
Inputs through 2015

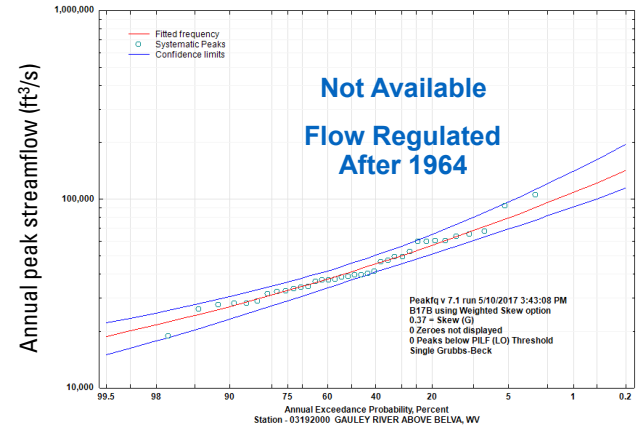




AEP Before 2016 Flooding

Inputs through 2016



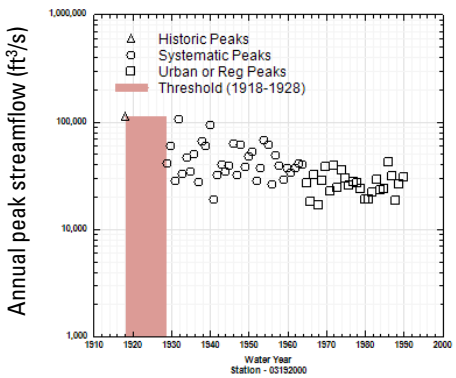


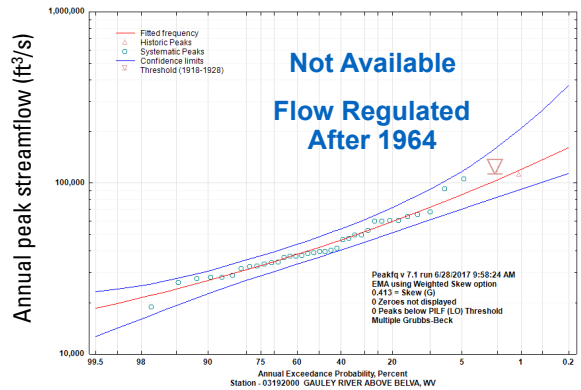
AEP After 2016 Flooding

Figure 2-41. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03192000 Gauley River above Belva, West Virginia, for the period of record through 2015 and 2016.

03192000 Gauley River above Belva, West Virginia.

EMA inputs through 1990

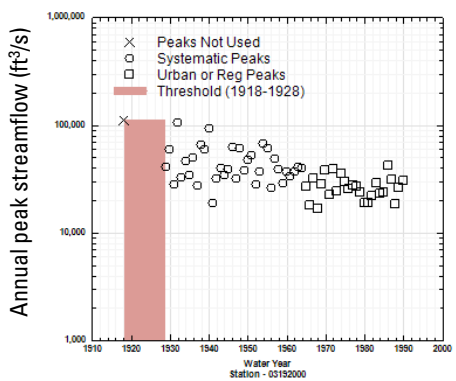


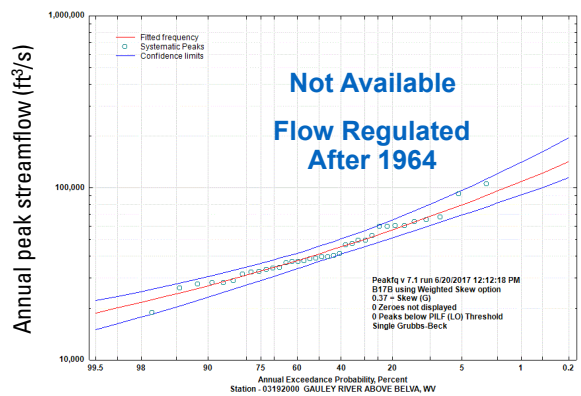


1990 AEP

(EMA)

17B inputs through 1990





1990 AEP

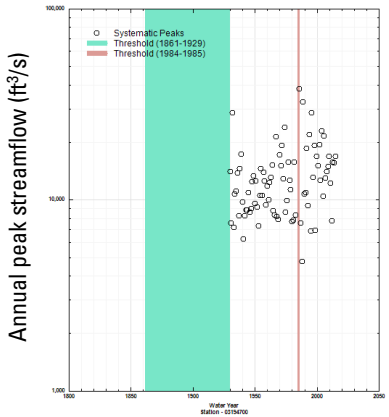
(17B)

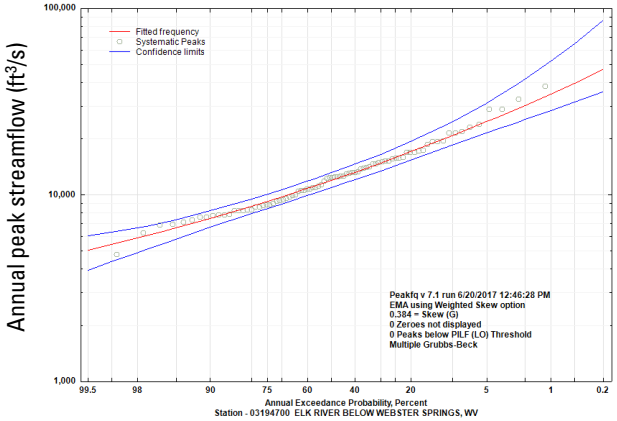
Figure 2-42. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03192000 Gauley River above Belva, West Virginia, for the period of record through 1990.

03194700 Elk River below Webster Springs, West Virginia.

EXPLANATION: June 2016 Flood Peak: 34,600 ft^3/s; annual exceedance probability (AEP) 0.0232

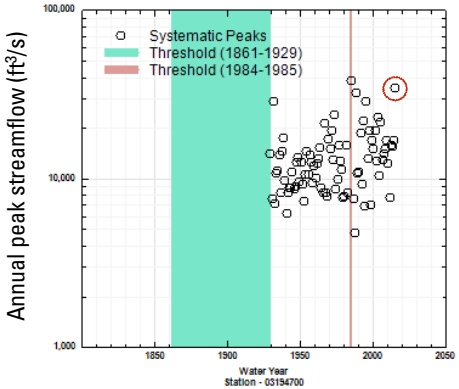
Inputs through 2015

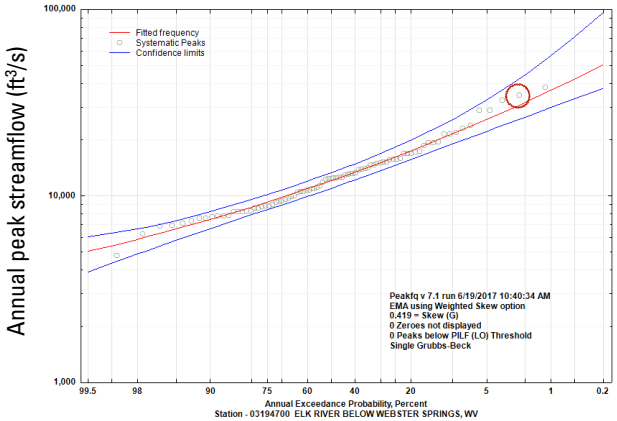




AEP Before 2016 Flooding

Inputs through 2016





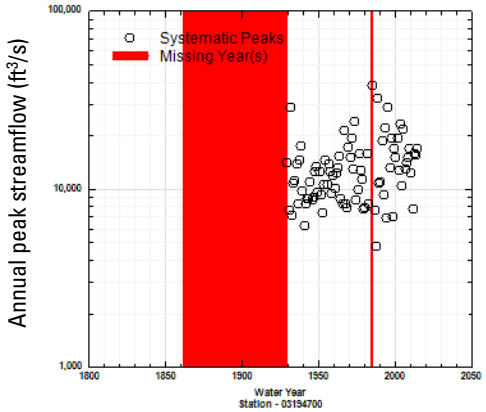
AEP After 2016 Flooding

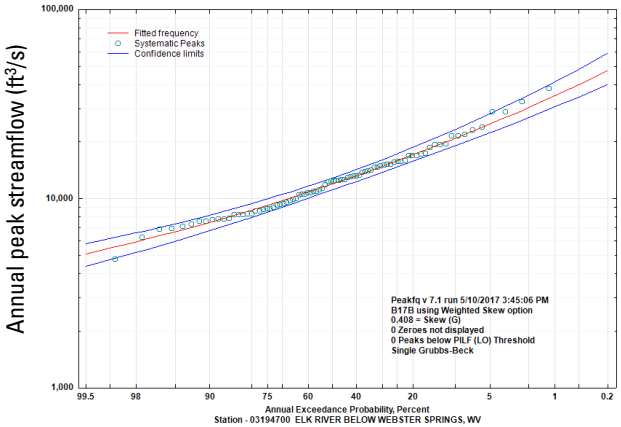
Figure 2-43. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03194700 Elk River below Webster Springs, West Virginia, for the period of record through 2015 and 2016.

03194700 Elk River below Webster Springs, West Virginia.

EXPLANATION: June 2016 Flood Peak: 34,600 ft^3/s; annual exceedance probability (AEP) 0.0233

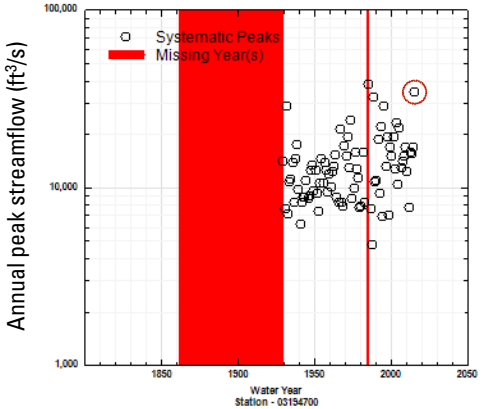
Inputs through 2015

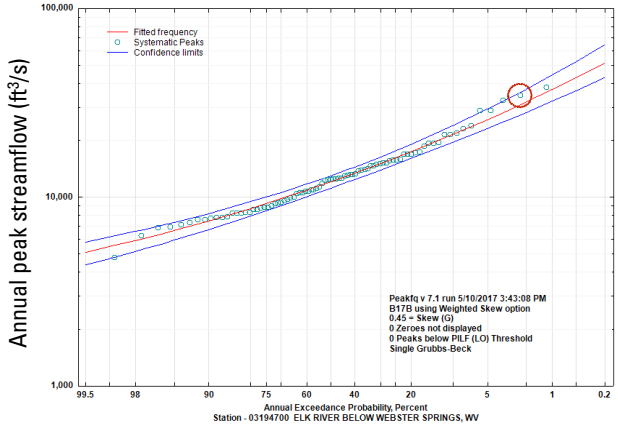




AEP Before 2016 Flooding

Inputs through 2016



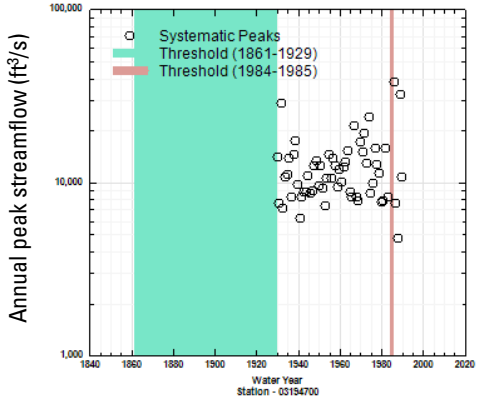


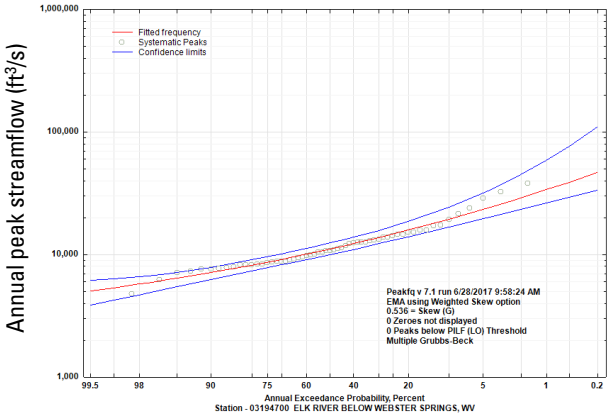
AEP After 2016 Flooding

Figure 2-44. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03194700 Elk River below Webster Springs, West Virginia, for the period of record through 2015 and 2016.

03194700 Elk River below Webster Springs, West Virginia.

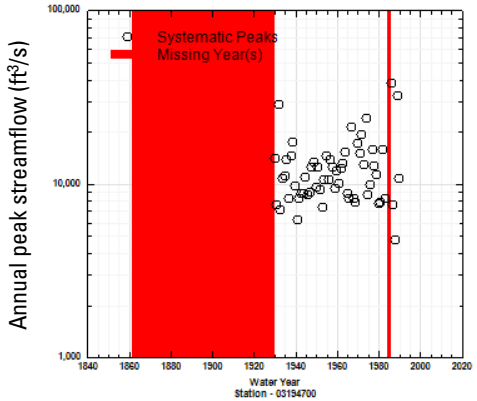
EMA inputs through 1990

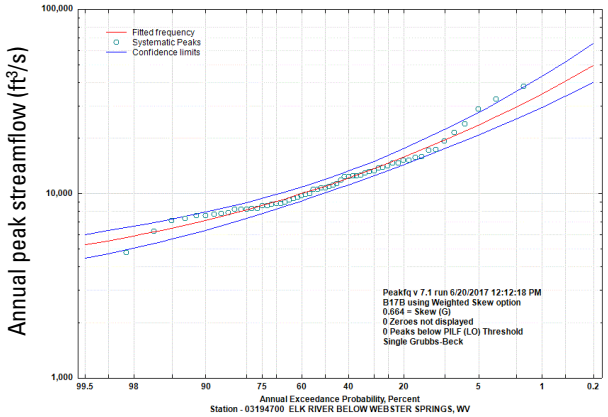




1990 AEP (EMA)

17B inputs through 1990





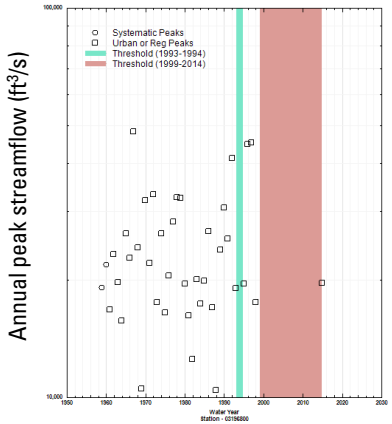
1990 AEP (17B)

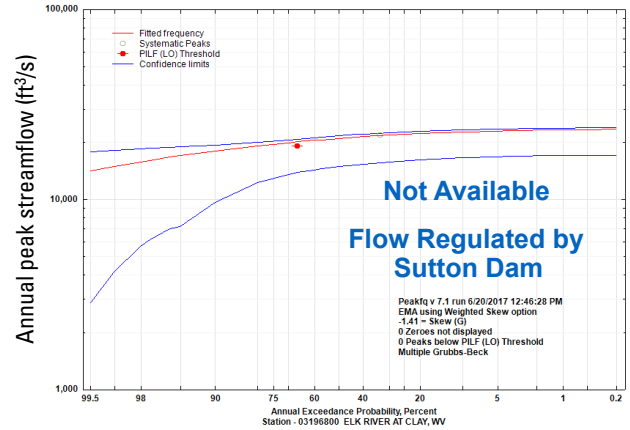
Figure 2-45. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03194700 Elk River below Webster Springs, West Virginia, for the period of record through 1990.

03196800 Elk River at Clay, West Virginia.

EXPLANATION: June 2016 Flood Peak: 63,100 ft^3/s; annual exceedance probability (AEP) NA

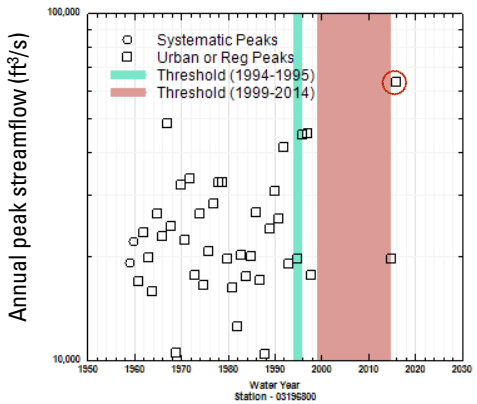
Inputs through 2015

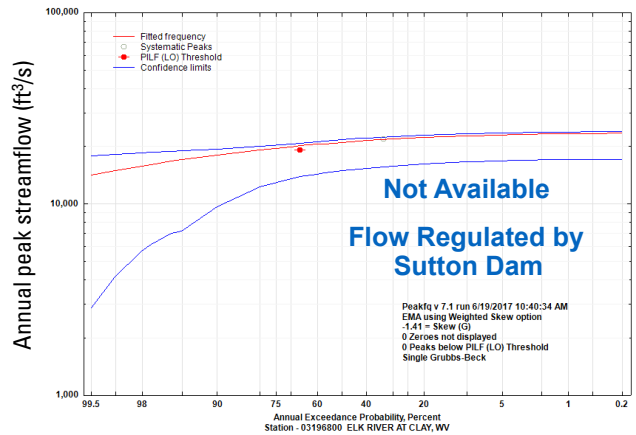




AEP Before 2016 Flooding

Inputs through 2016





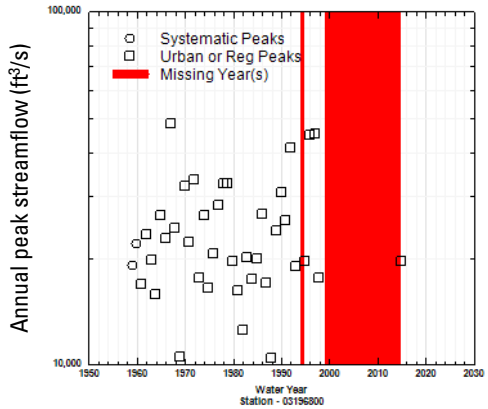
AEP After 2016 Flooding

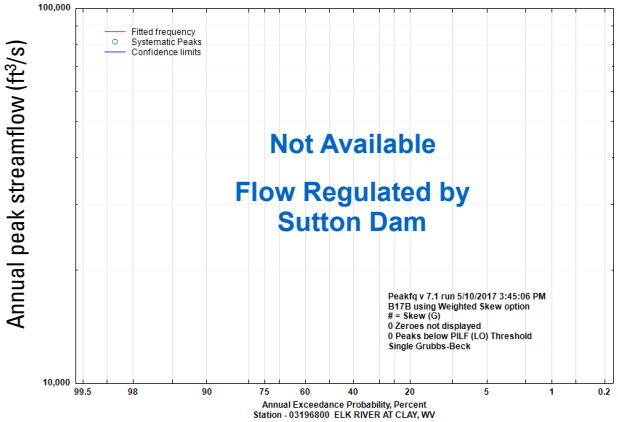
Figure 2-46. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03196800 Elk River at Clay, West Virginia, for the period of record through 2015 and 2016.

03196800 Elk River at Clay, West Virginia.

EXPLANATION: June 2016 Flood Peak: 63,100 ft^3/s; annual exceedance probability (AEP) NA

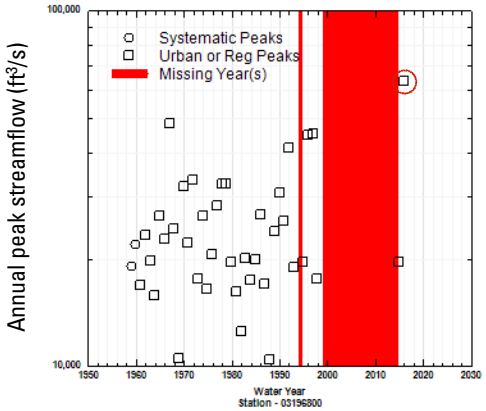
Inputs through 2015

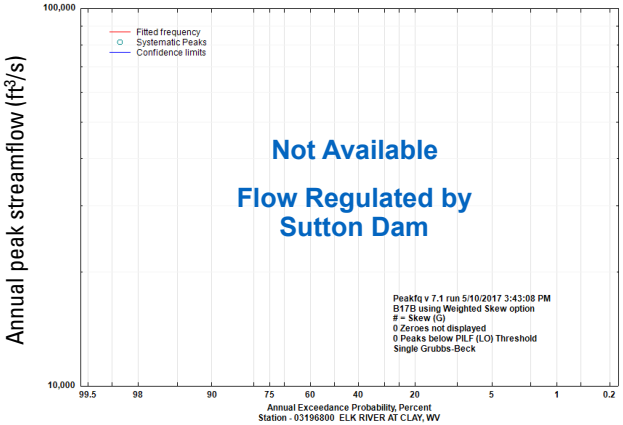




AEP Before 2016 Flooding

Inputs through 2016



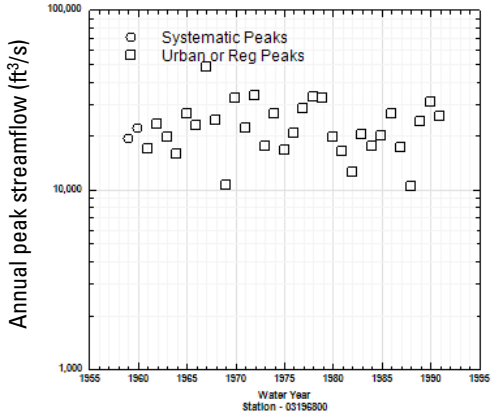


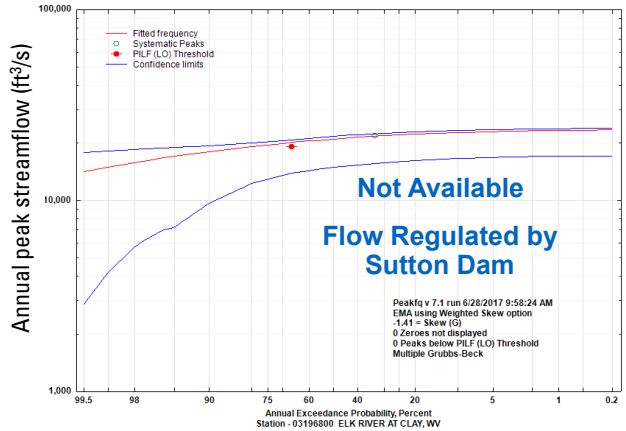
AEP After 2016 Flooding

Figure 2-47. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03196800 Elk River at Clay, West Virginia, for the period of record through 2015 and 2016.

03196800 Elk River at Clay, West Virginia.

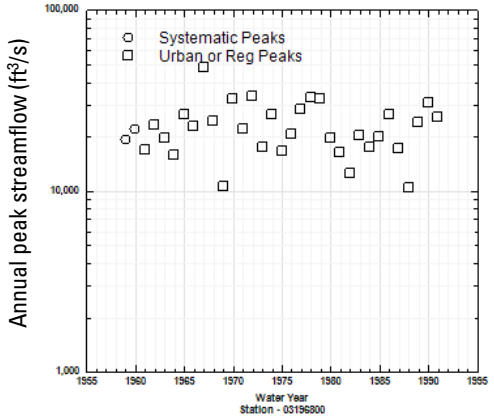
EMA inputs through 1990

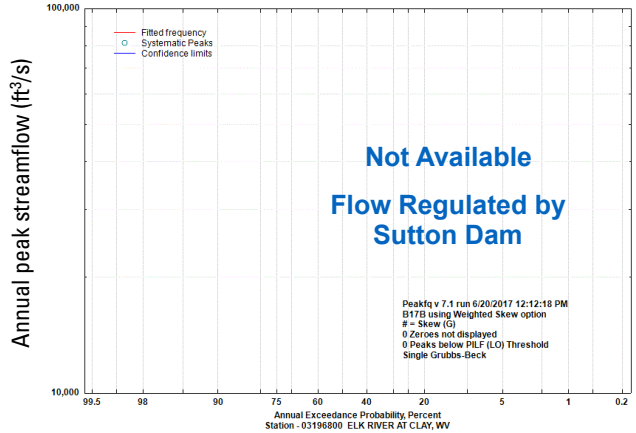




1990 AEP (EMA)

17B inputs through 1990





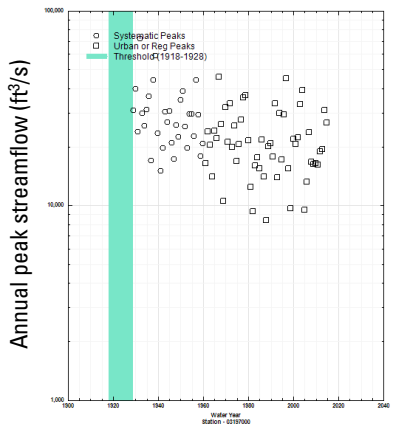
1990 AEP (17B)

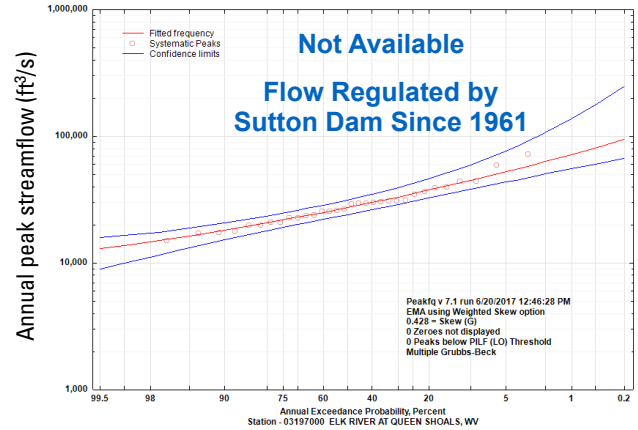
Figure 2-48. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03196800 Elk River at Clay, West Virginia, for the period of record through 1990.

03197000 Elk River at Queen Shoals, West Virginia.

EXPLANATION: June 2016 Flood Peak: 82,700 ft^3/s; annual exceedance probability (AEP) NA

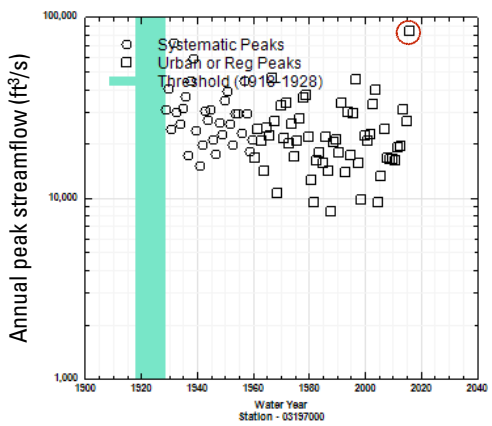
Inputs through 2015

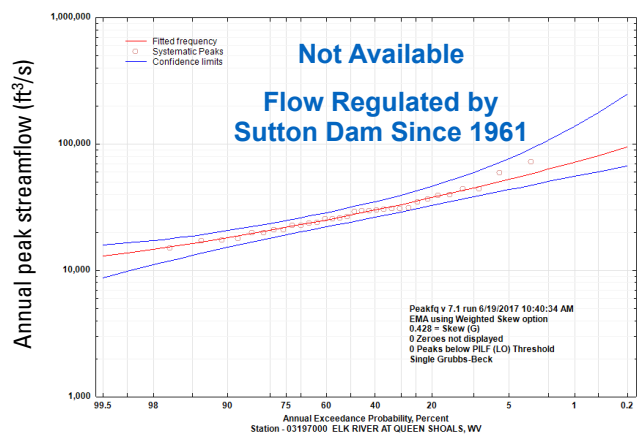




AEP Before 2016 Flooding

Inputs through 2016





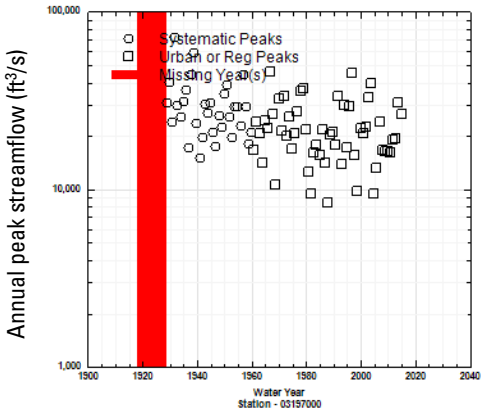
AEP After 2016 Flooding

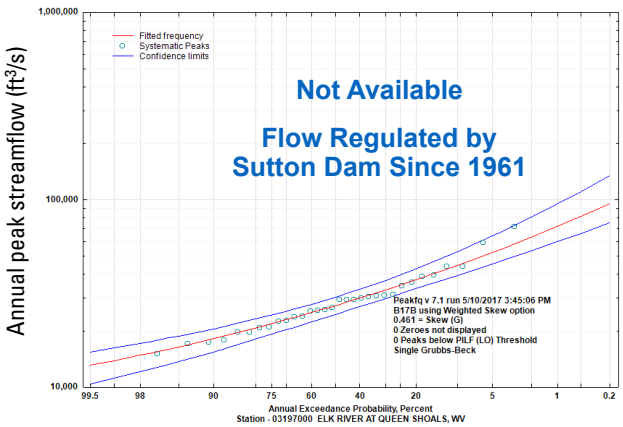
Figure 2-49. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03197000 Elk River at Queen Shoals, West Virginia, for the period of record through 2015 and 2016.

03197000 Elk River at Queen Shoals, West Virginia.

EXPLANATION: June 2016 Flood Peak: 82,700 ft^3/s; annual exceedance probability (AEP) NA

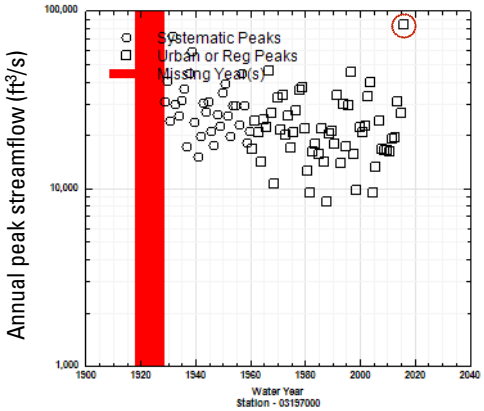
Inputs through 2015

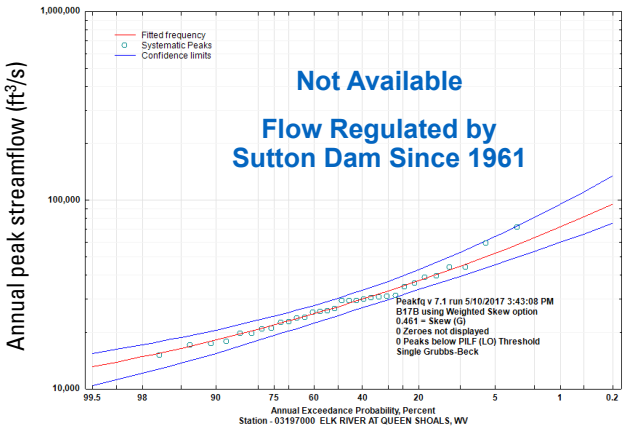




AEP Before 2016 Flooding

Inputs through 2016



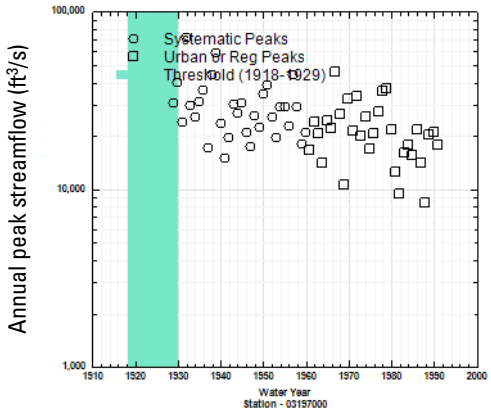


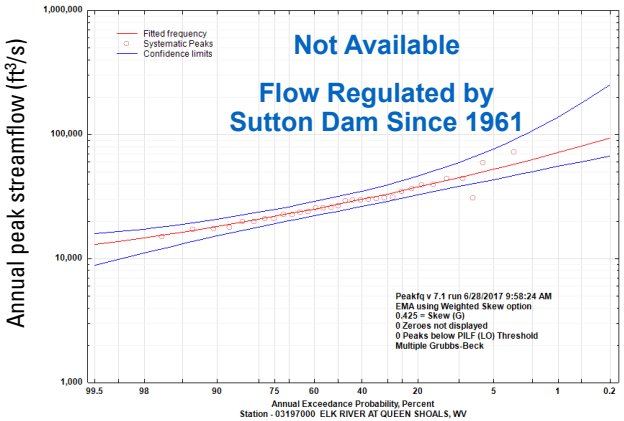
AEP After 2016 Flooding

Figure 2-50. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03197000 Elk River at Queen Shoals, West Virginia, for the period of record through 2015 and 2016.

03197000 Elk River at Queen Shoals, West Virginia.

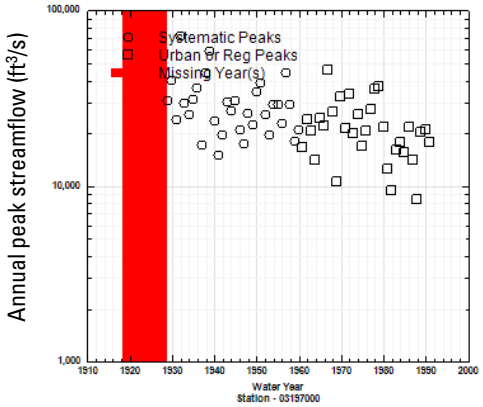
EMA inputs through 1990

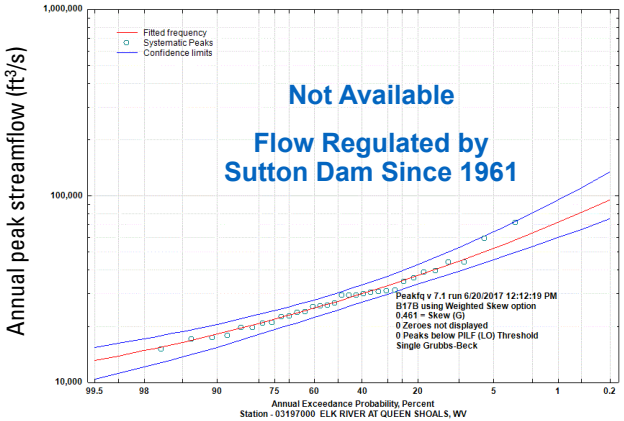




1990 AEP (EMA)

17B inputs through 1990





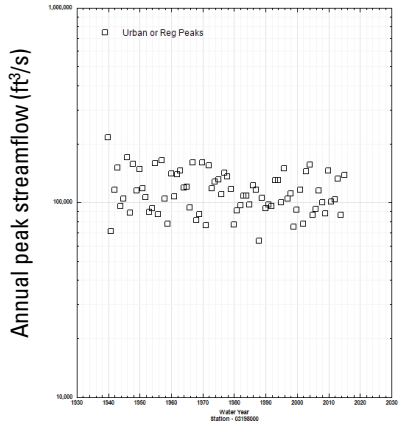
1990 AEP (17B)

Figure 2-51. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03197000 Elk River at Queen Shoals, West Virginia, for the period of record through 1990.

03198000 Kanawha River at Charleston, West Virginia.

EXPLANATION: June 2016 Flood Peak: 163,000 ft^3/s; annual exceedance probability (AEP) NA

Inputs through 2015



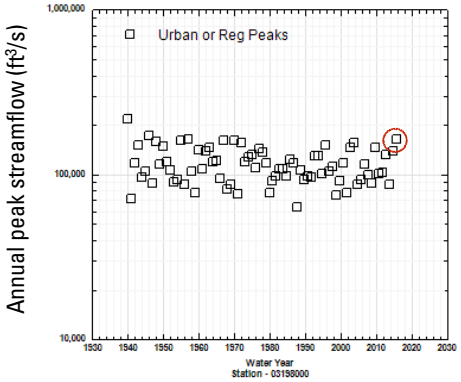
Annual peak streamflow (ft^3/s)

Not Available

Flow Regulated by Bluestone, Summersville, and Sutton Dams

AEP Before 2016 Flooding

Inputs through 2016



Annual peak streamflow (ft^3/s)

Not Available

Flow Regulated by Bluestone, Summersville, and Sutton Dams

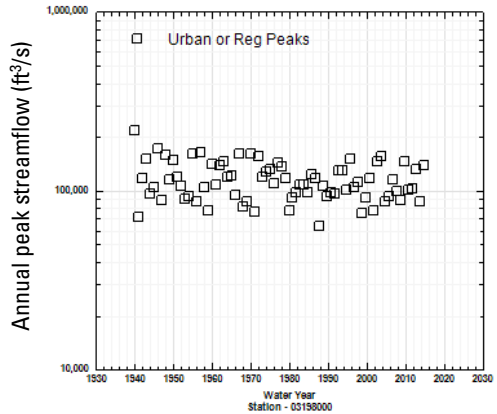
AEP After 2016 Flooding

Figure 2-52. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm method, for streamflow-gaging station 03198000 Kanawha River at Charleston, West Virginia, for the period of record through 2015 and 2016.

03198000 Kanawha River at Charleston, West Virginia.

EXPLANATION: June 2016 Flood Peak: 163,000 ft^3/s; annual exceedance probability (AEP) NA

Inputs through 2015



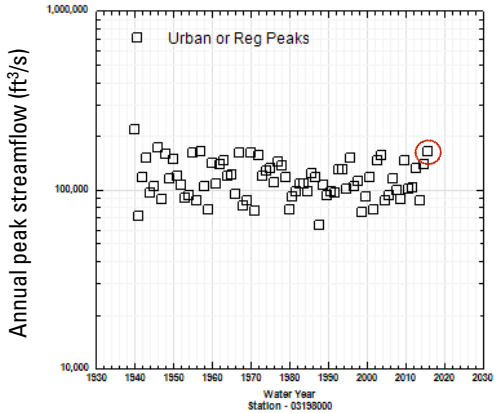
Annual peak streamflow (ft^3/s)

Not Available

Flow Regulated by Bluestone, Summersville, and Sutton Dams

AEP Before 2016 Flooding

Inputs through 2016



Annual peak streamflow (ft^3/s)

Not Available

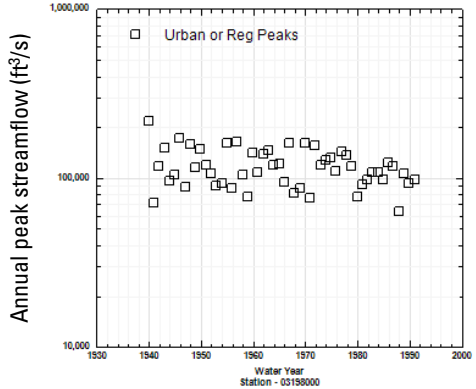
Flow Regulated by Bluestone, Summersville, and Sutton Dams

AEP After 2016 Flooding

Figure 2-53. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Bulletin 17B method, for streamflow-gaging station 03198000 Kanawha River at Charleston, West Virginia, for the period of record through 2015 and 2016.

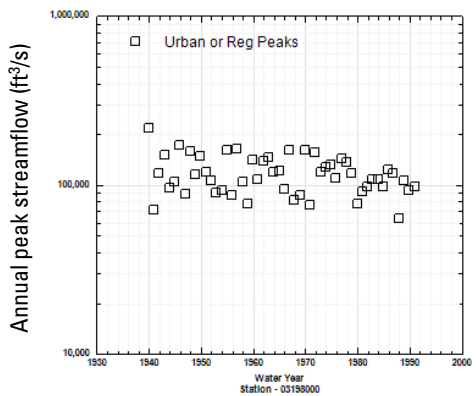
03198000 Kanawha River at Charleston, West Virginia.

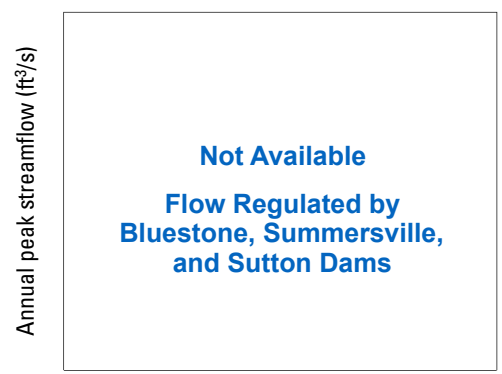
EMA inputs through 1990



1990 AEP (EMA)

17B inputs through 1990





1990 AEP (17B)

Figure 2-54. Selected annual exceedance probabilities in relation to estimated annual peak streamflow, determined using the Expected Moments Algorithm and Bulletin 17B methods, for streamflow-gaging station 03198000 Kanawha River at Charleston, West Virginia, for the period of record through 1990.