

Appendix A

Observed and Generated
Statistics at Mississippi River
USGS Discharge Stations
within the St. Louis District

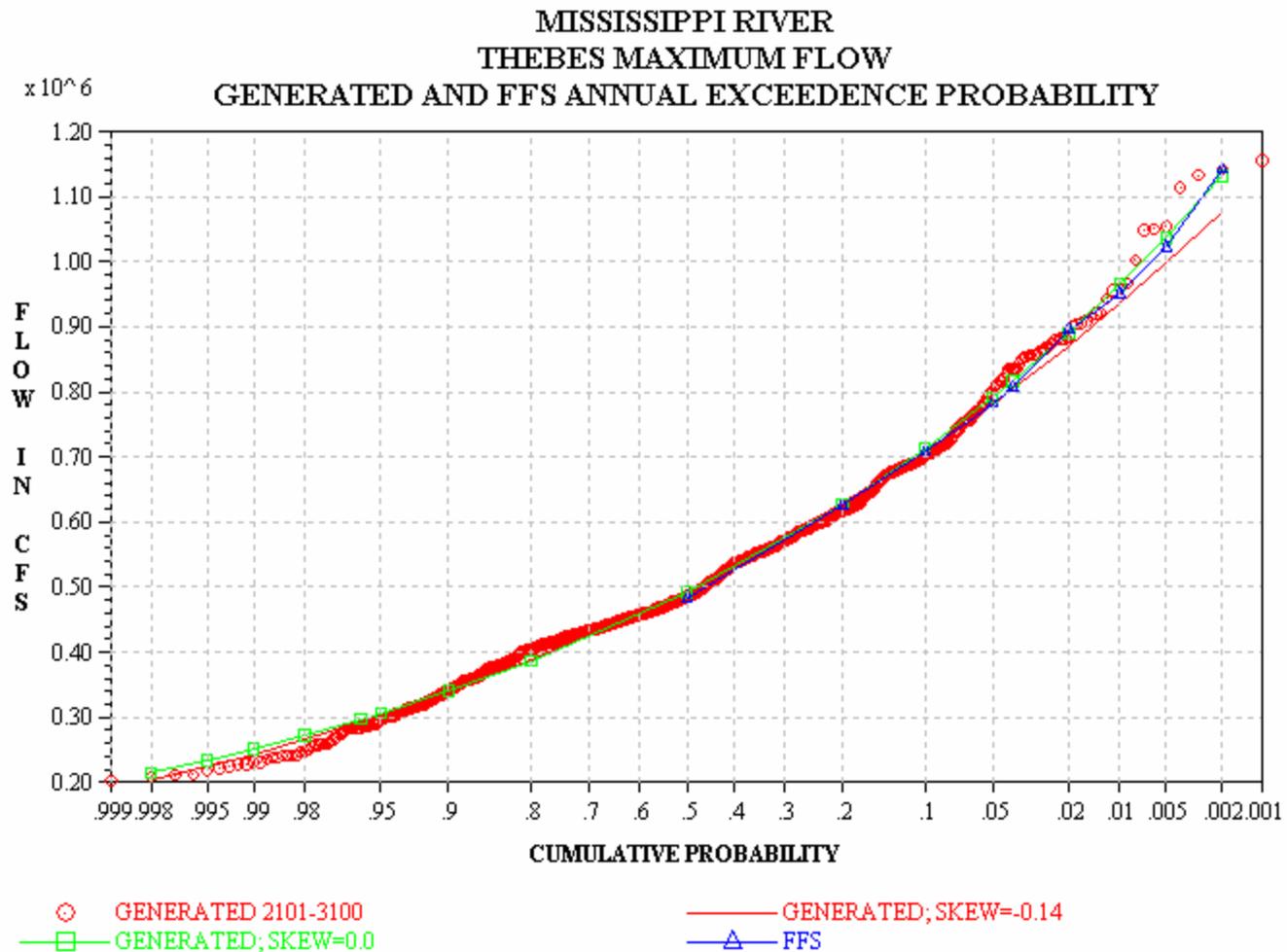


Figure A-1. Maximum flow exceedence frequency at Thebes for FFS and for generated data from 2101 to 3100. The actual skew, -0.14, is used for the generated Log-Pearson III curve. FFS applied a regional skew of 0.00.

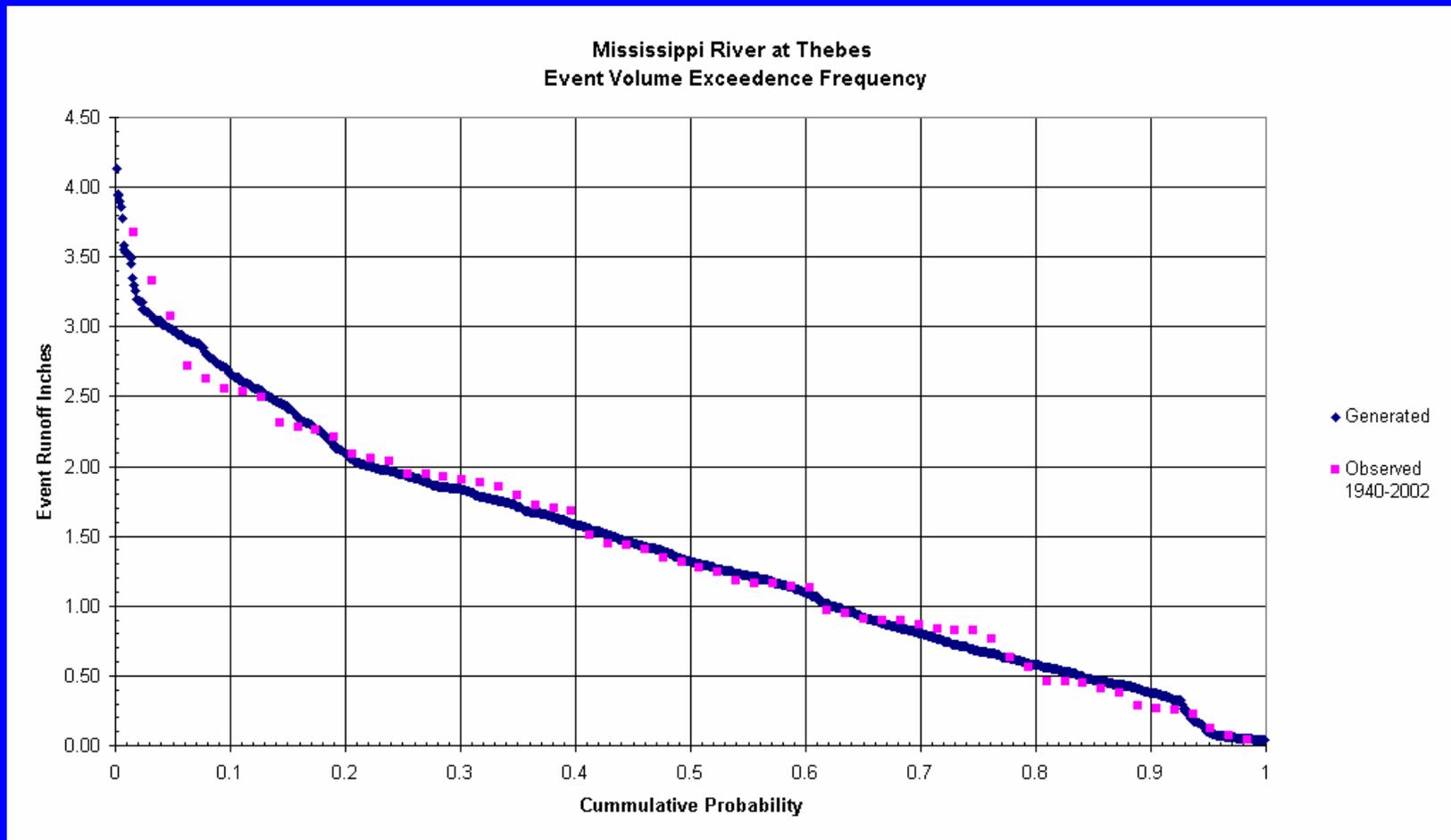


Figure A-2. Event volume frequency at Thebes for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

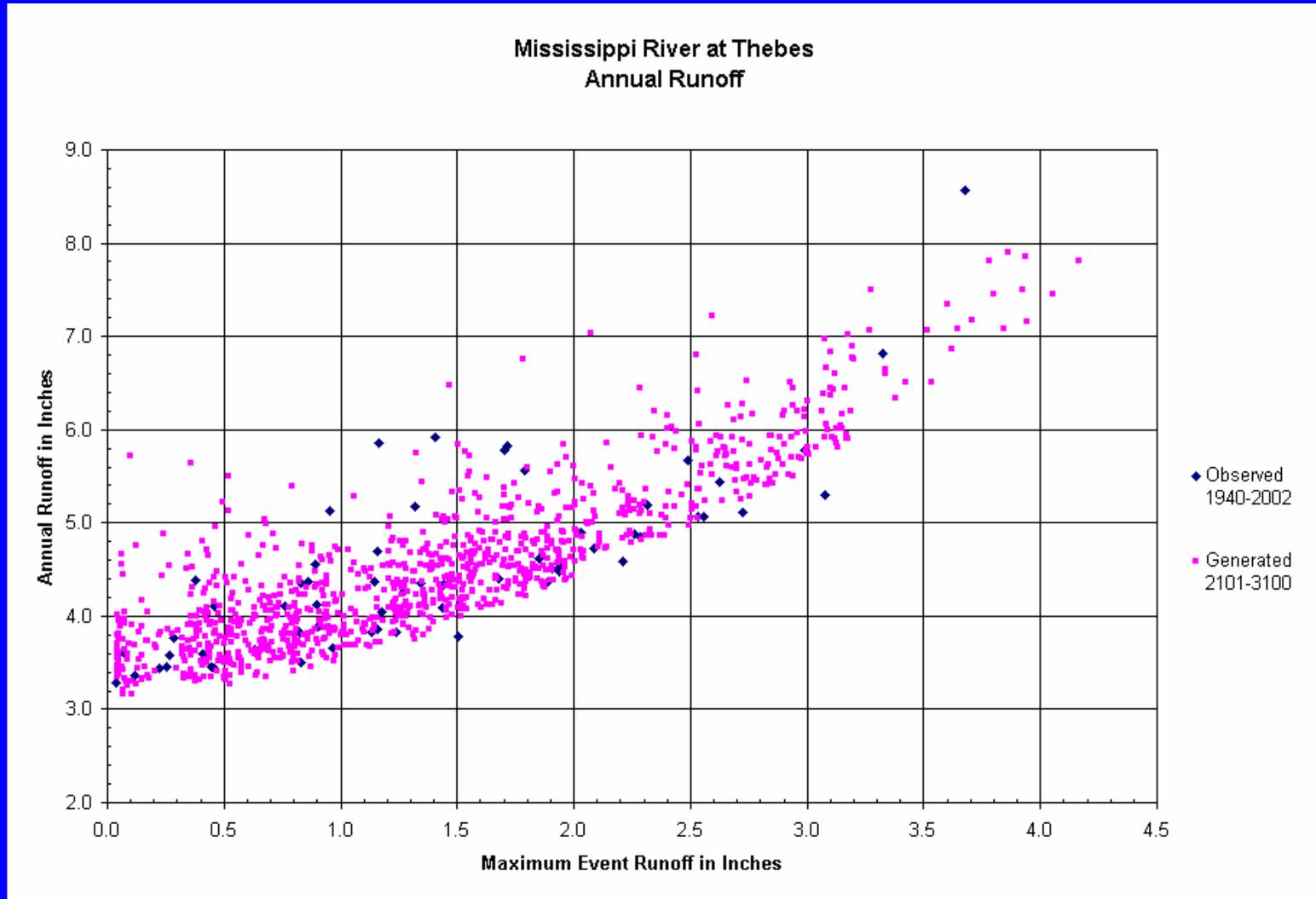


Figure A-3. Annual volume at Thebes for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

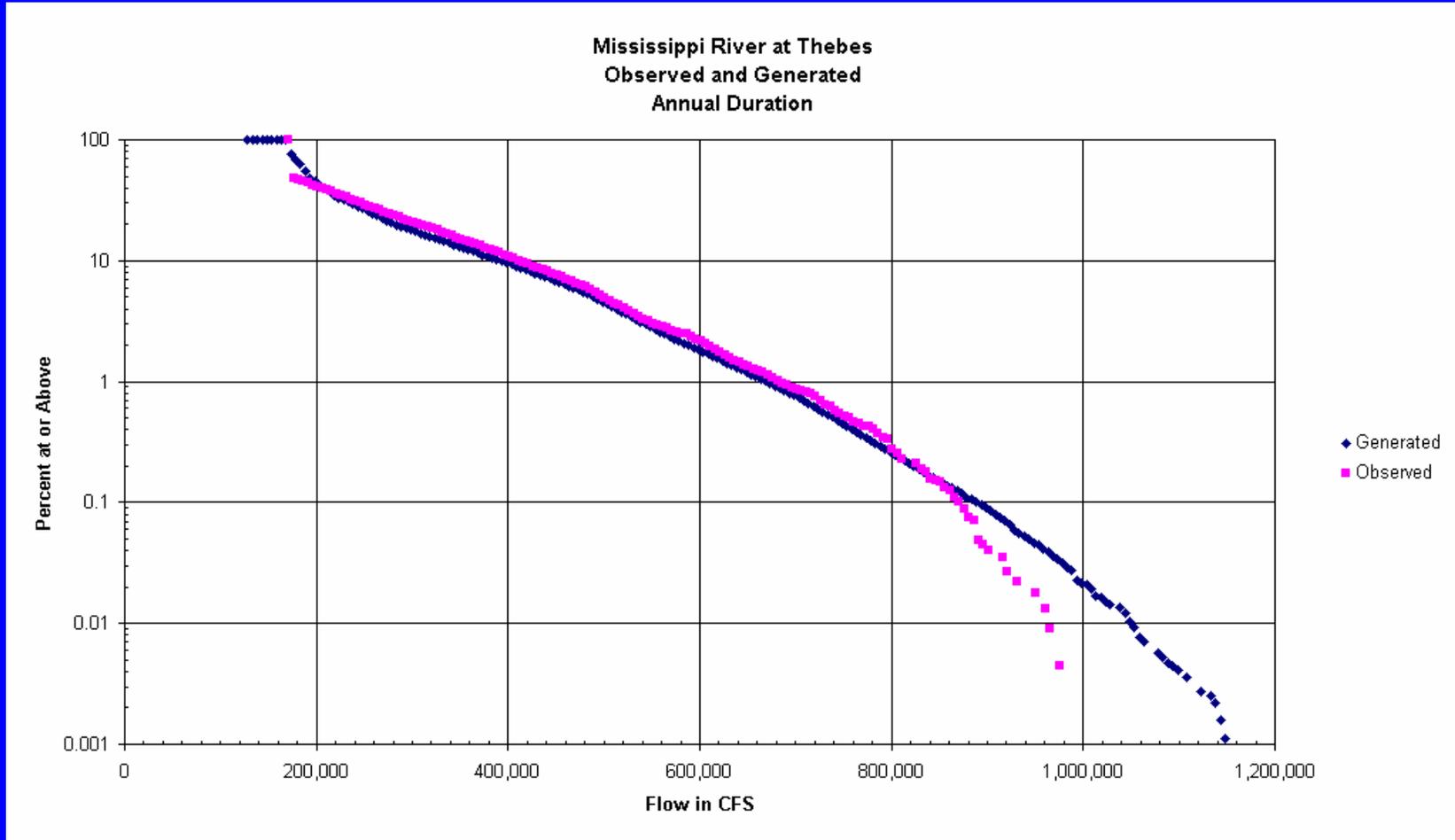


Figure A-4. Annual duration at Thebes for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Mississippi River at Chester Event Runoff Volume Exceedence Probability

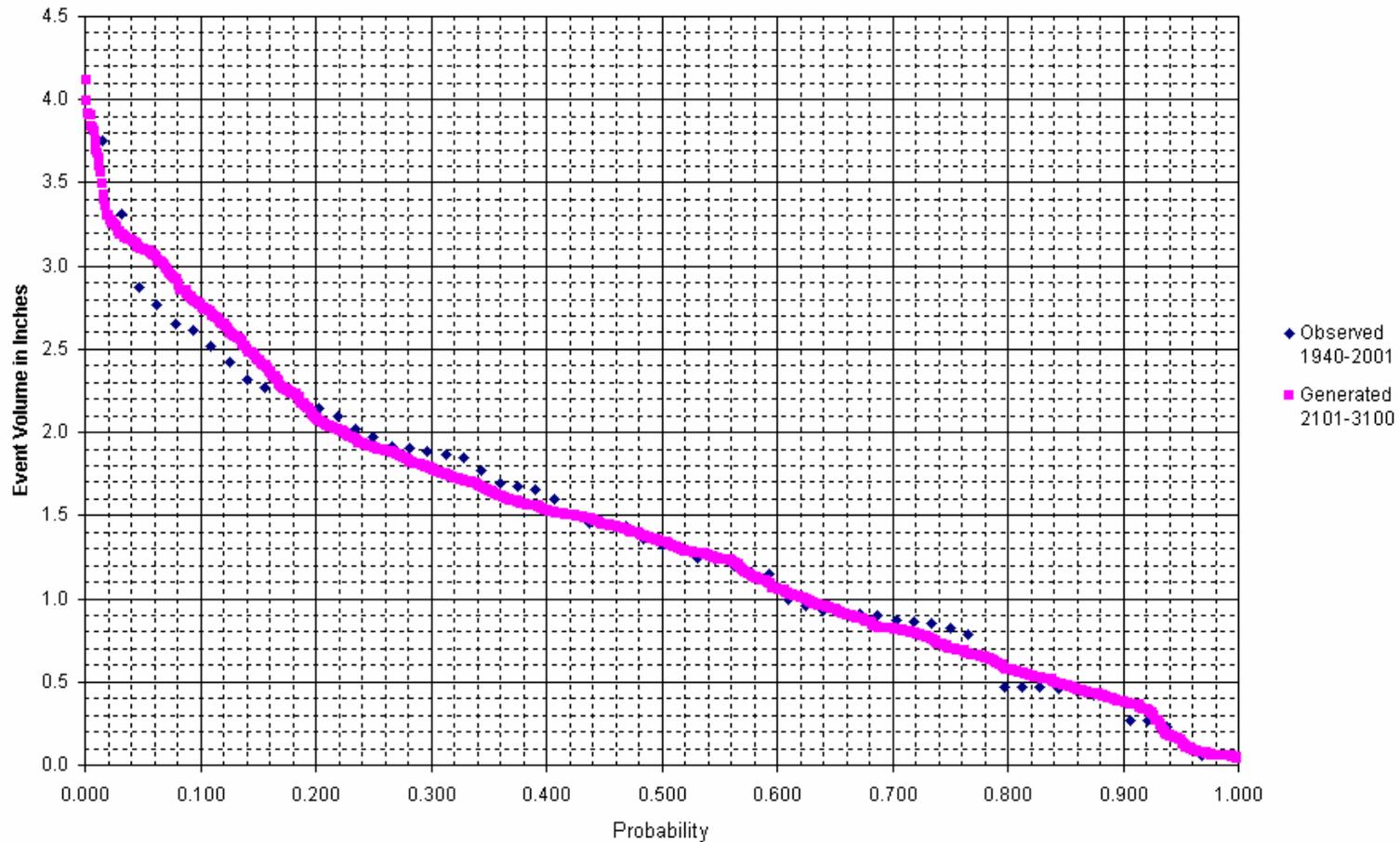


Figure A-6. Event volume frequency at Chester for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Mississippi River at St. Louis
Event Volume - Annual Volume Relationship

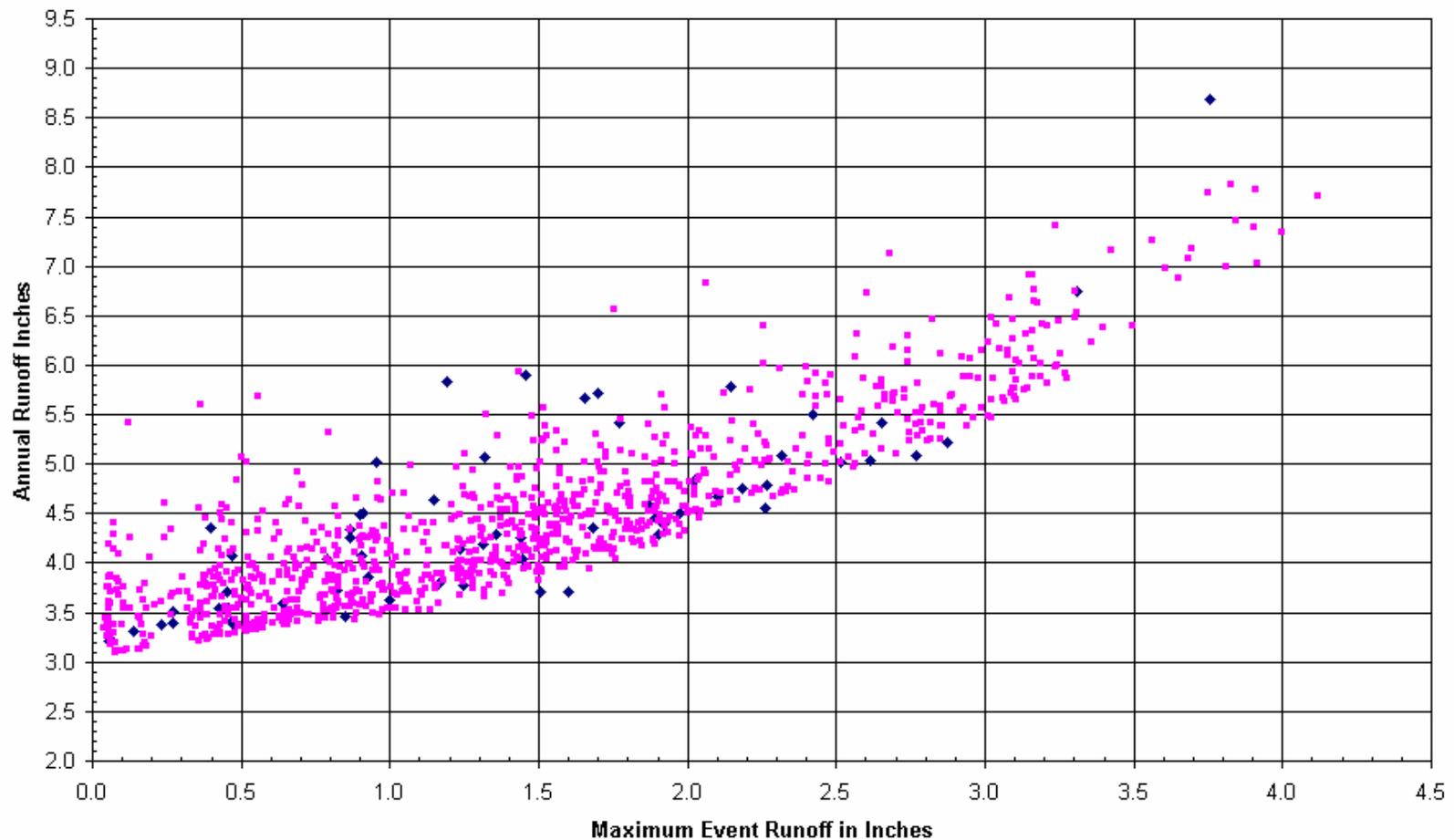


Figure A-7. Annual volume at Chester for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

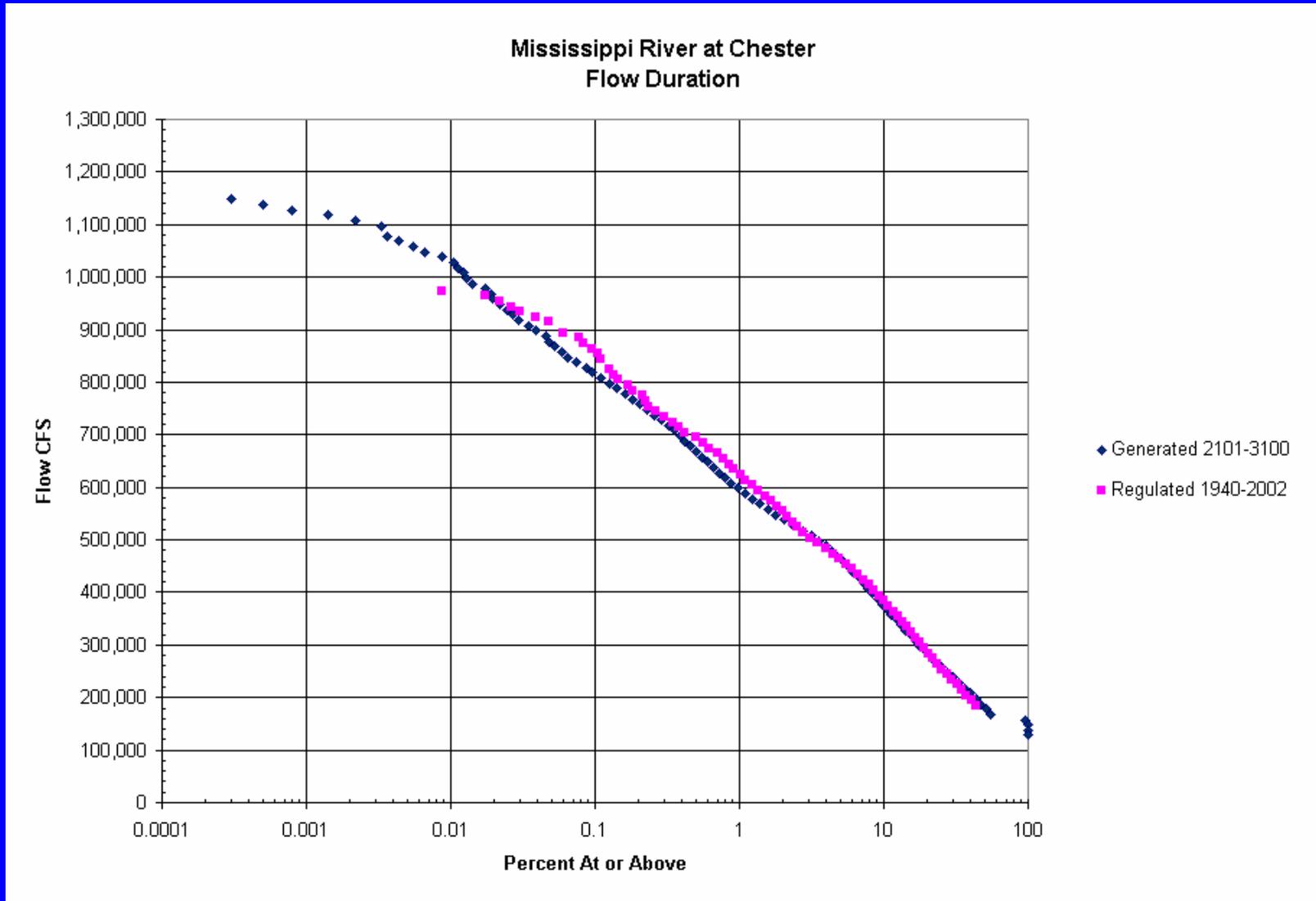


Figure A-8. Annual duration at Chester for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

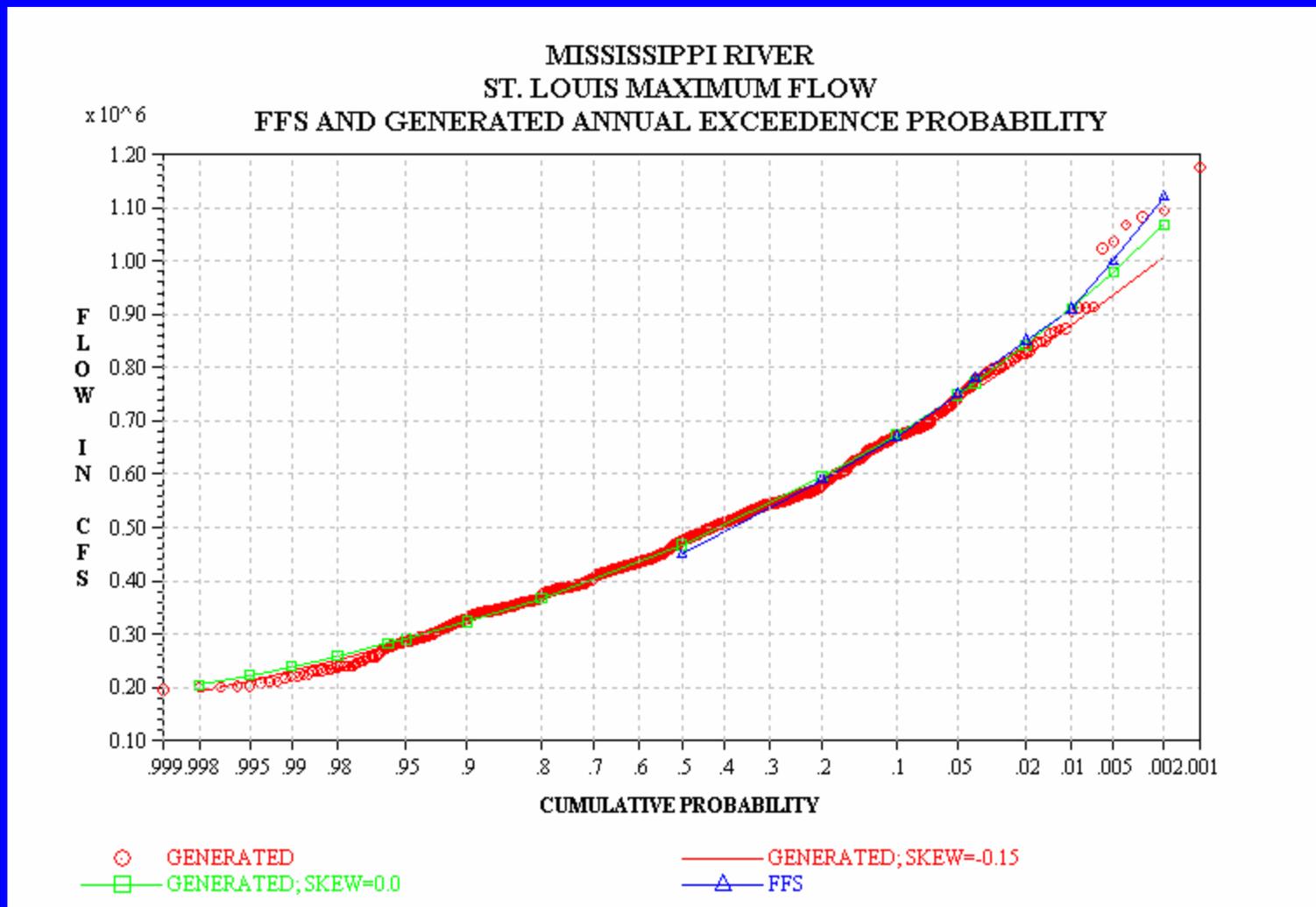


Figure A-9. Maximum flow exceedence frequency at St. Louis for FFS and for generated data from 2101 to 3100. The actual skew, -0.15, is used for the generated Log-Pearson III curve. FFS applied a regional skew of 0.00.

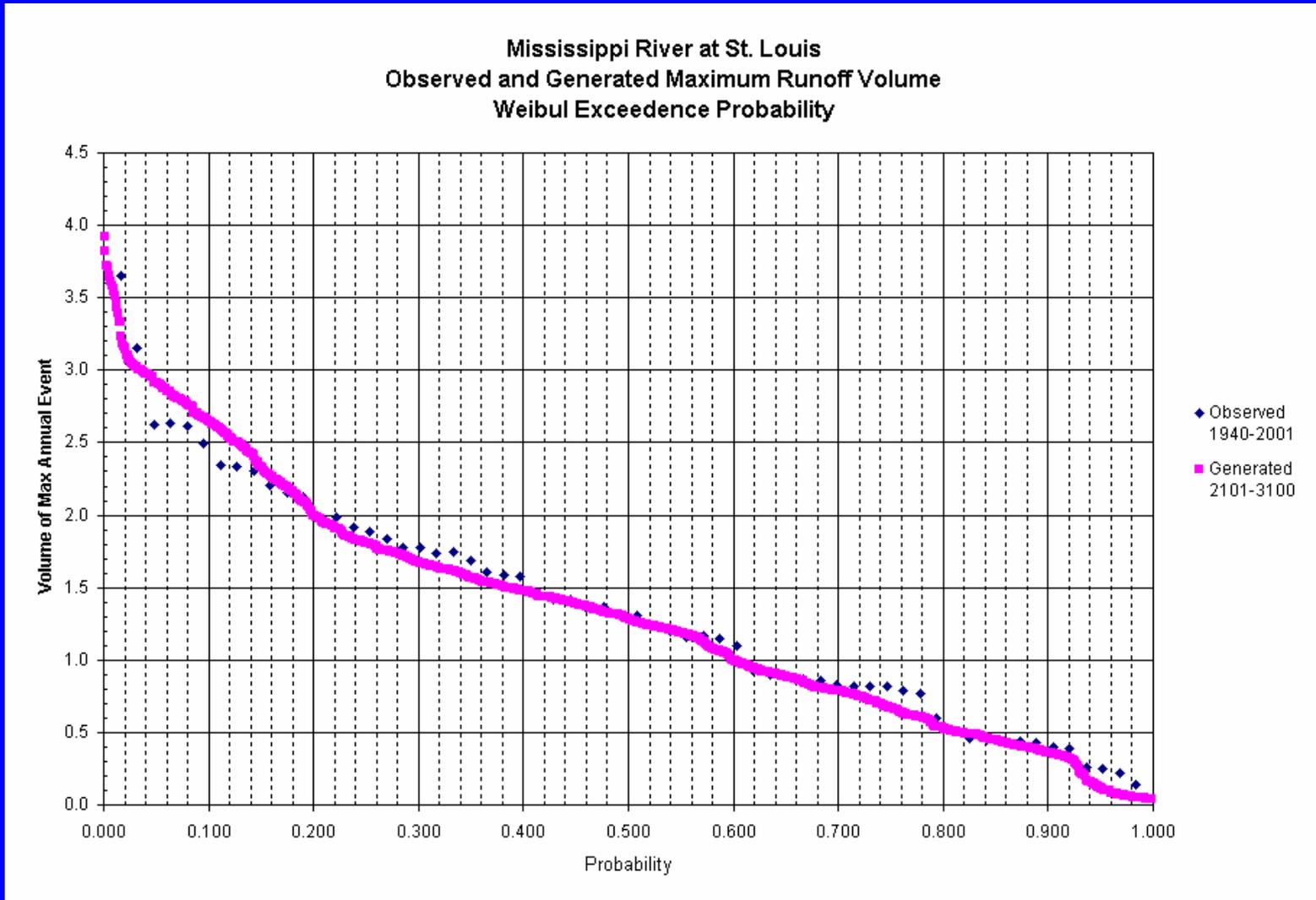


Figure A-10. Event volume frequency at St. Louis for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Mississippi River at St. Louis
Event Volume - Annual Volume Relationship

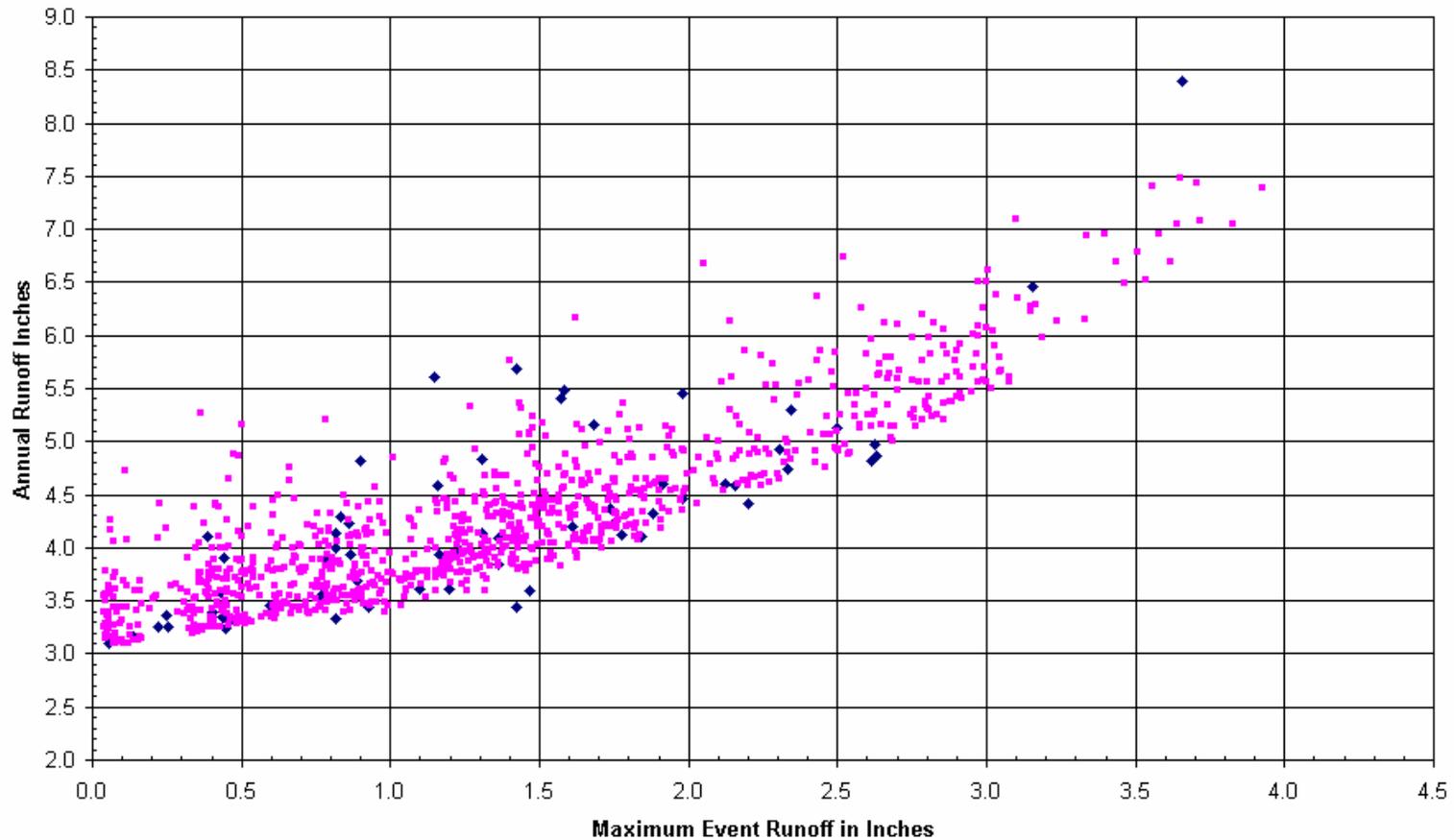


Figure A-11. Annual volume at St. Louis for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

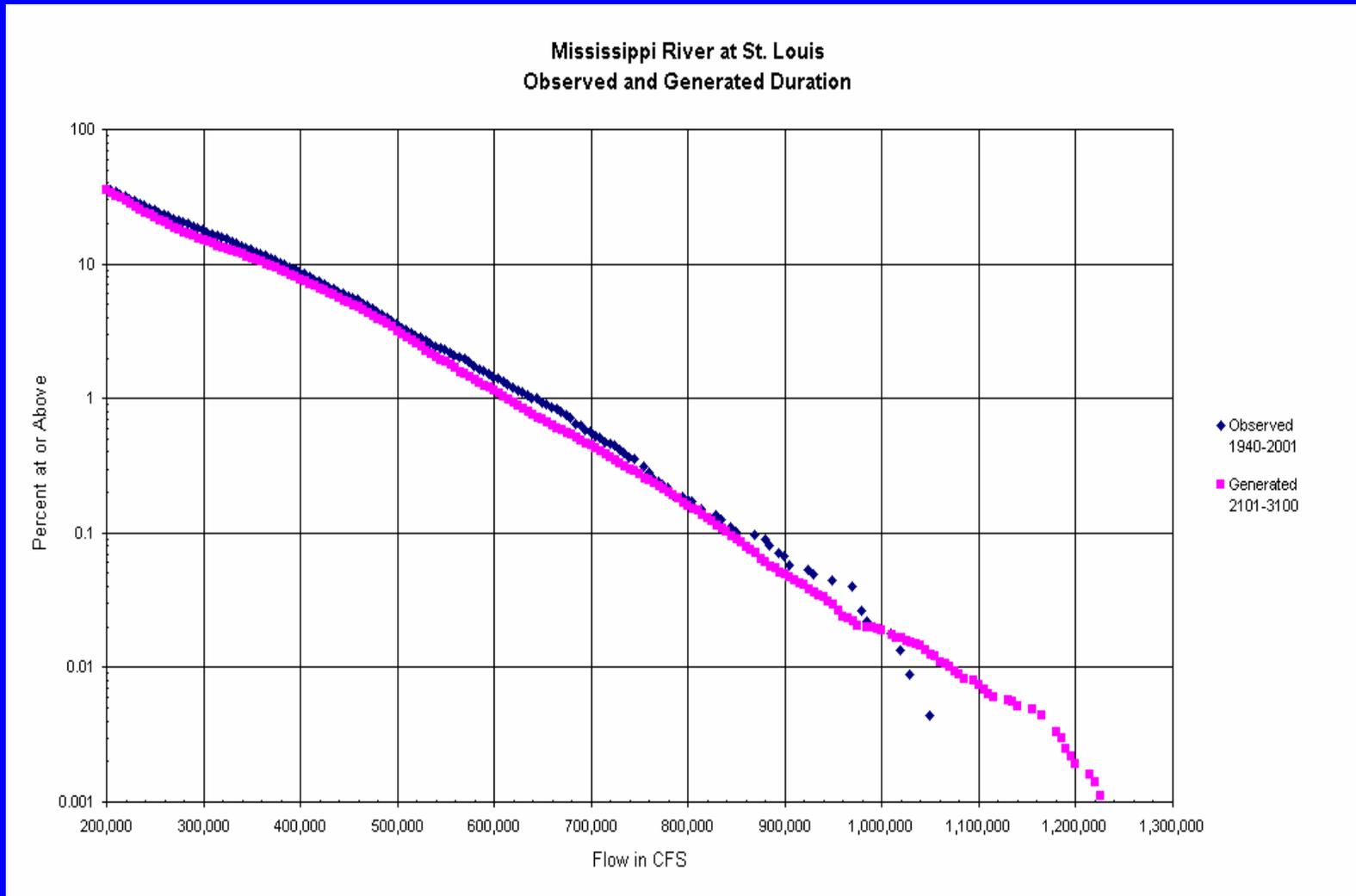


Figure A-12. Annual duration at St. Louis for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

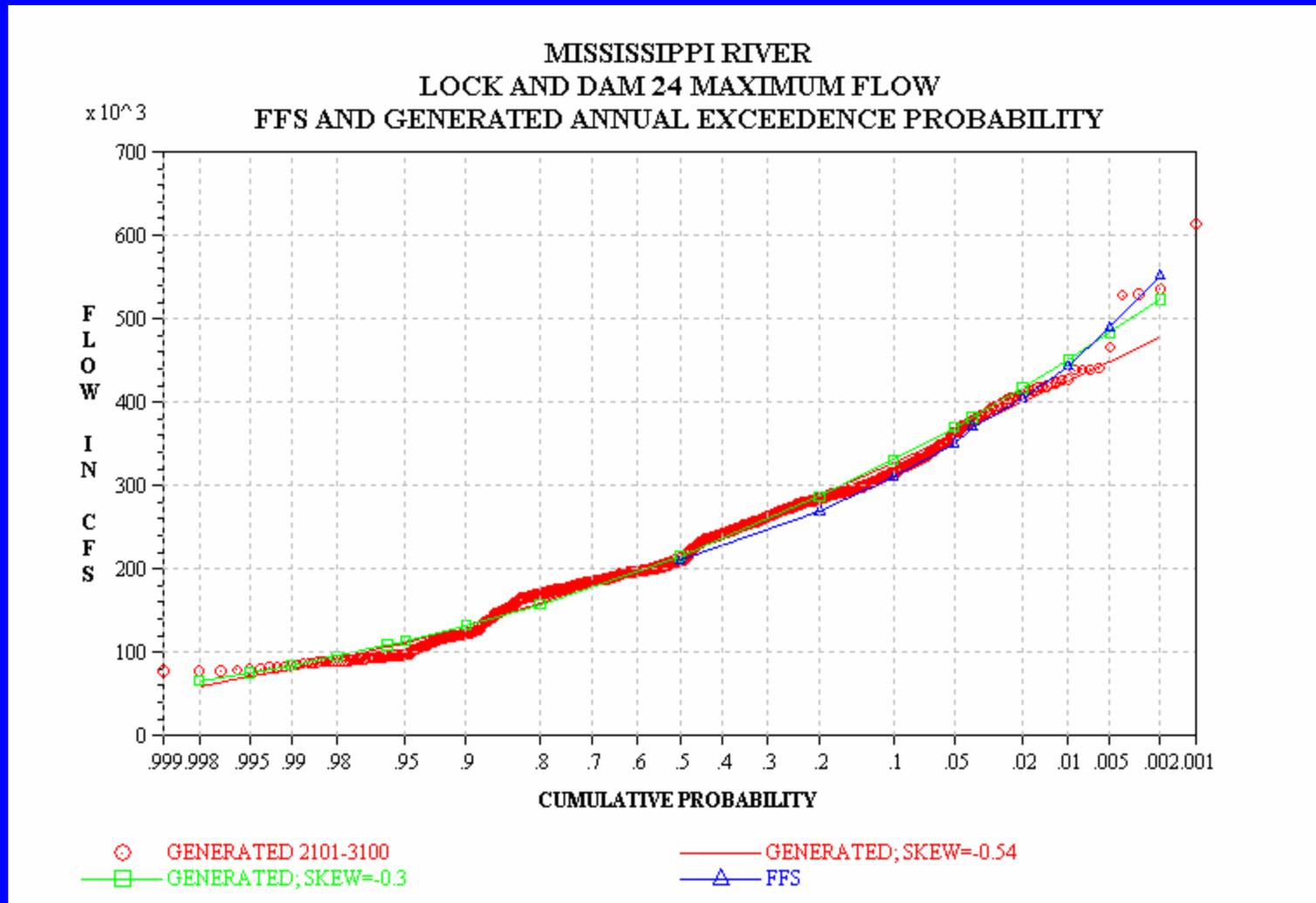


Figure A-13. Maximum flow exceedence frequency at Lock and Dam 24 for FFS and for generated data from 2101 to 3100. The actual skew, -0.54, is used for the generated Log-Pearson III curve. The fitted skew of -0.3 gives a better fit. FFS applied a regional skew of -0.20.

Mississippi River at Lock and Dam 24
Observed and Generated Maximum Runoff Volume
Weibul Exceedence Probability

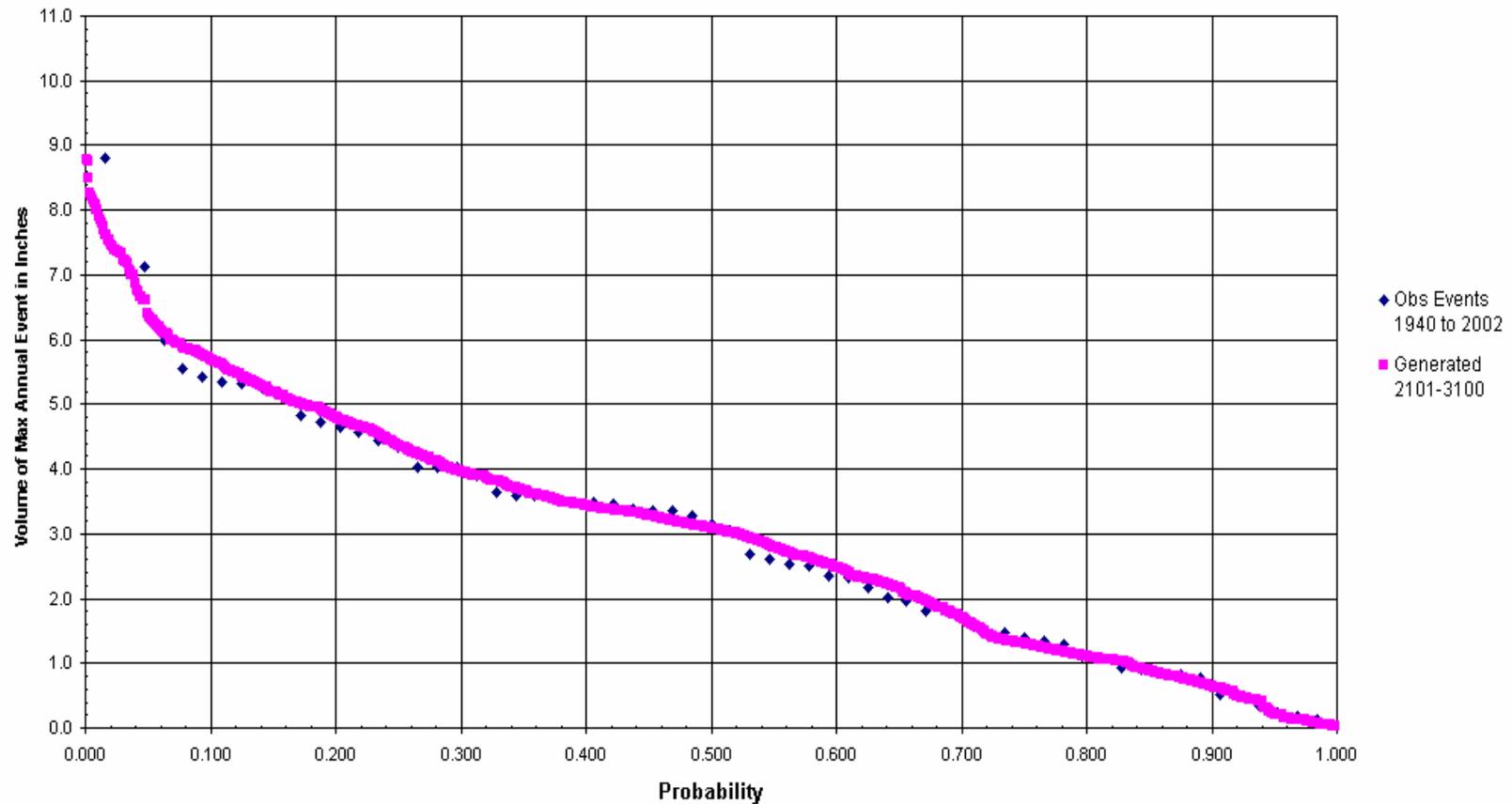


Figure A-14. Event volume frequency at Lock and Dam 24 for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Mississippi River at L&D 24
Event Volume - Annual Volume Relationship

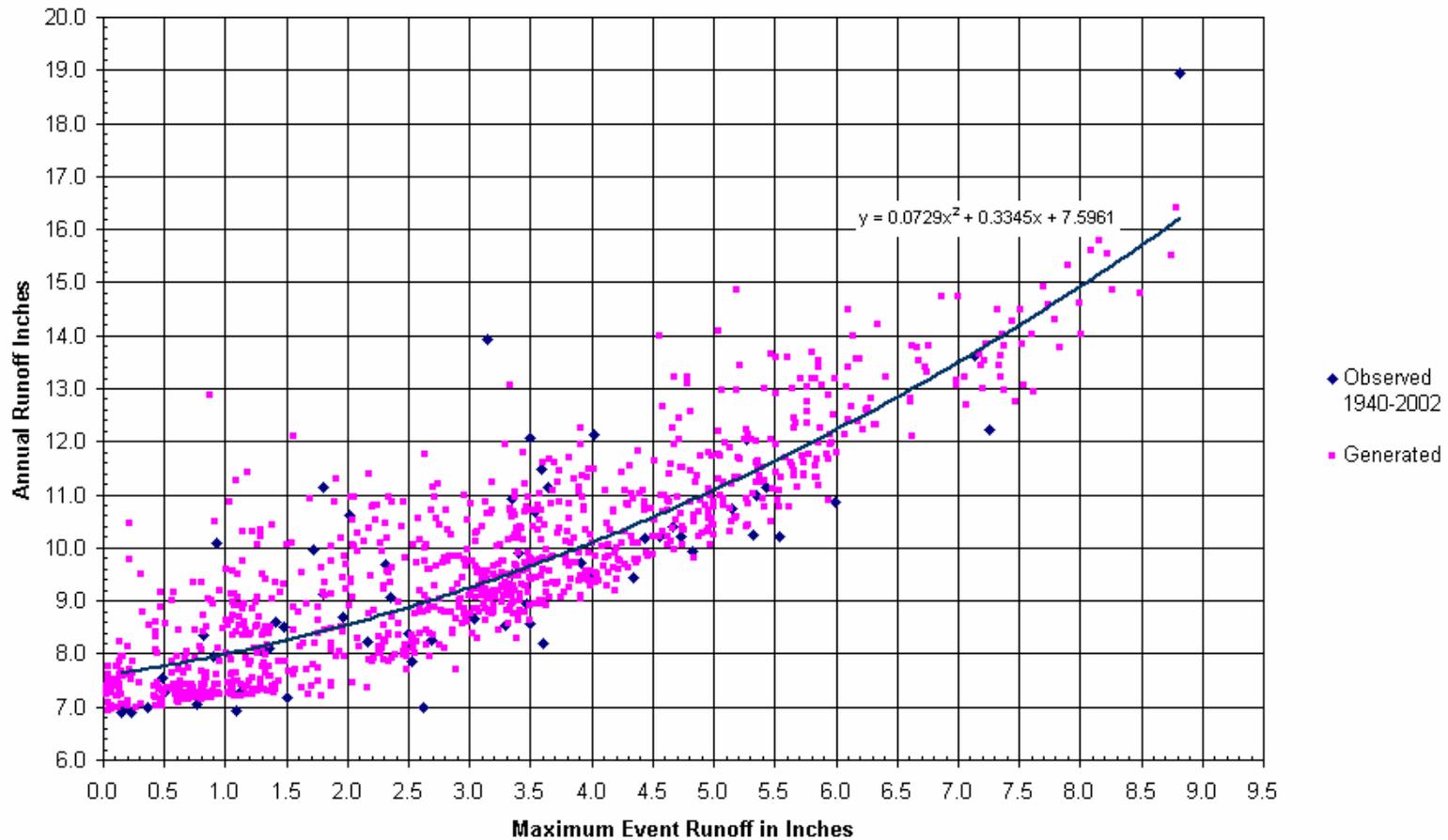


Figure A-15. Annual volume at Lock and Dam 24 for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Appendix B

Observed and Generated
Statistics at Illinois River USGS
Discharge Stations within the
Rock Island District

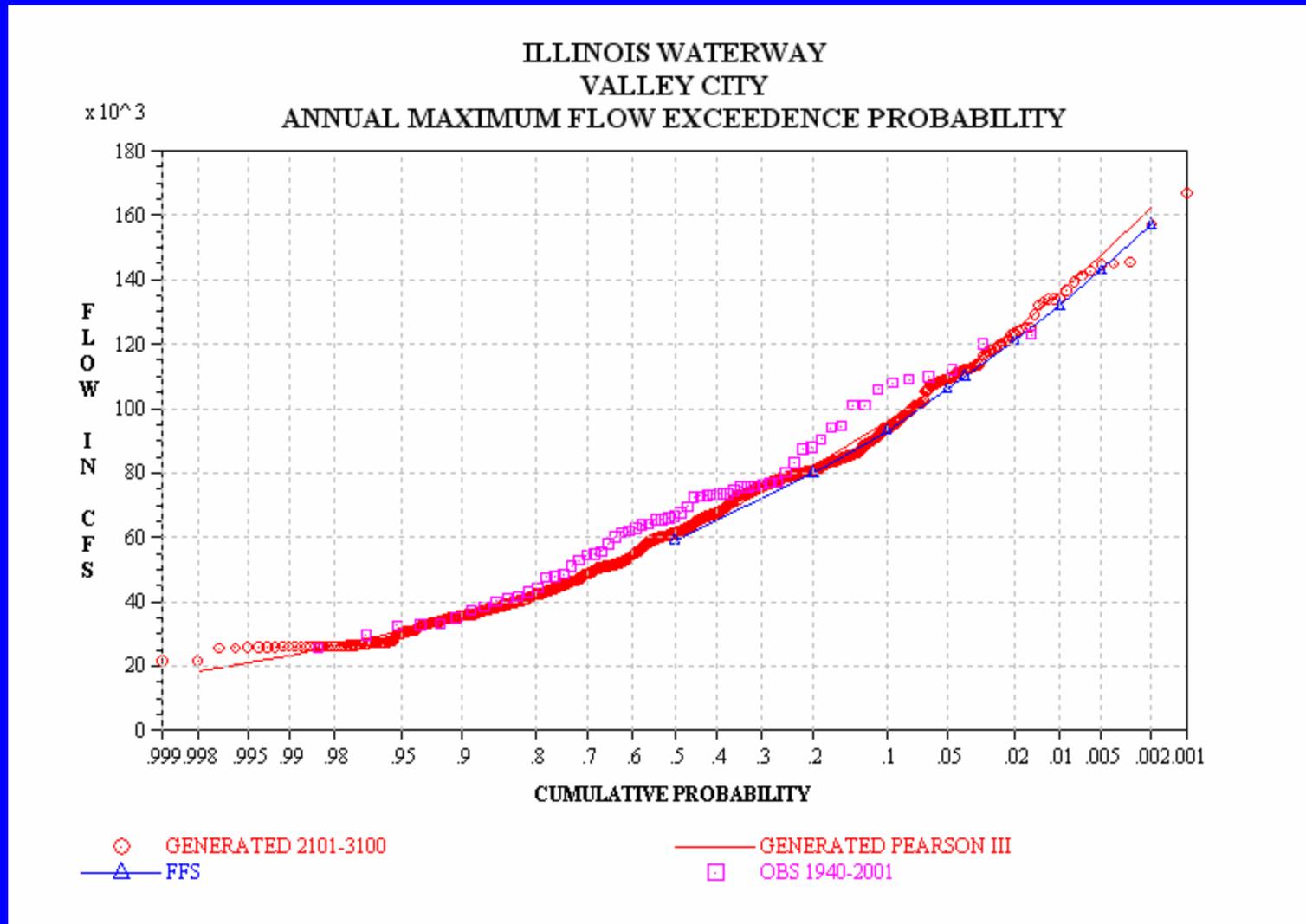


Figure B-1. Maximum flow exceedence frequency of Valley City for FFS and for generated data from 2101 to 3100. The actual skew, $-.193$, is used for the generated Log-Pearson III curve. FFS applied a regional skew of $-.2$.

Illinois River at Valley City
Observed and Generated Maximum Runoff Volume
Weibul Exceedence Probability

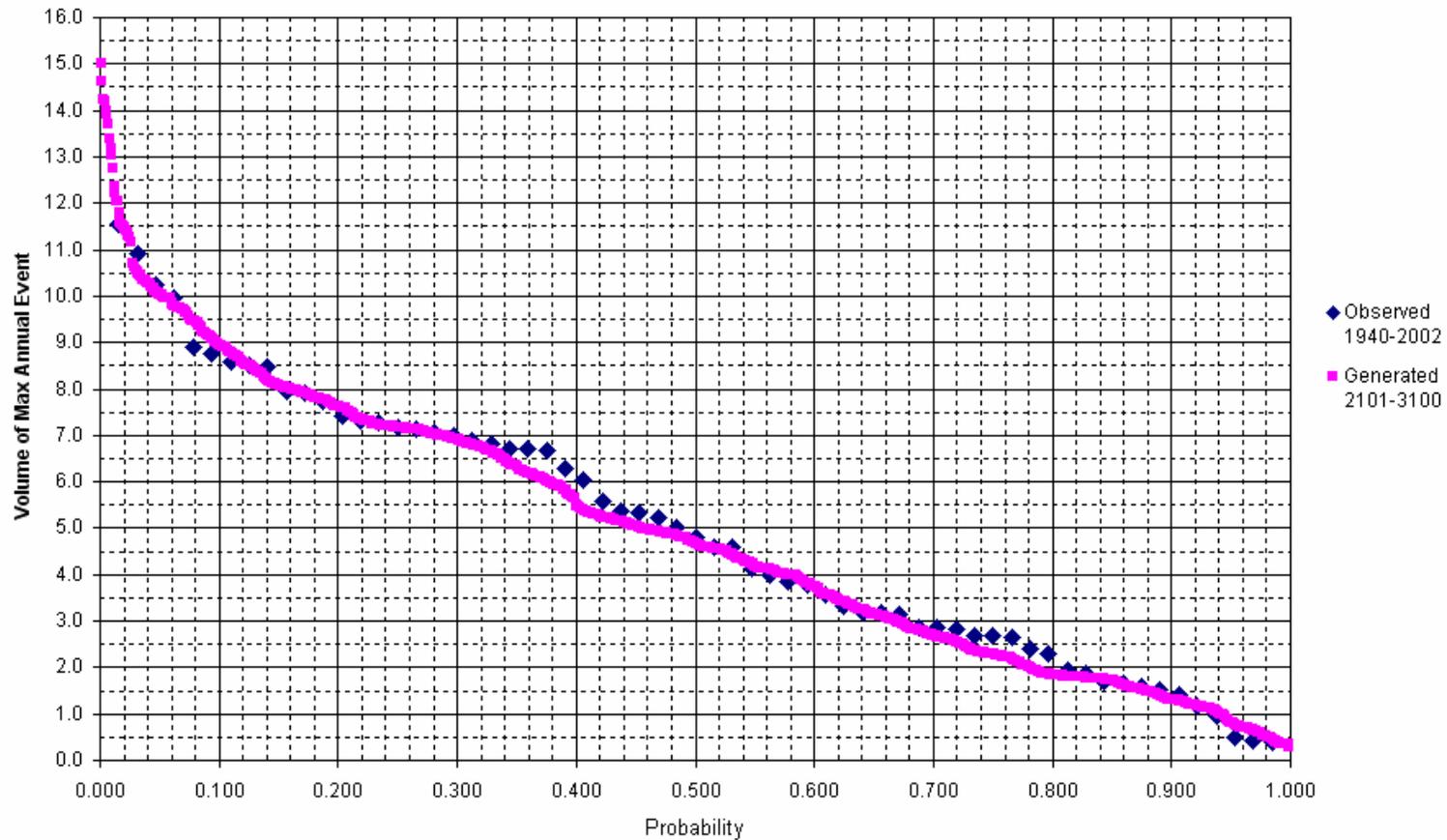


Figure B-2. Event volume frequency at Valley City for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Illinois River at Valley City
Event Volume - Annual Volume Relationship

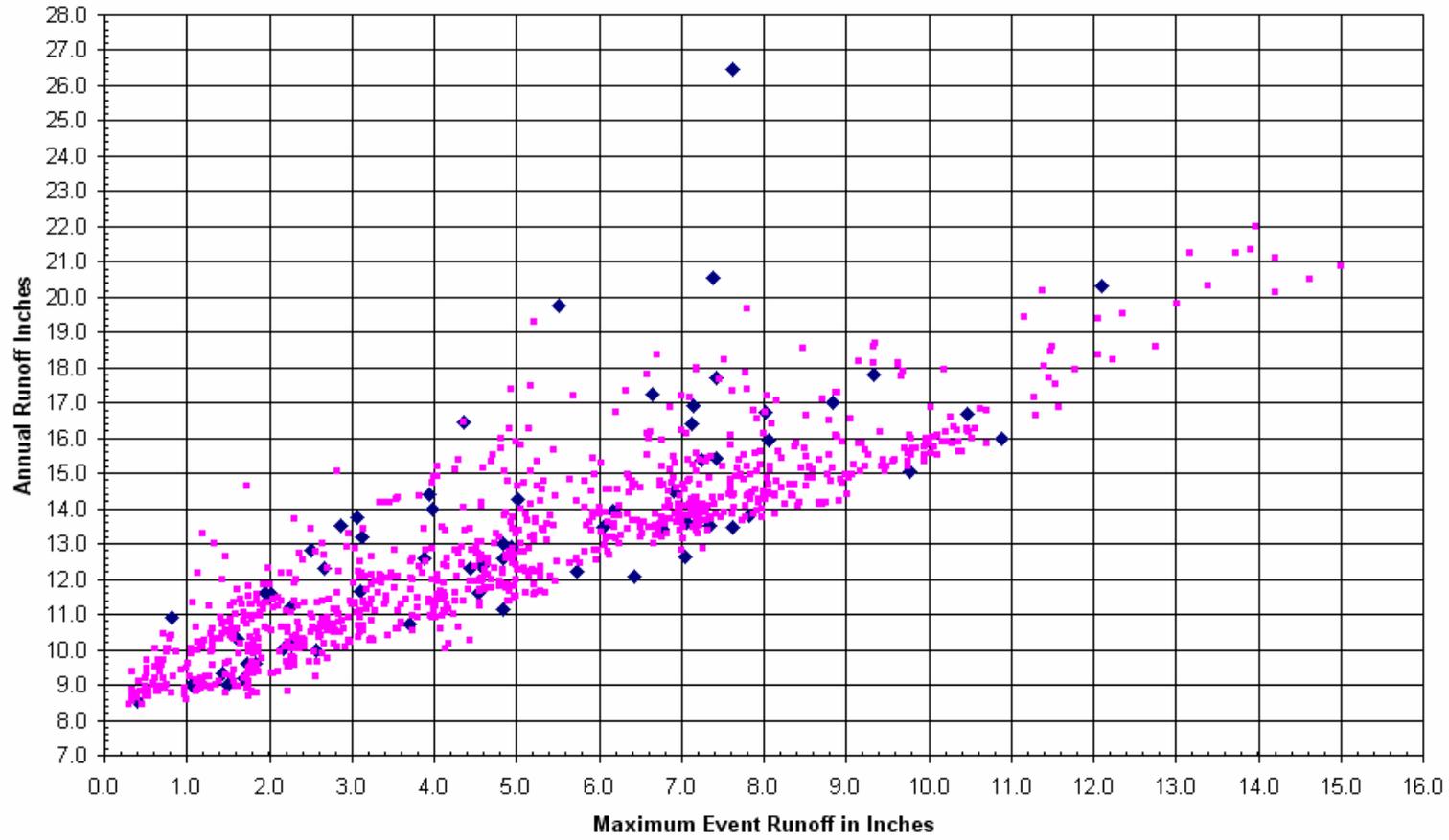


Figure B-3. Annual volume at Valley City for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

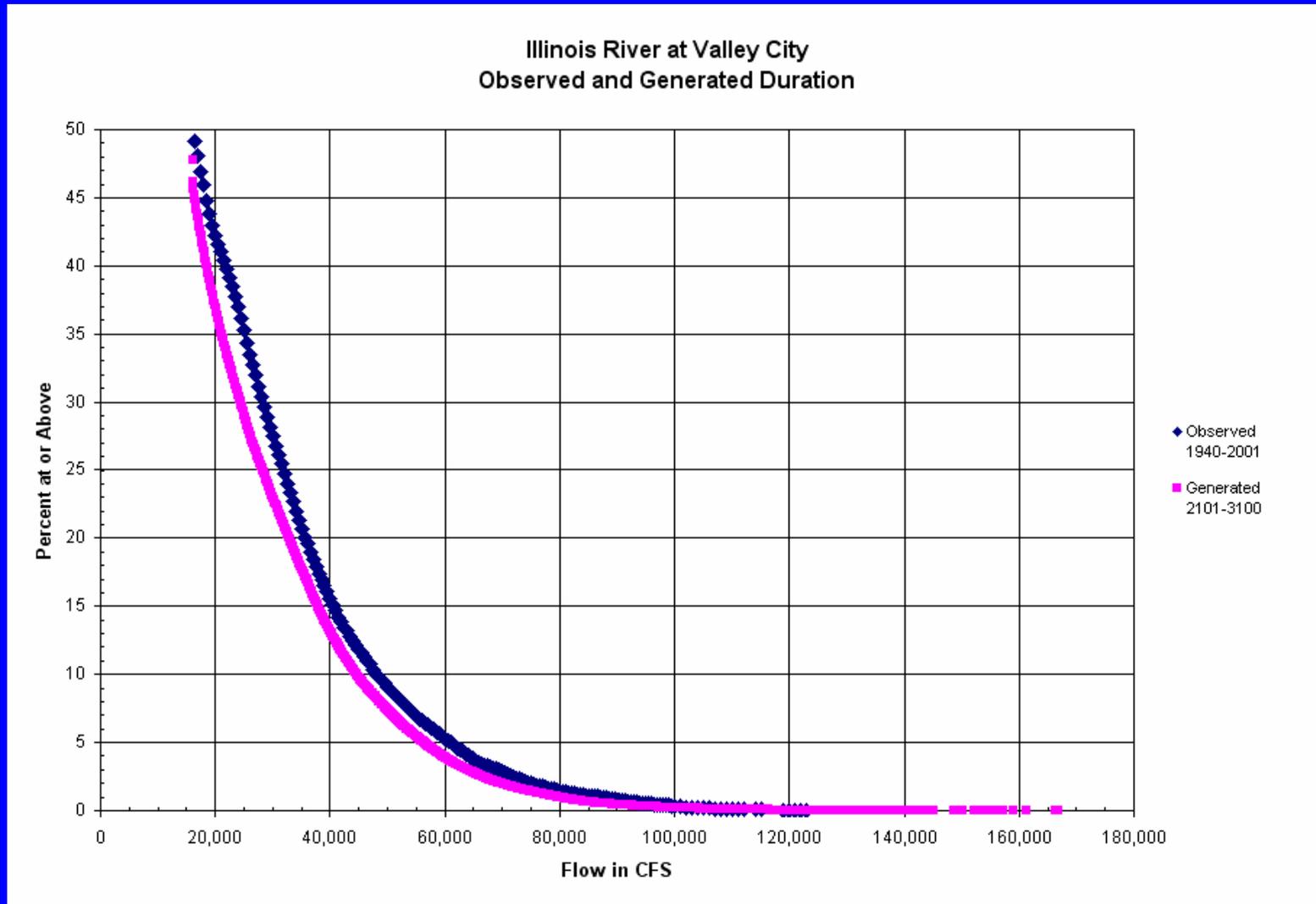


Figure B-4. Annual duration for at Valley City for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

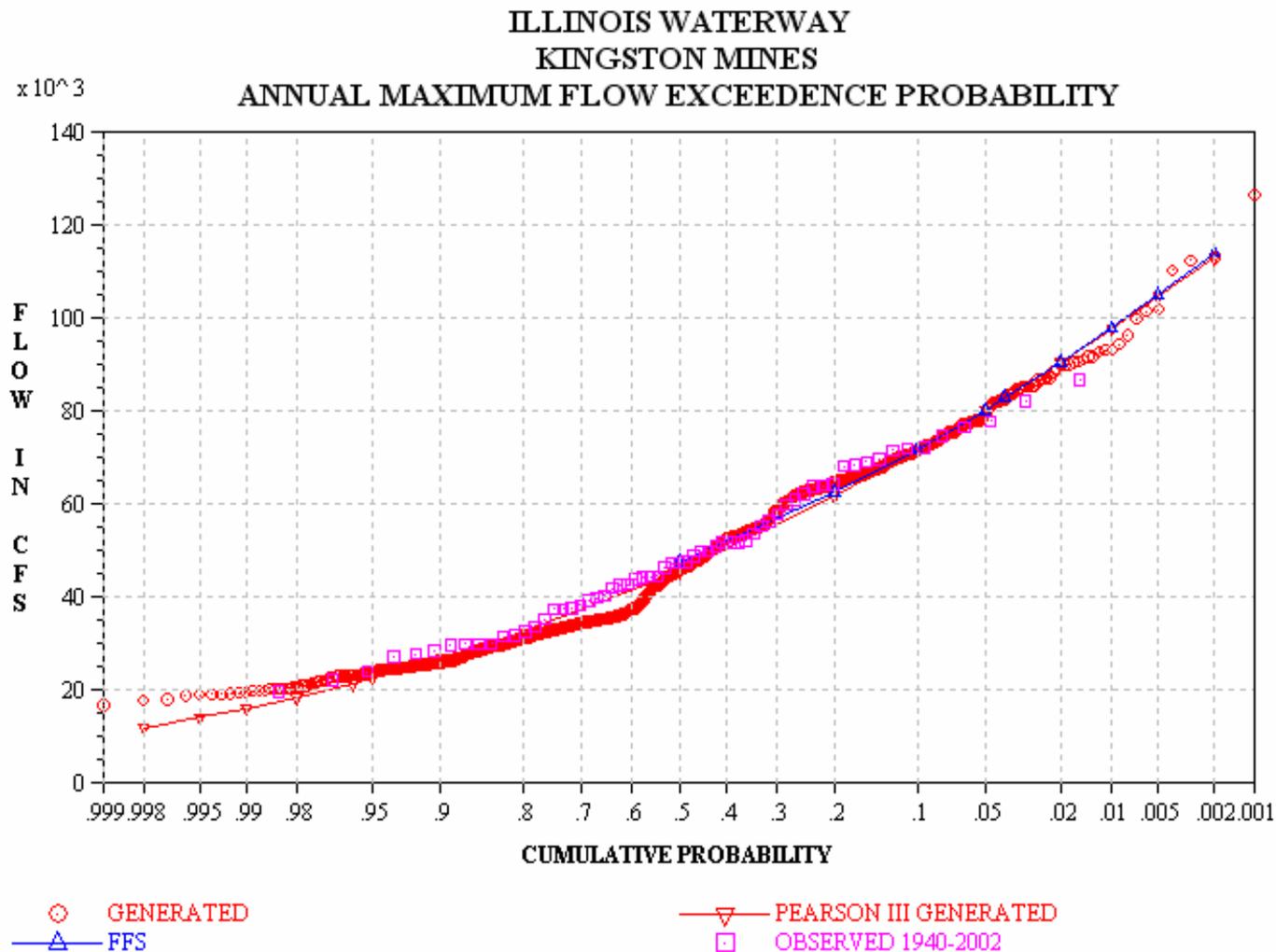


Figure B-5. Maximum flow exceedence frequency of Kingston Mines for FFS and for generated data from 2101 to 3100. The fitted skew, -0.4 , is used for the generated Log-Pearson III curve. FFS applied a regional skew of -0.2 .

Illinois River at Kingston Mines
Observed and Generated Maximum Runoff Volume
Weibul Exceedence Probability

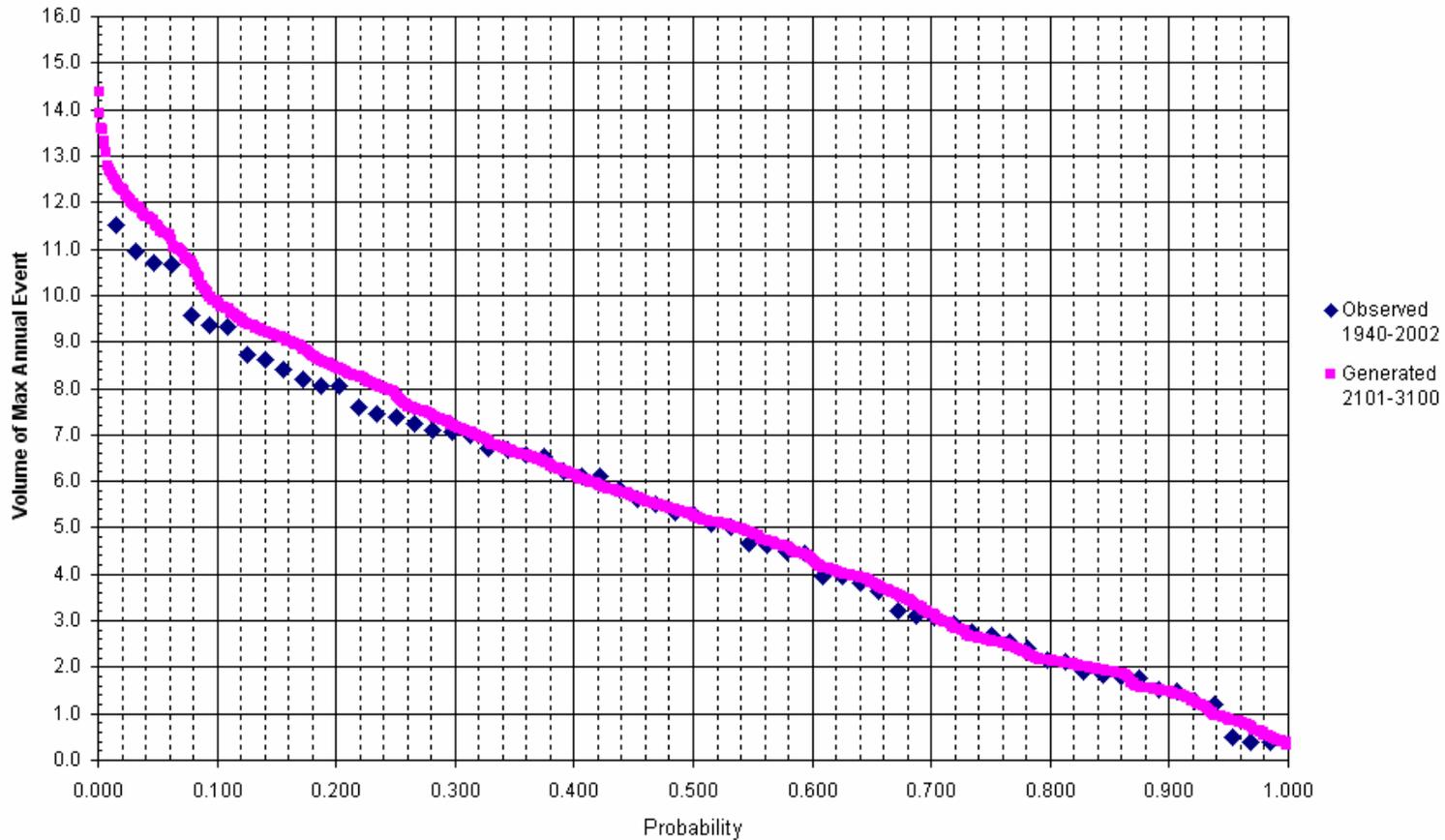


Figure B-6. Event volume frequency at Kingston Mines for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Illinois River at Valley City
Event Volume - Annual Volume Relationship

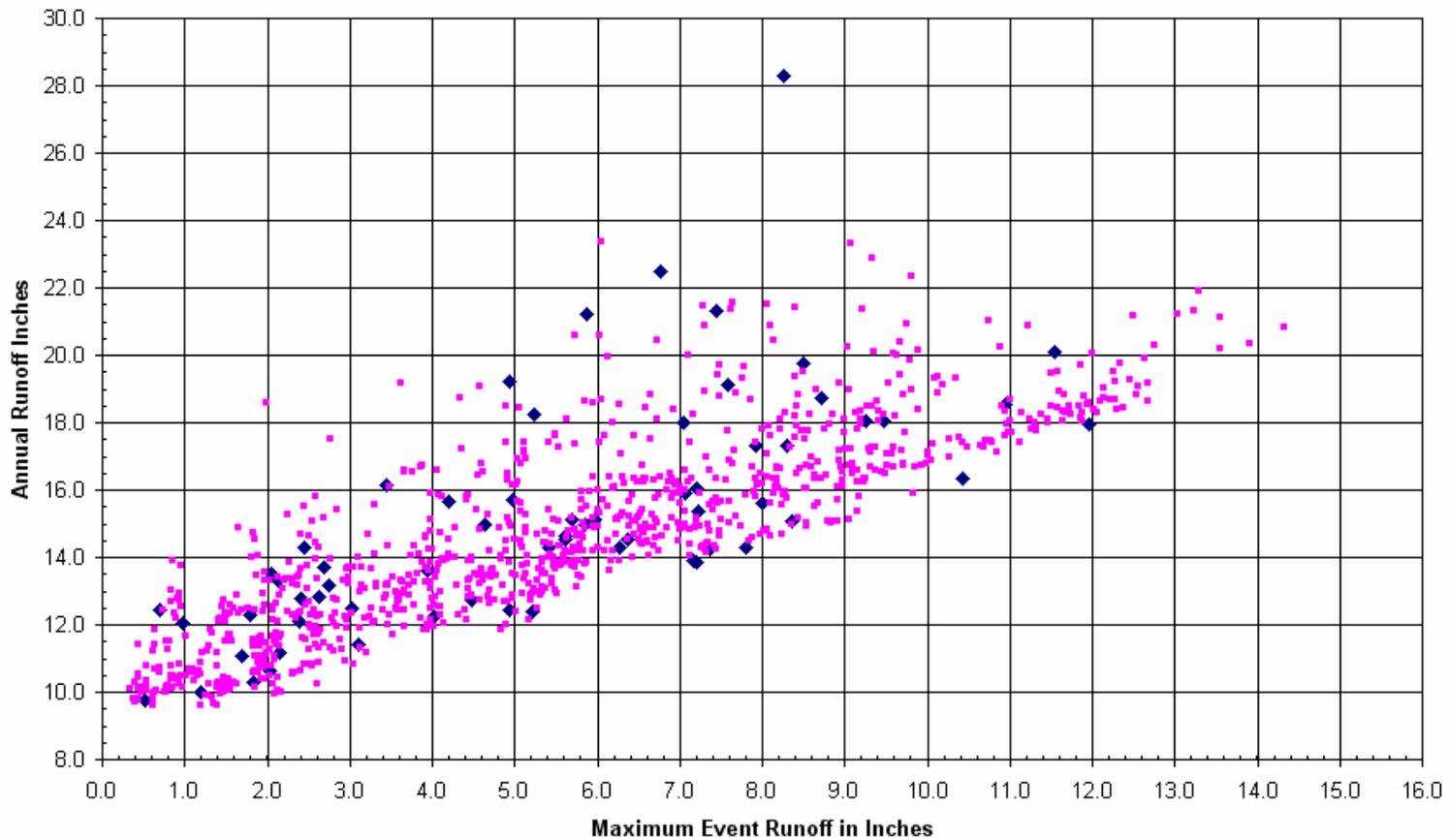


Figure B-7. Annual volume at Kingston Mines for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

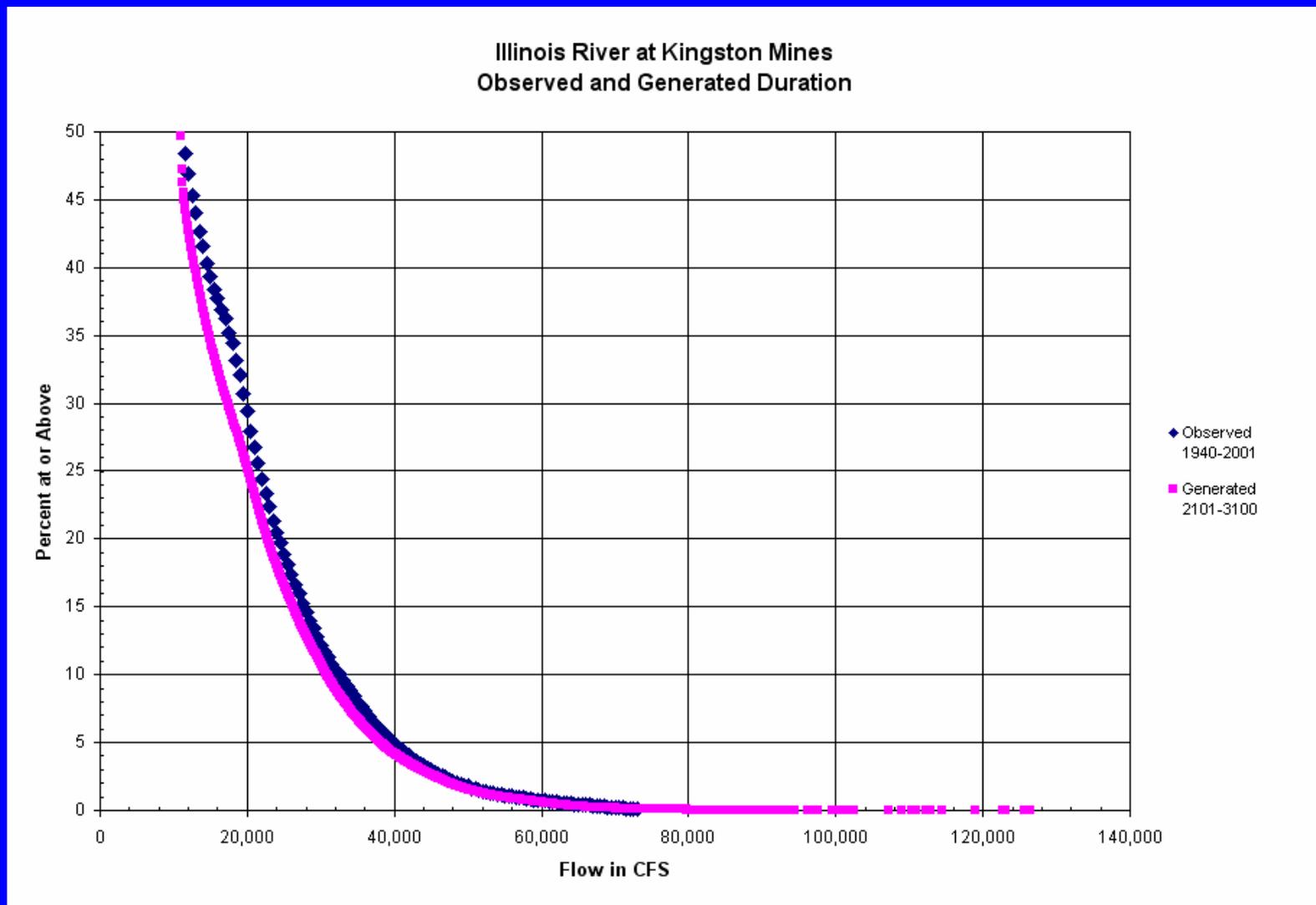


Figure B-8. Annual duration for at Kingston Mines for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

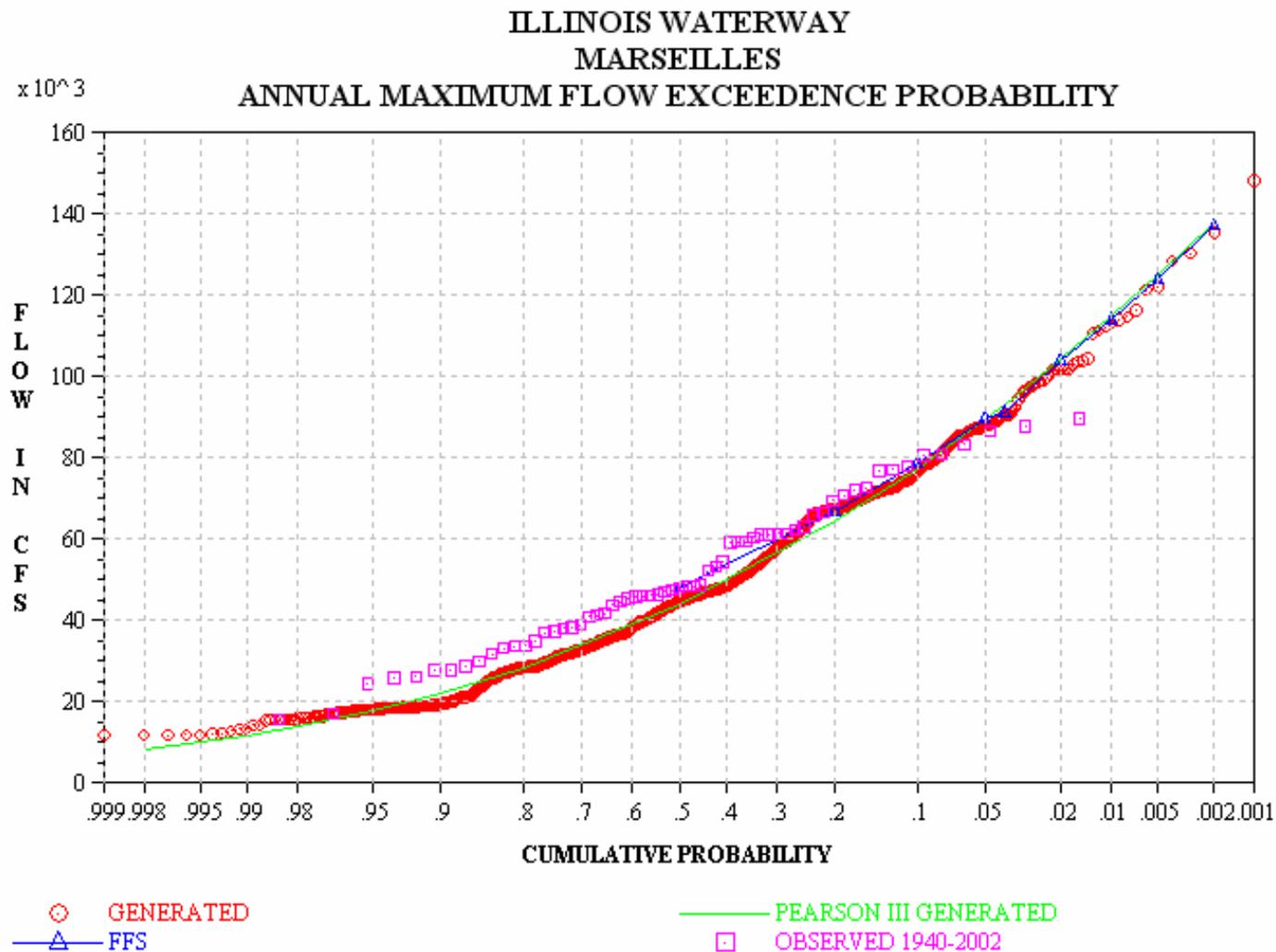


Figure B-9. Maximum flow exceedence frequency of Marseilles USGS for FFS and for generated data from 2101 to 3100. The fitted skew, -0.4 , is used for the generated Log-Pearson III curve. FFS applied a regional skew of -0.2 .

Illinois River at Marseilles
Observed and Generated Maximum Runoff Volume
Weibul Exceedence Probability

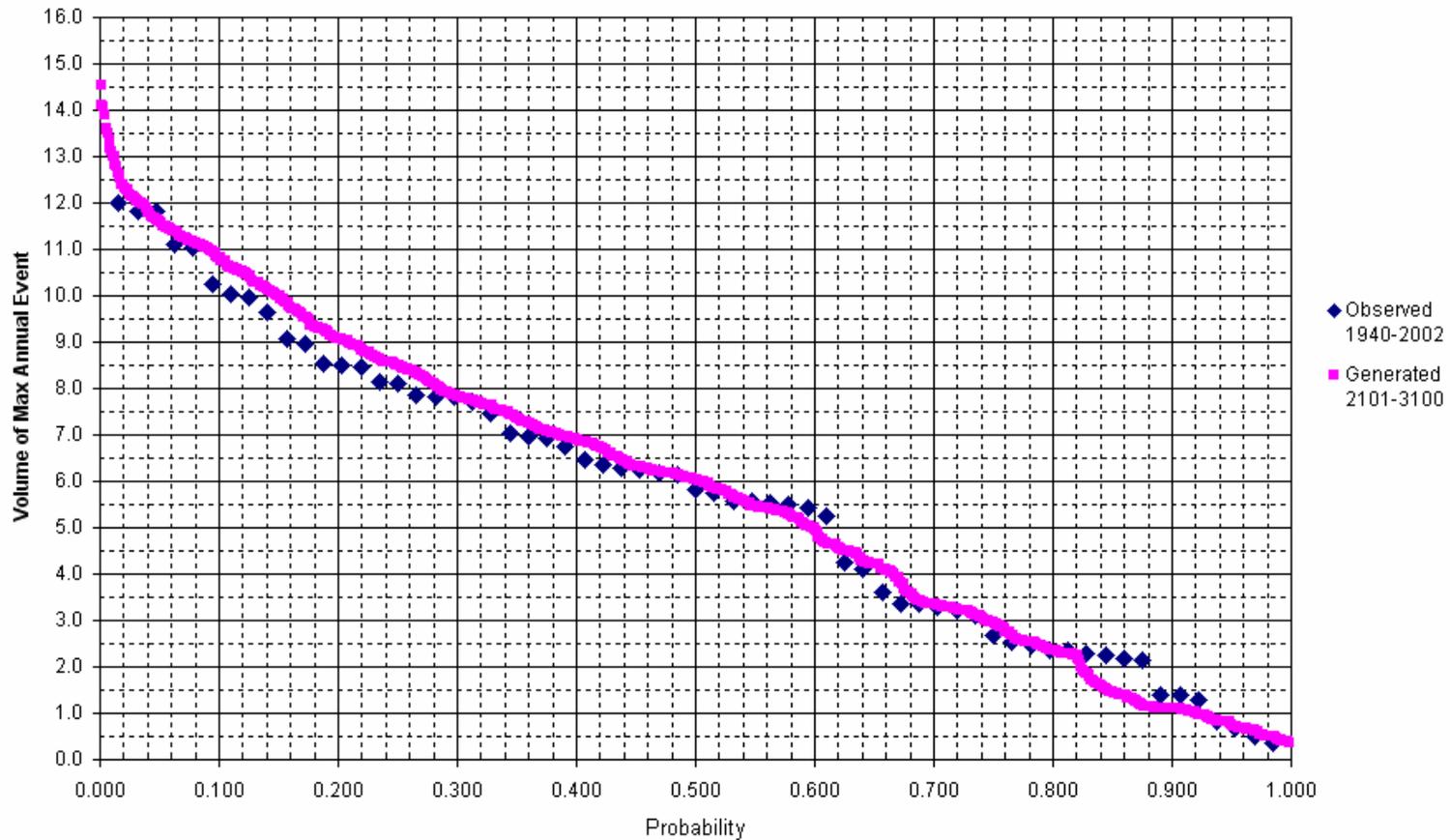


Figure B-10. Event volume frequency at Marseilles USGS for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Illinois River at Marseilles
Event Volume - Annual Volume Relationship

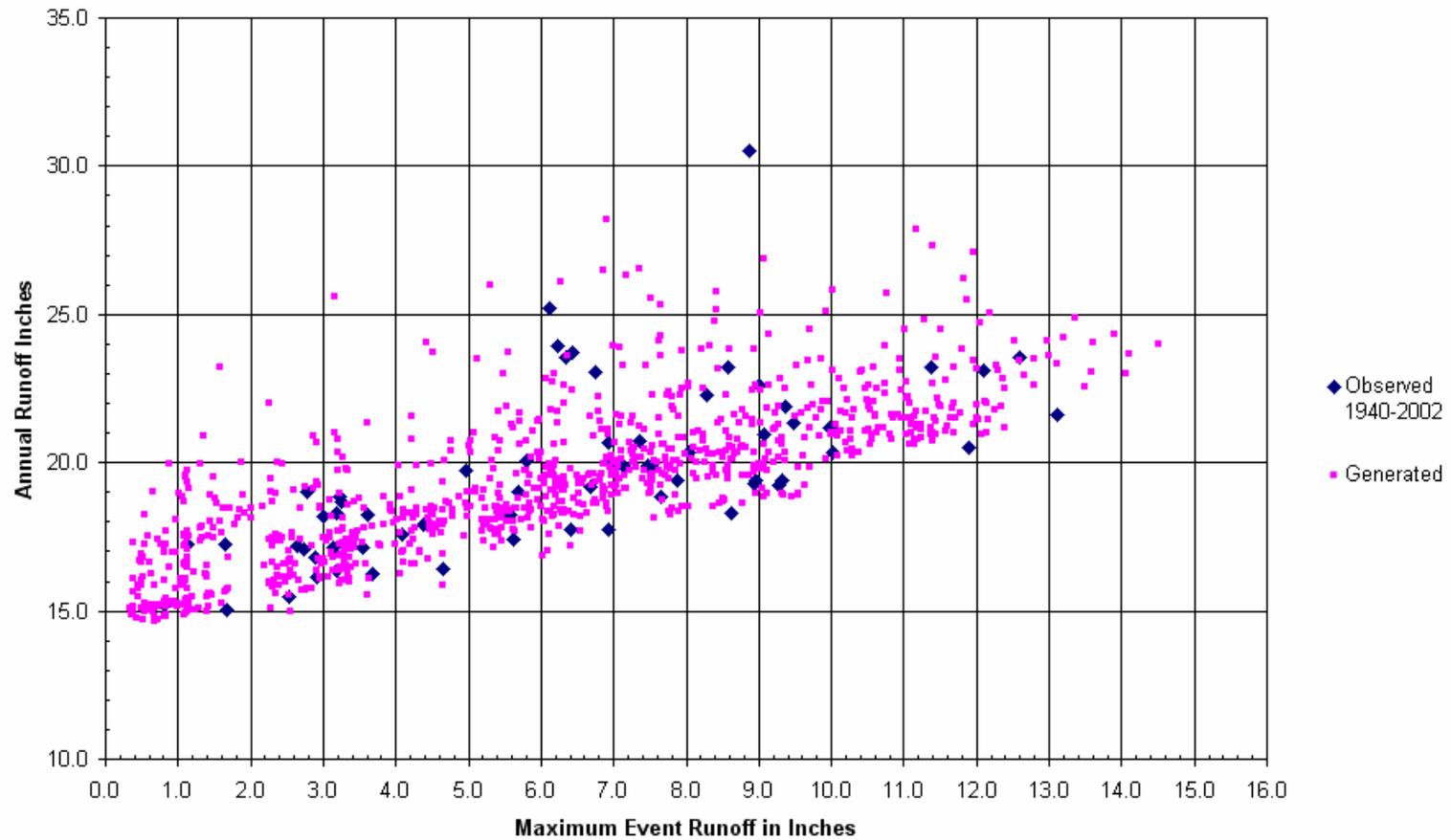


Figure B-11. Annual volume at Marseilles USGS for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Illinois River at Valley City Observed and Generated Duration

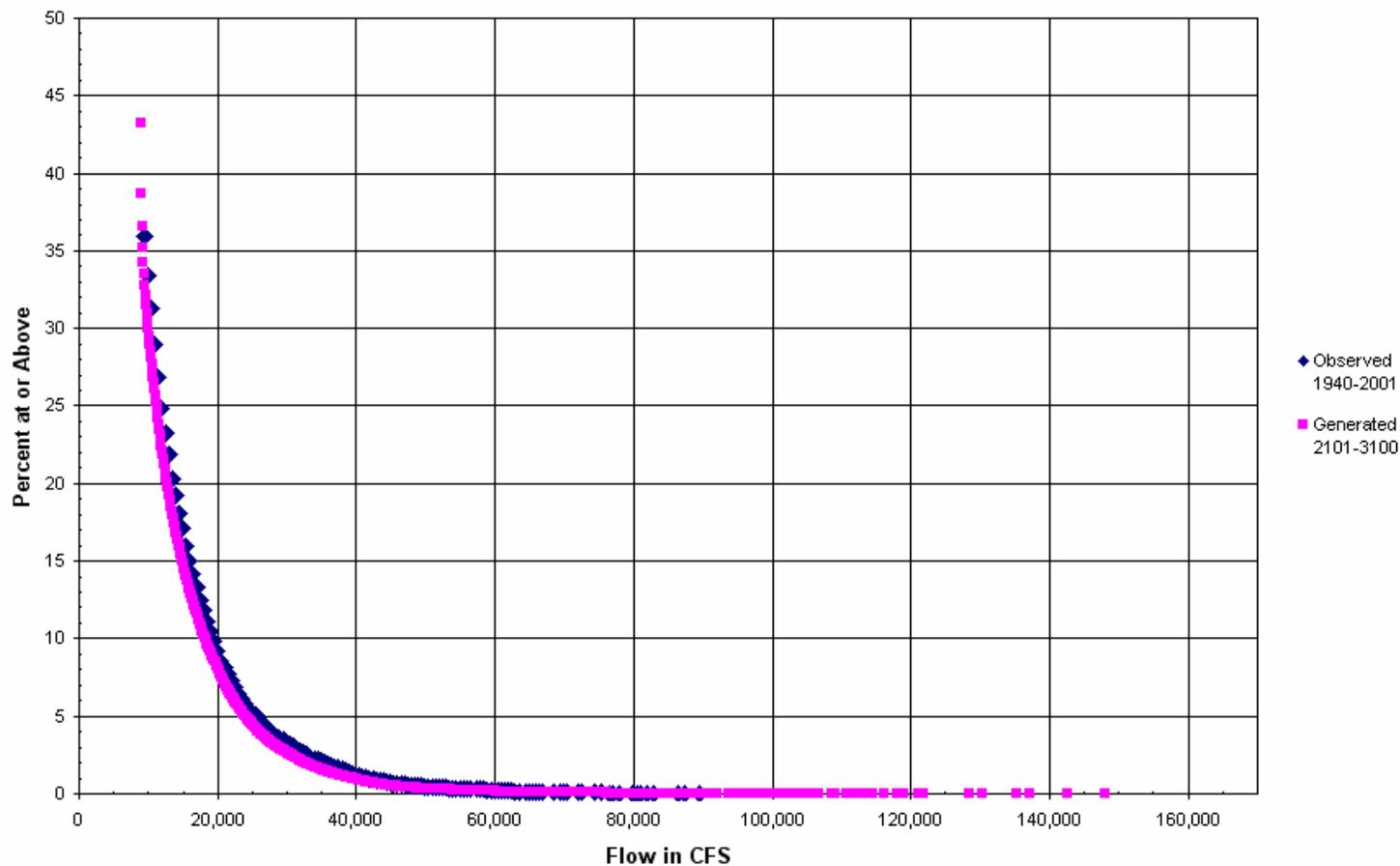


Figure B-12. Annual duration for at Valley City for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

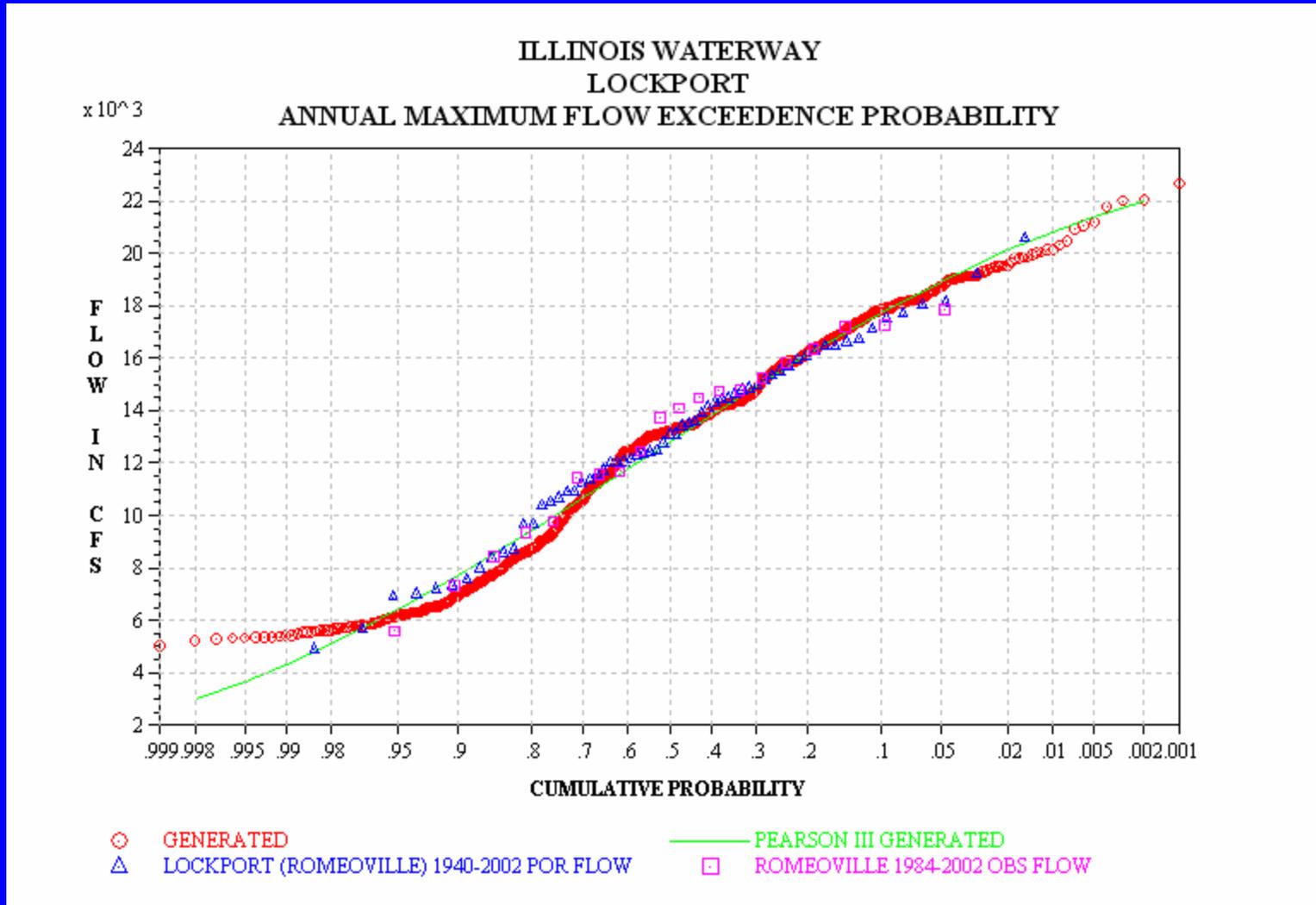


Figure B-13. Maximum flow exceedence frequency of Lockport (Romeoville) for observed and for generated data from 2101 to 3100.

Illinois River at Lockport
Observed and Generated Maximum Runoff Volume
Weibul Exceedence Probability

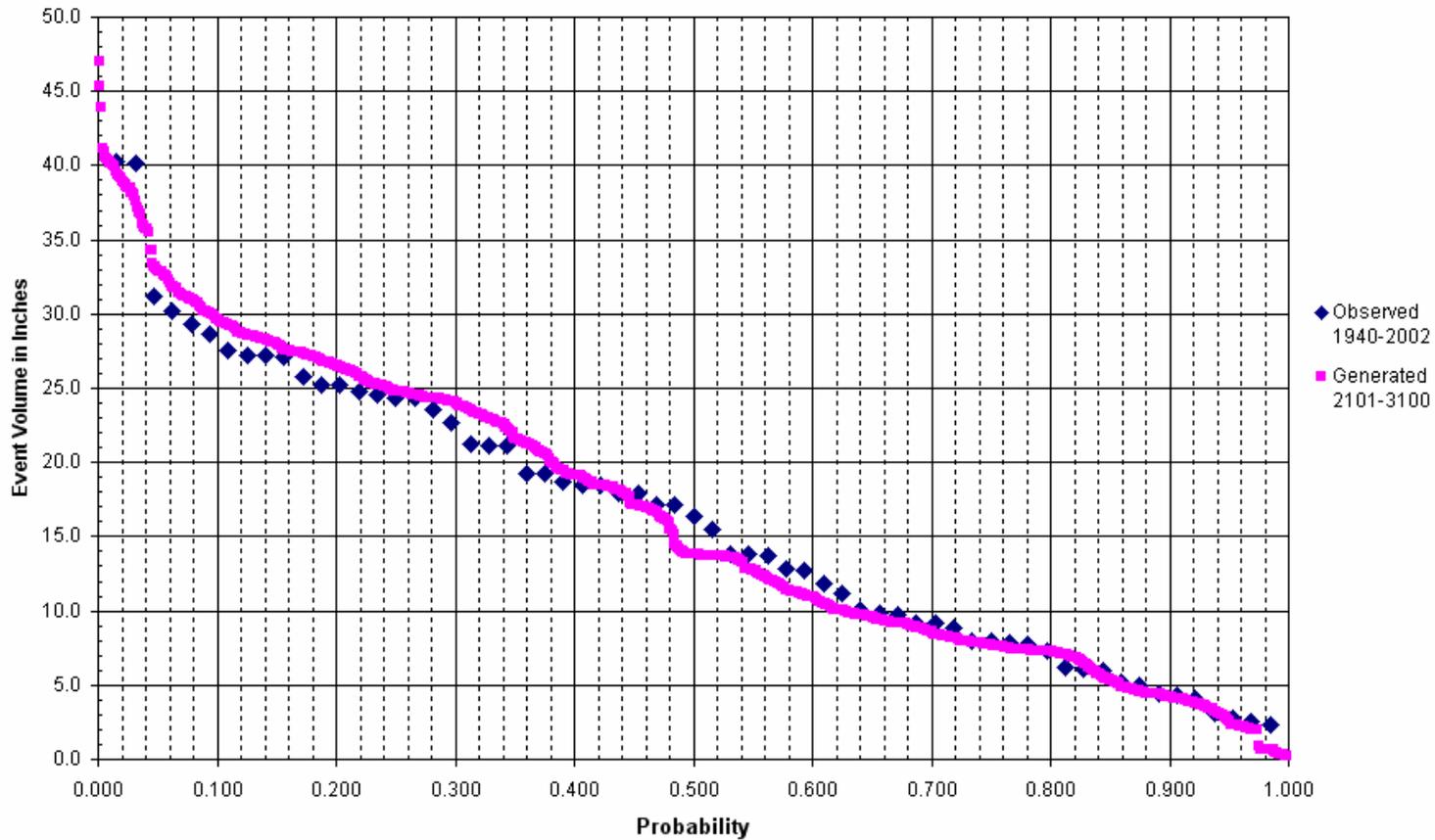


Figure B-14. Event volume frequency at Lockport for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

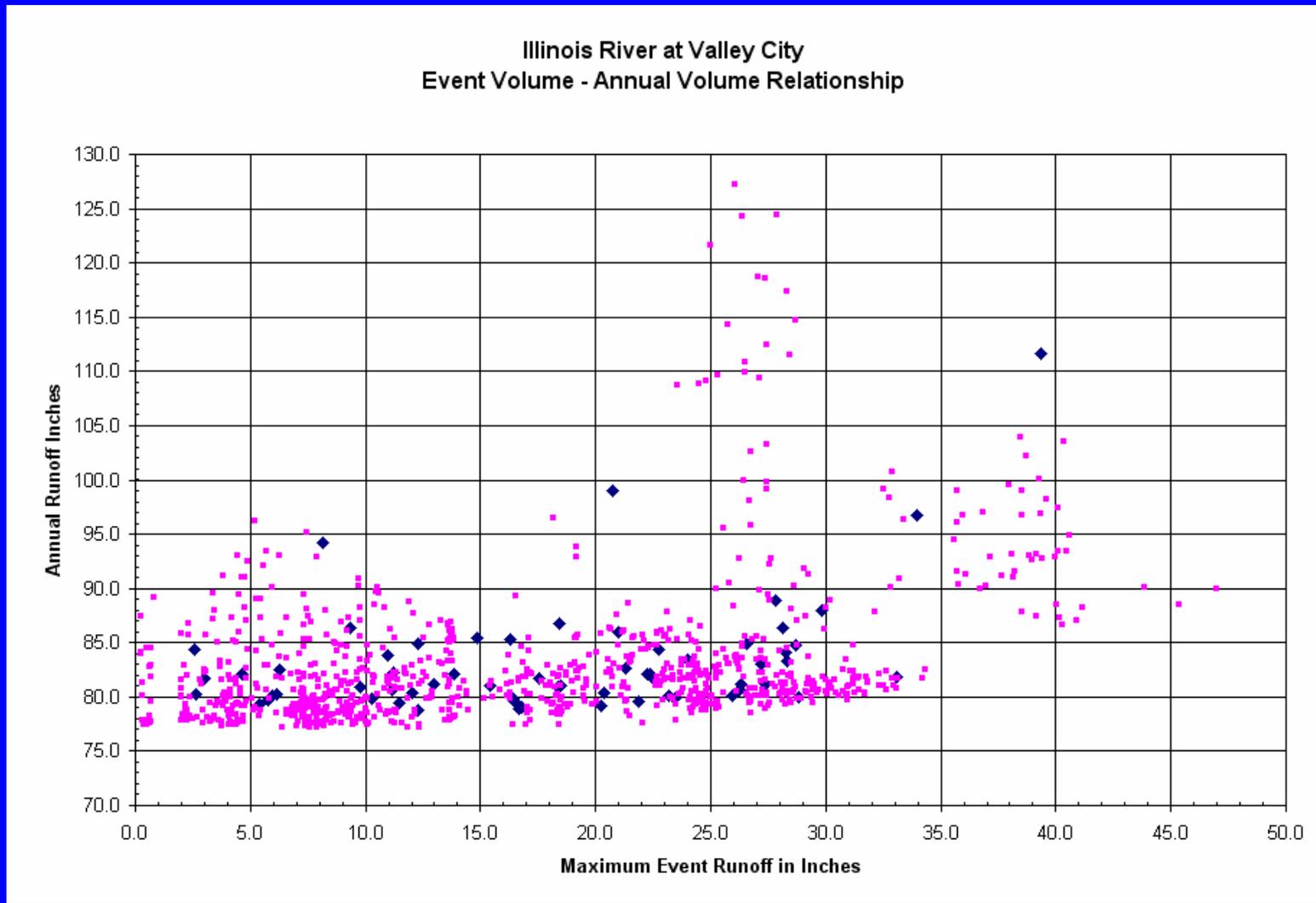


Figure B-15. Annual volume at Lockport for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

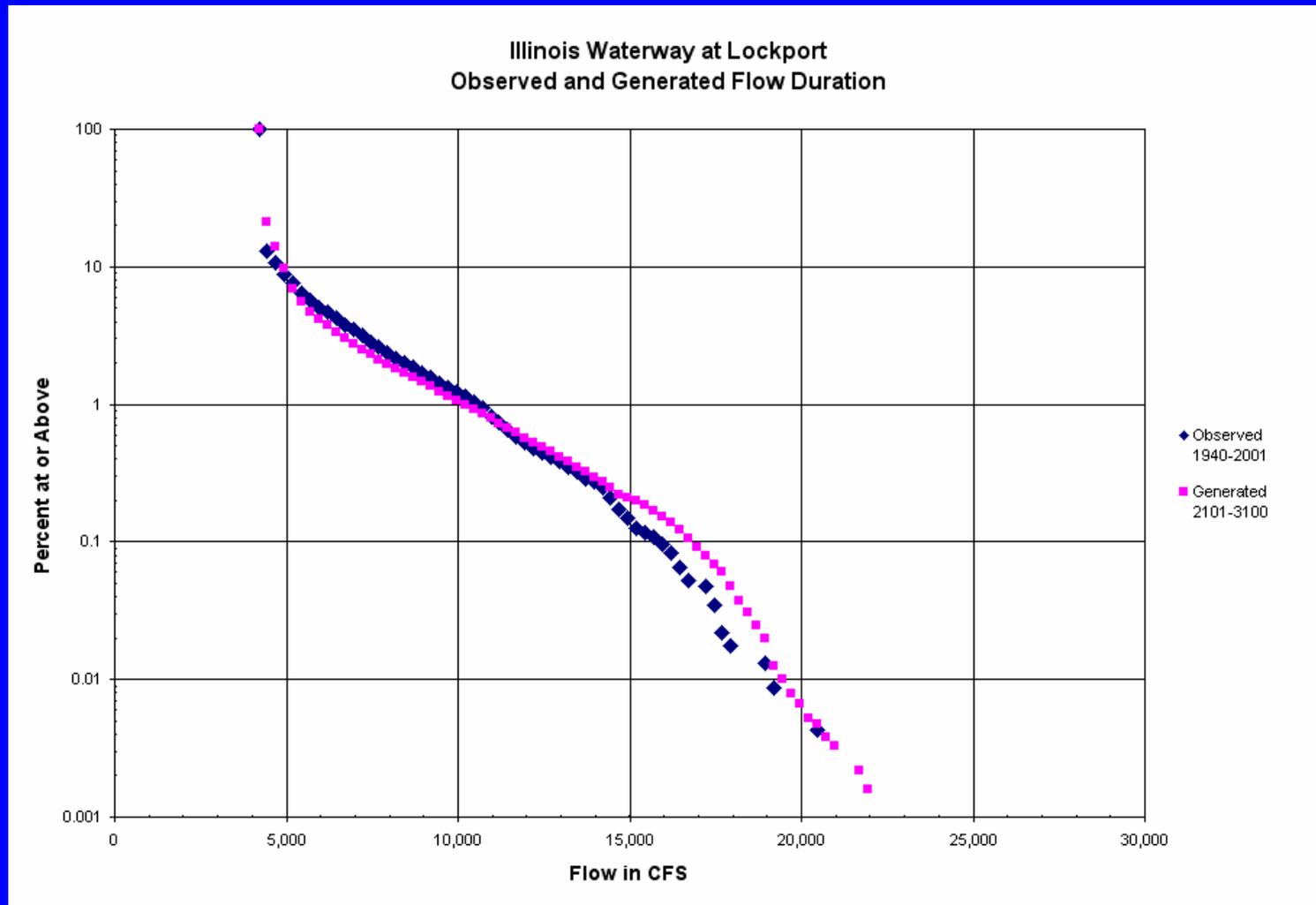


Figure B-16. Annual duration for at Lockport for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Appendix C

Observed and Generated
Statistics at Mississippi River
USGS Discharge Stations within
the Rock Island District

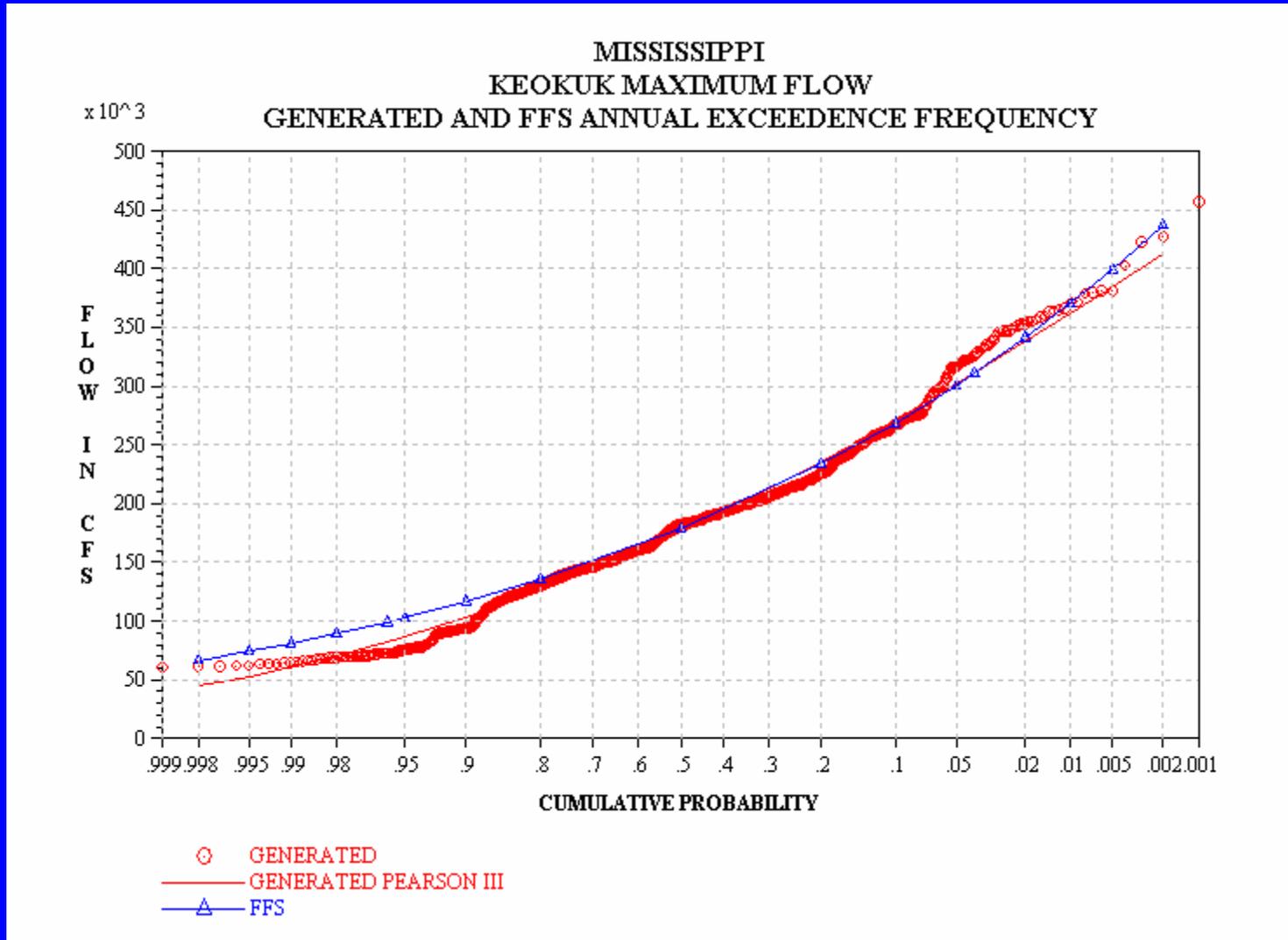


Figure C-1. Maximum flow exceedence frequency at Keokuk for FFS and for generated data from 2101 to 3100. The actual skew, -0.501 , is used for the generated Log-Pearson III curve. FFS applied a regional skew of -0.100 .

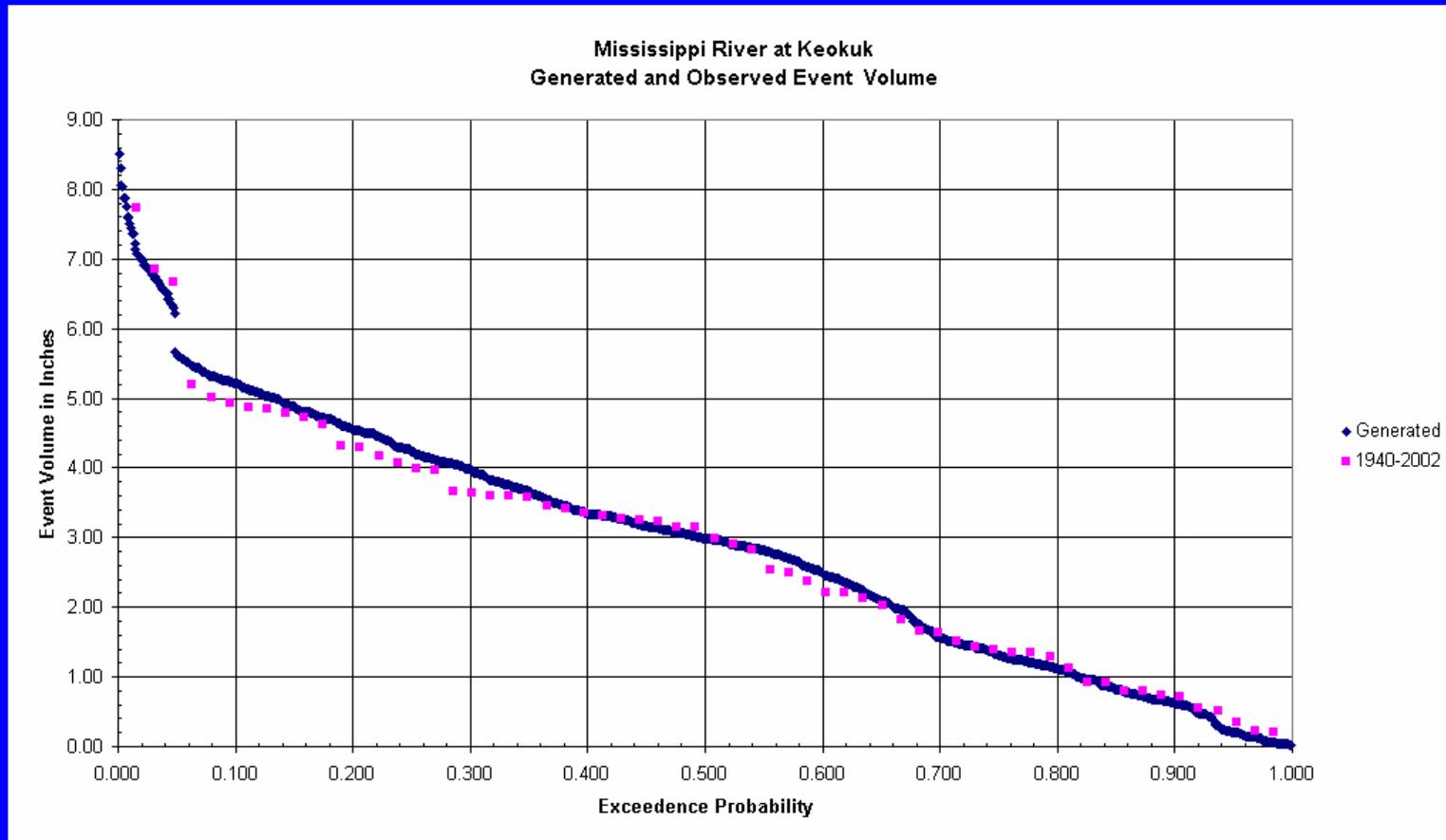


Figure C-2. Event volume frequency at Keokuk for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

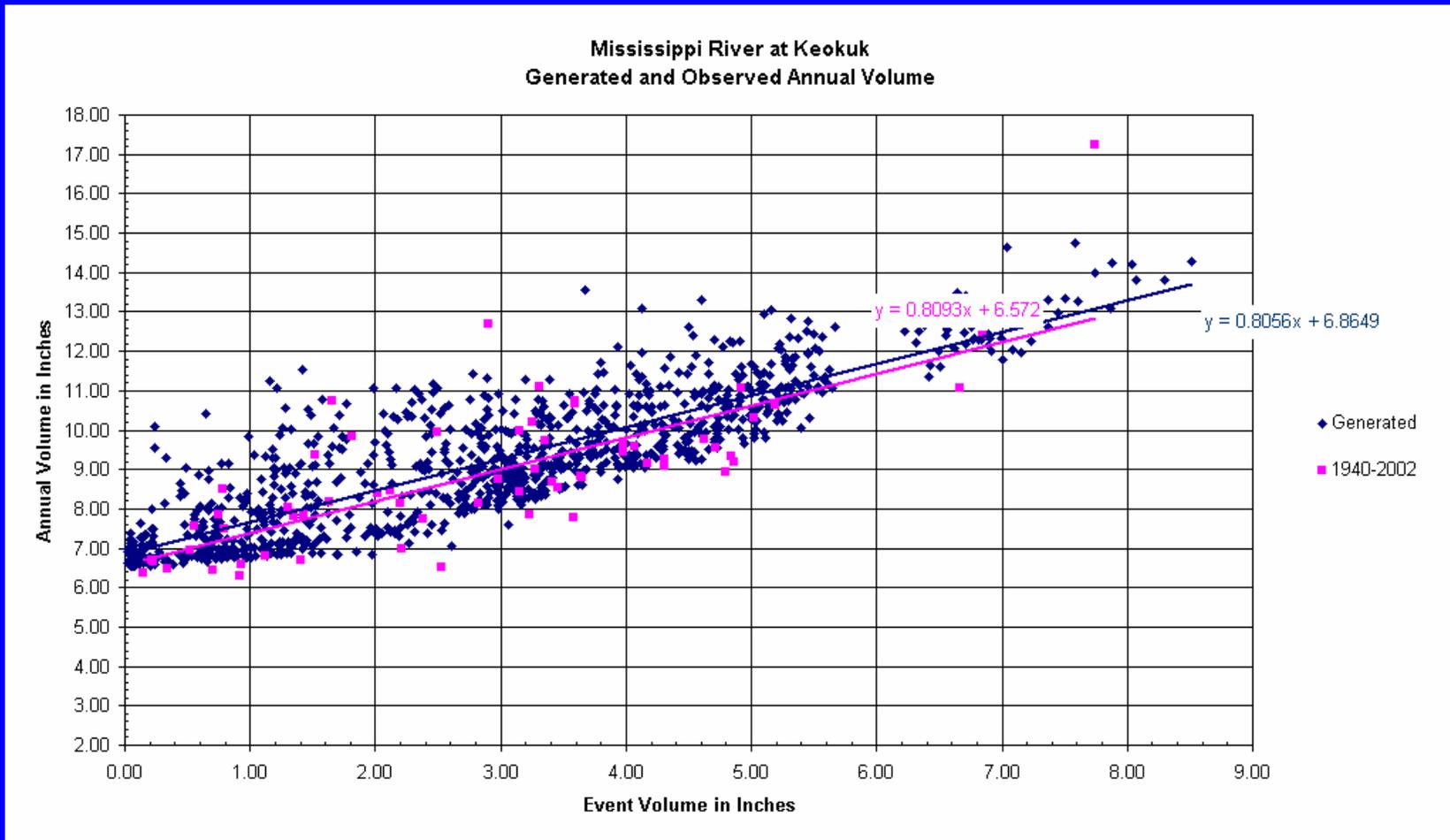


Figure C-3. Annual volume at Keokuk for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

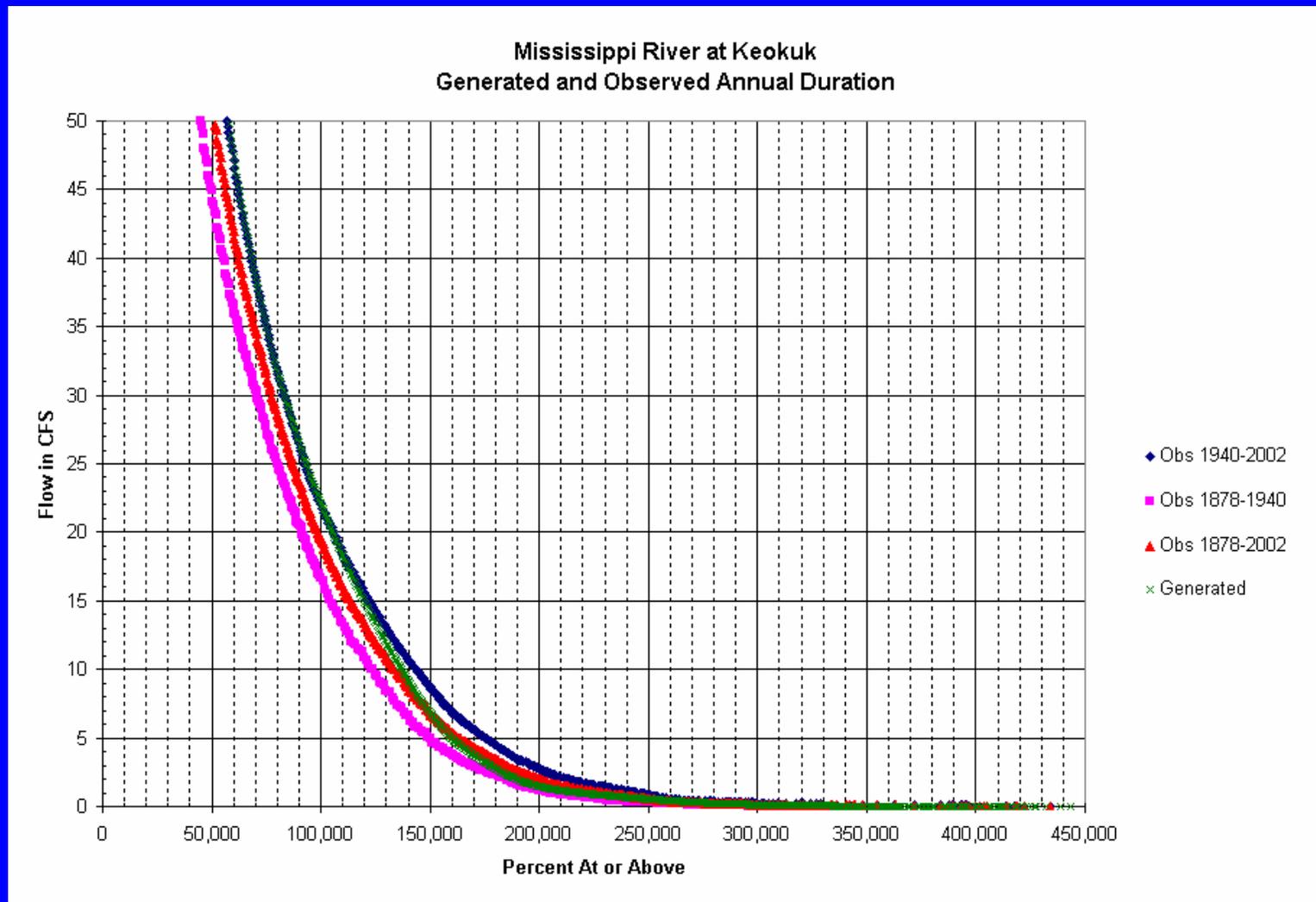


Figure C-4. Annual duration at Keokuk below the 50% level for observed data from 1940 to 2002, 1878 to 1940, and 1878 to 2002 and for generated data from 2101 to 3100. The plot shows that duration of the generated data is within the variability of the observed time series.

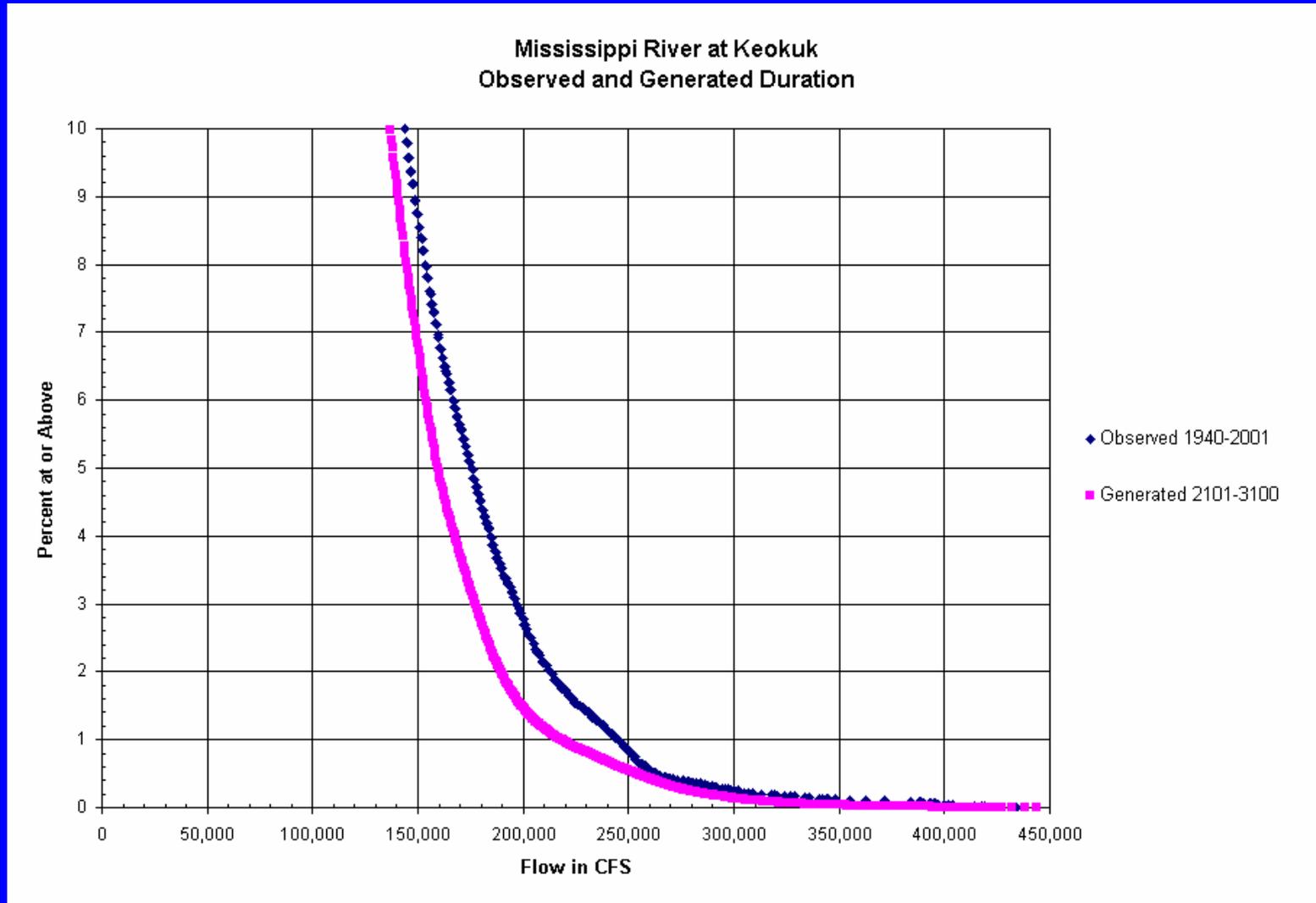


Figure C-5. Annual duration at Keokuk below the 10% level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

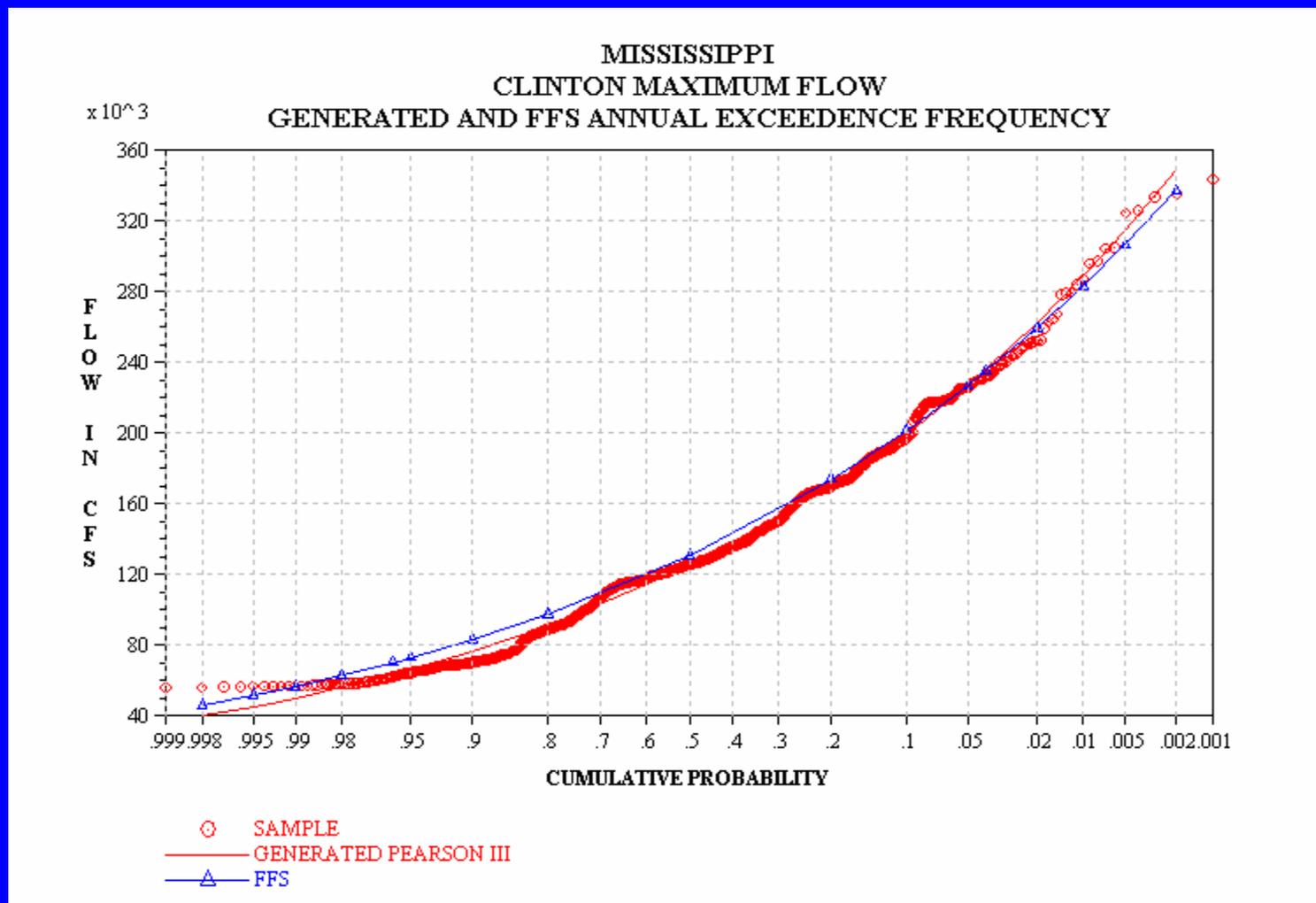


Figure C-6. Maximum flow exceedence frequency at Clinton for FFS and for generated data from 2101 to 3100. The actual skew, -0.114 , is used for the generated Log-Pearson III curve. FFS applied a regional skew of -0.100 .

Mississippi River at Clinton
Observed and Generated Event Volume

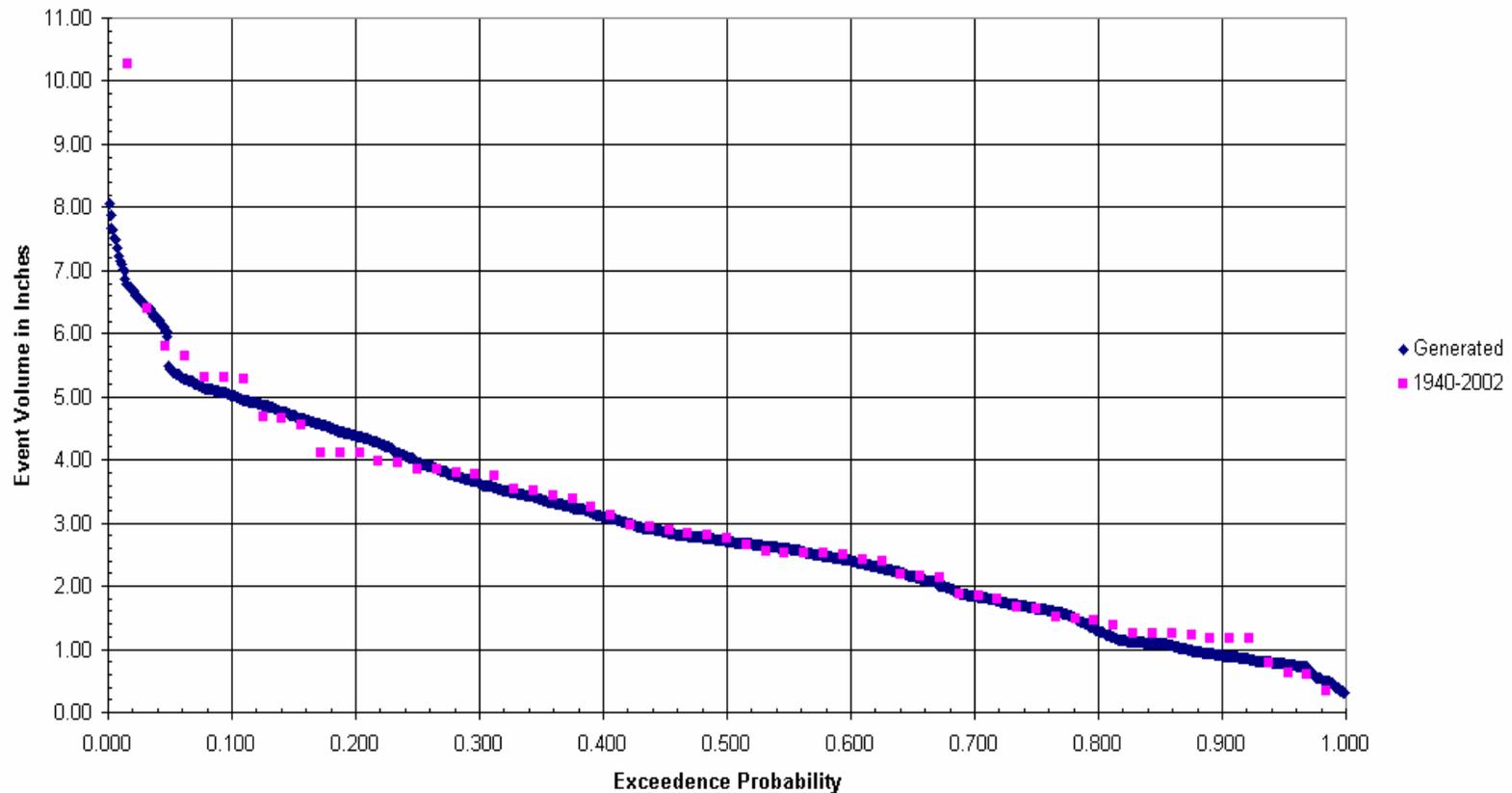


Figure C-7. Event volume frequency at Clinton for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

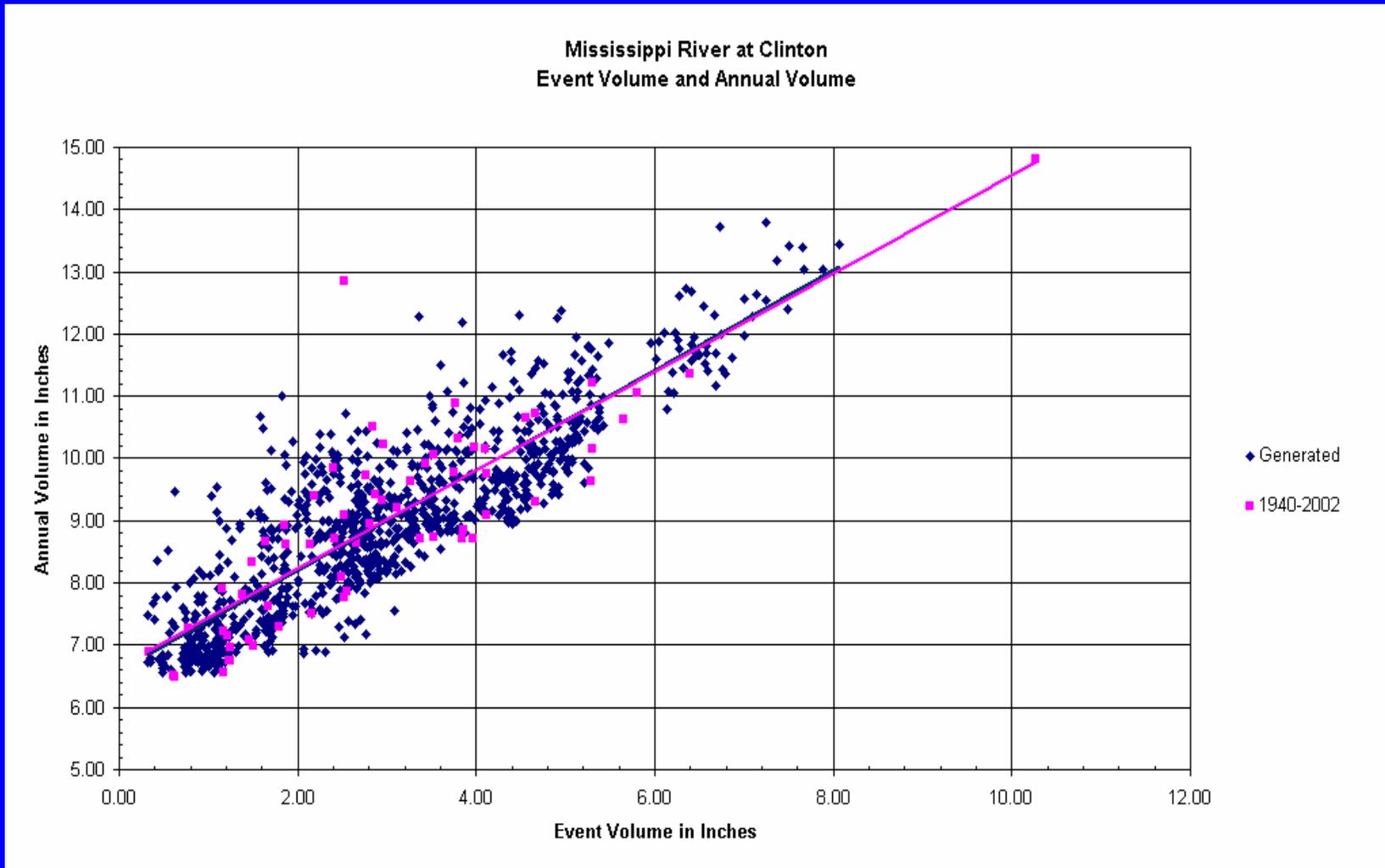


Figure C-8. Annual volume at Clinton for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

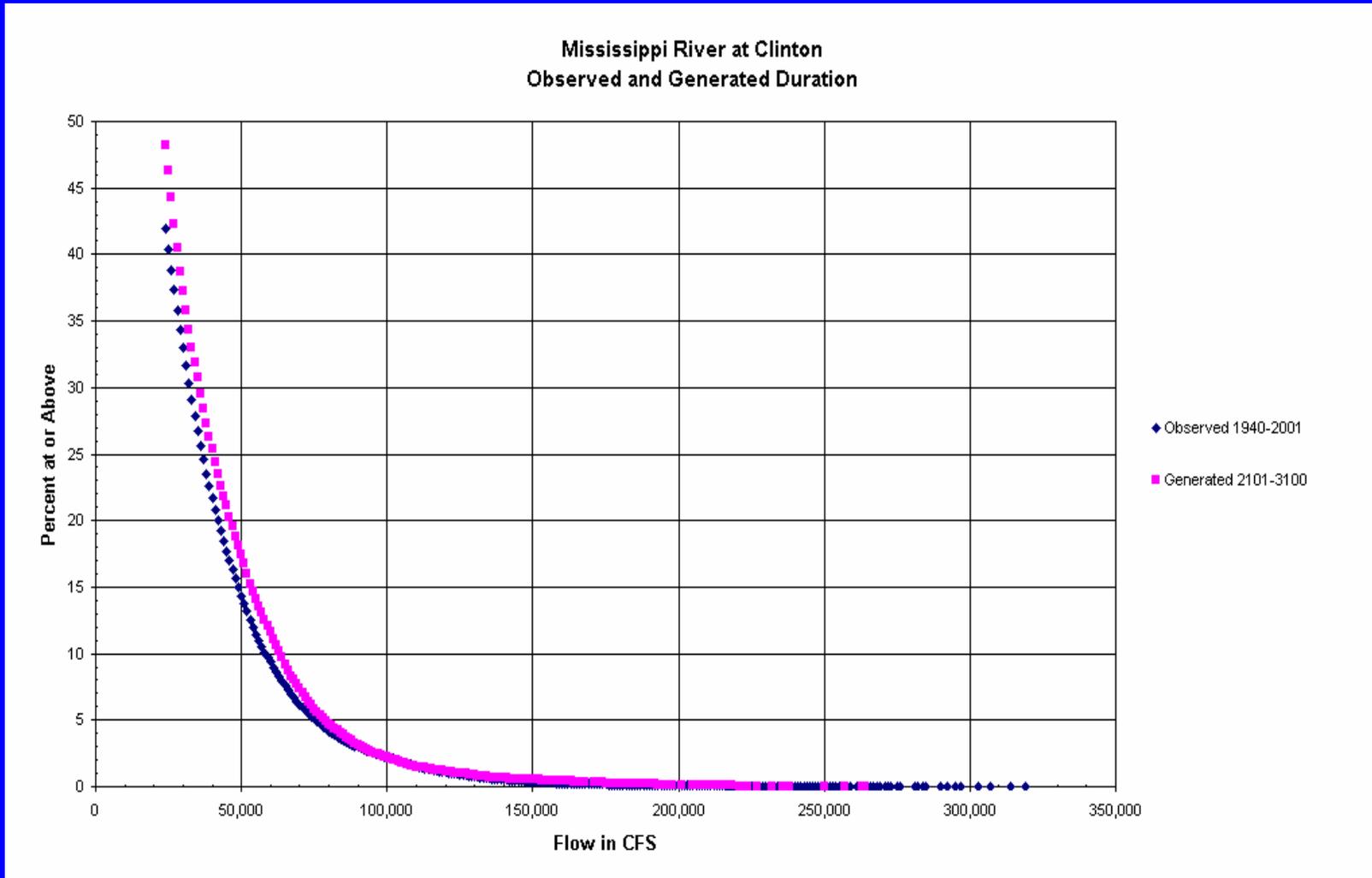


Figure C-9. Annual duration at Clinton below the 50% level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

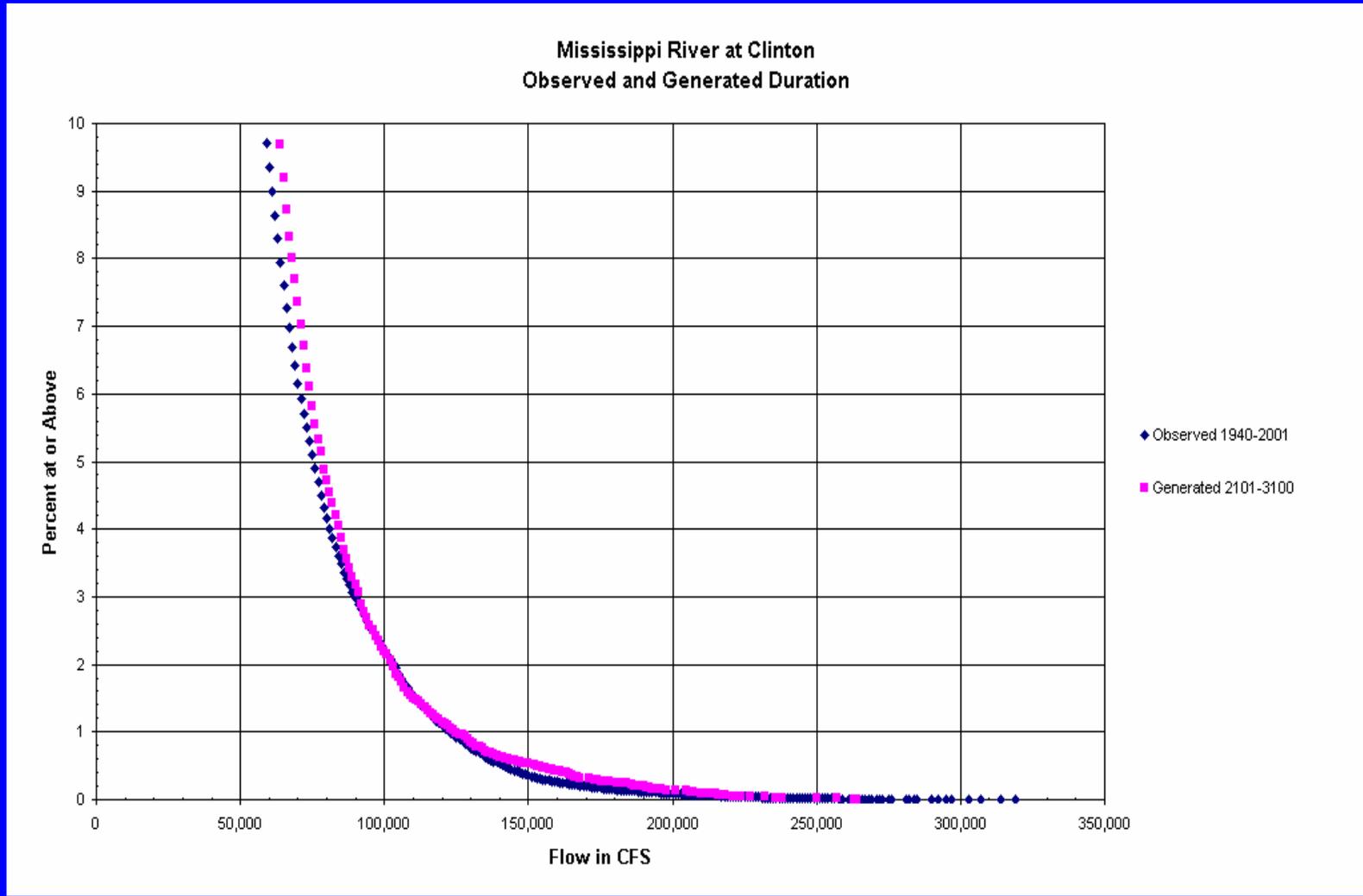


Figure C-10. Annual duration at Clinton below the 10% level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

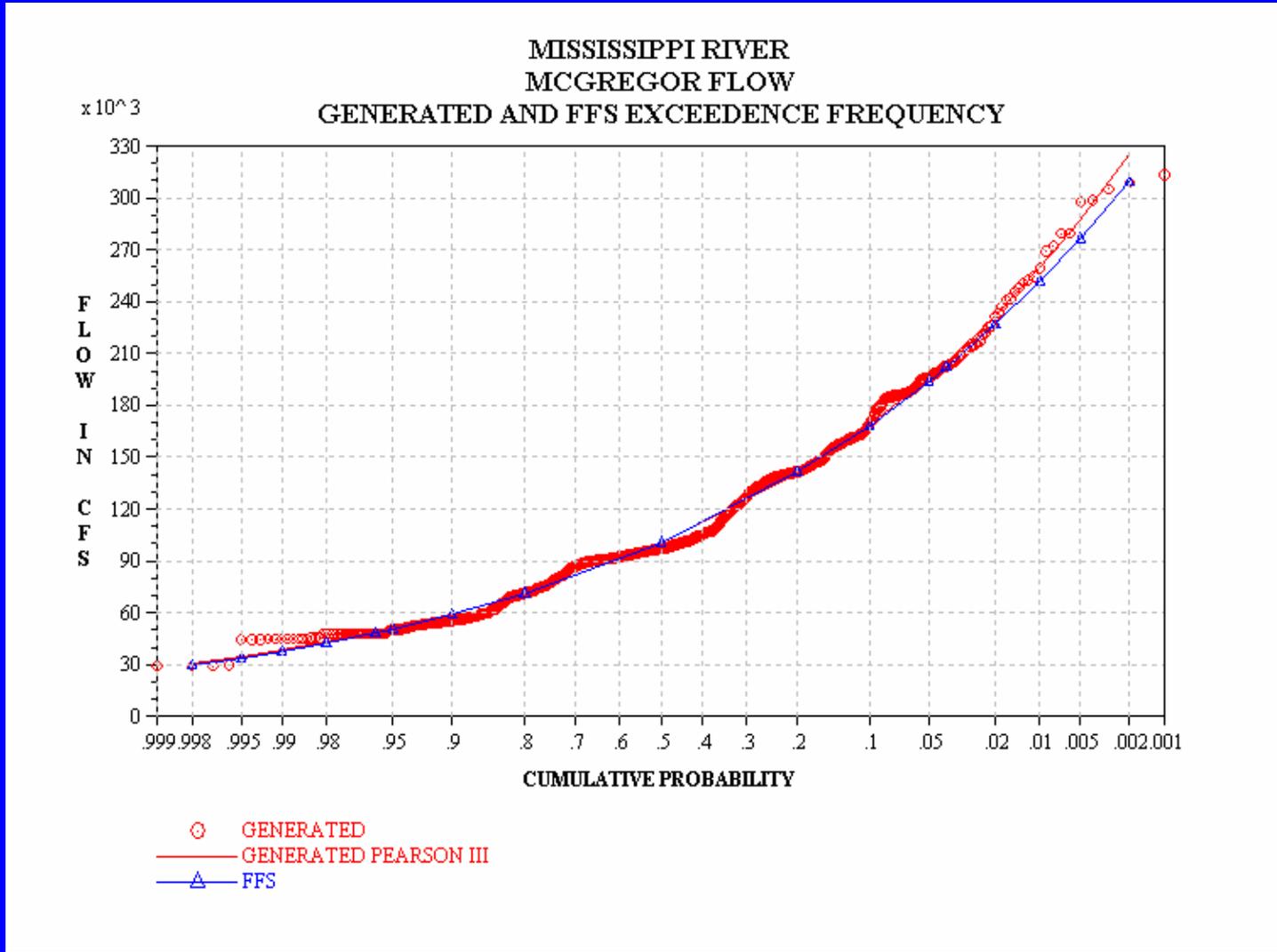


Figure C-11. Maximum flow exceedence frequency at McGregor for FFS and for generated data from 2101 to 3100. The actual skew, 0.00, is used for the generated Log-Pearson III curve. FFS applied a regional skew of -0.100 .

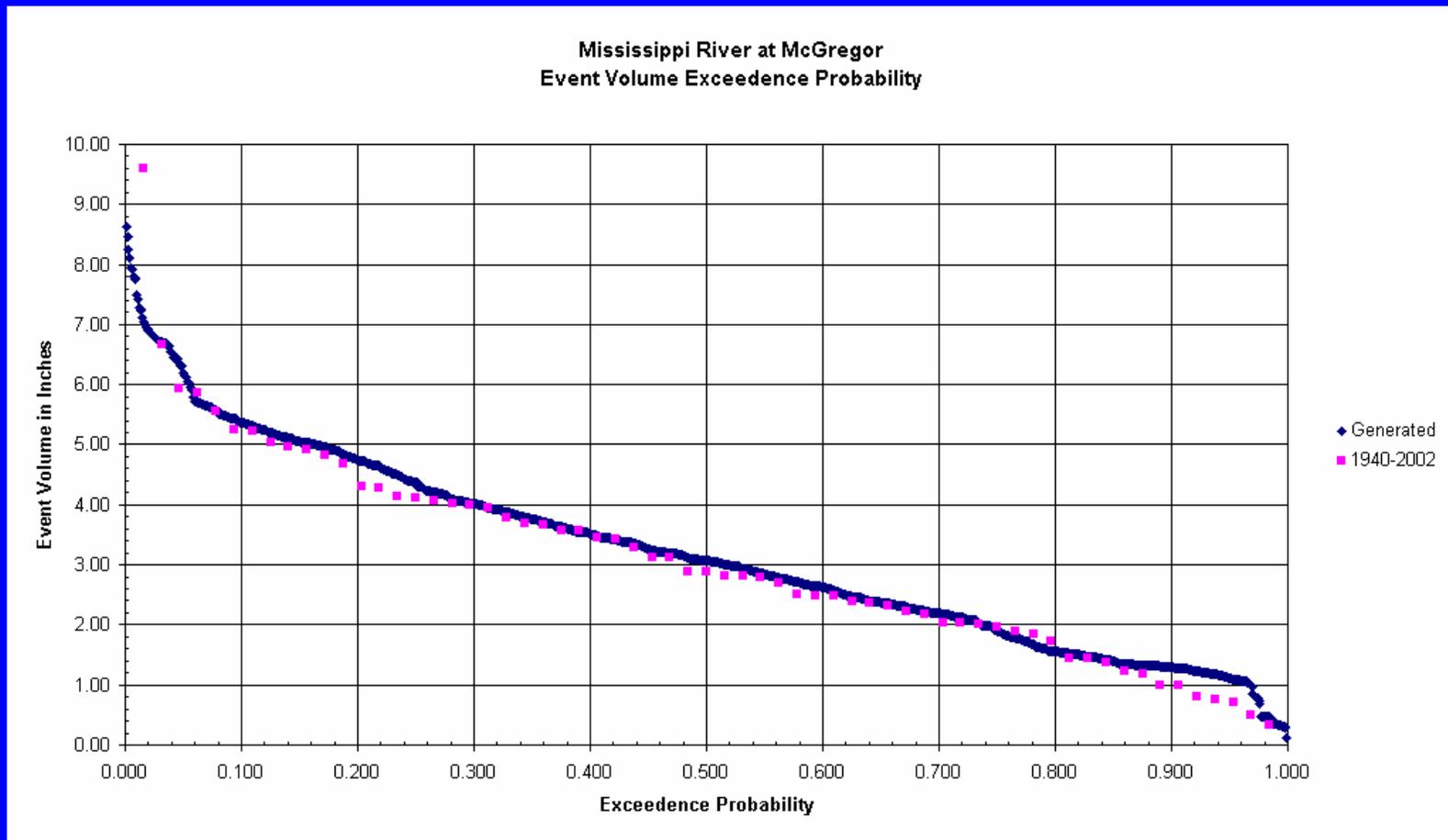


Figure C-12. Event volume frequency at McGregor for observed data from 1940 to 2002 and for generated data from 2101 to 3100

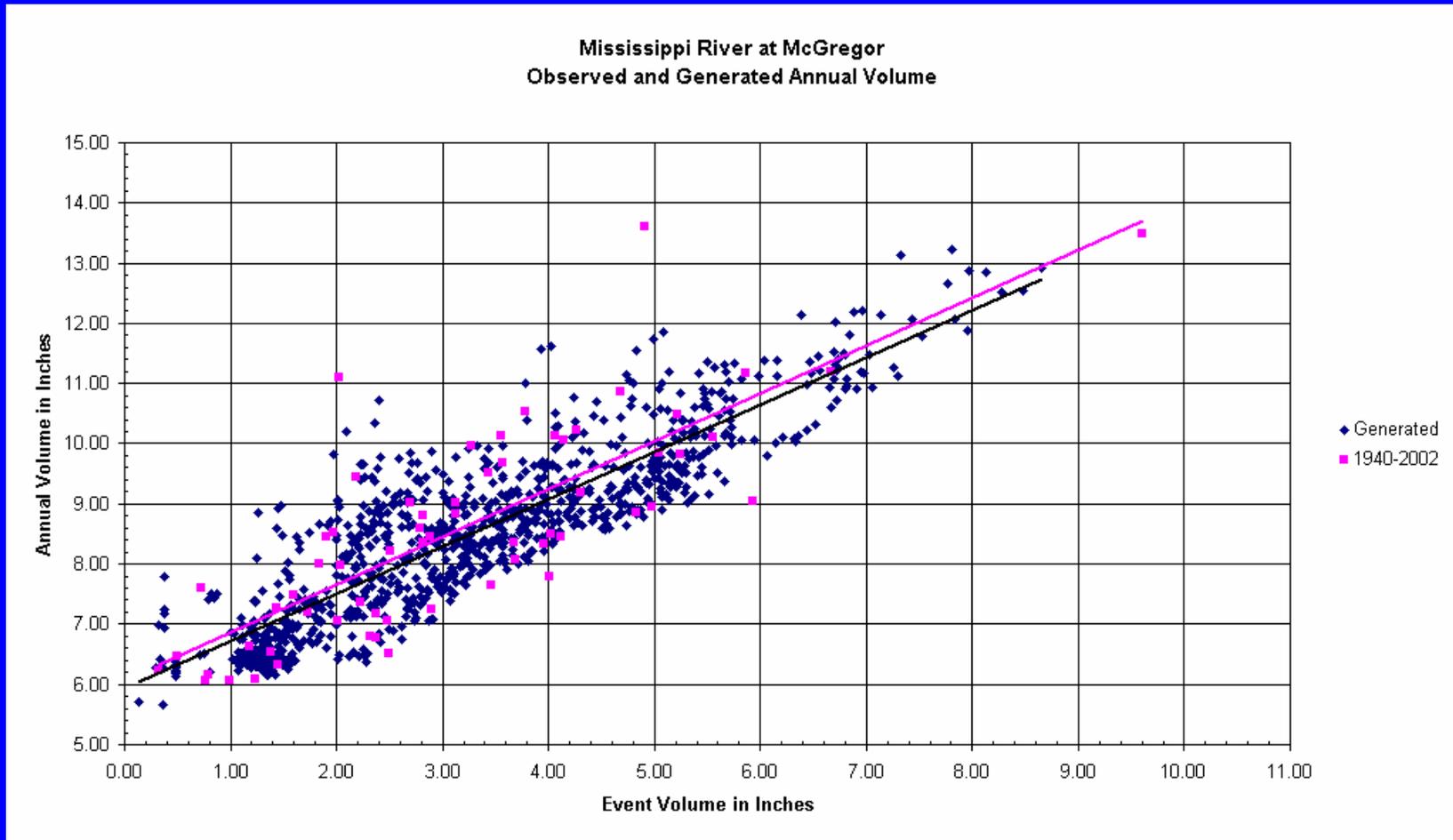


Figure C-13. Annual volume at McGregor for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

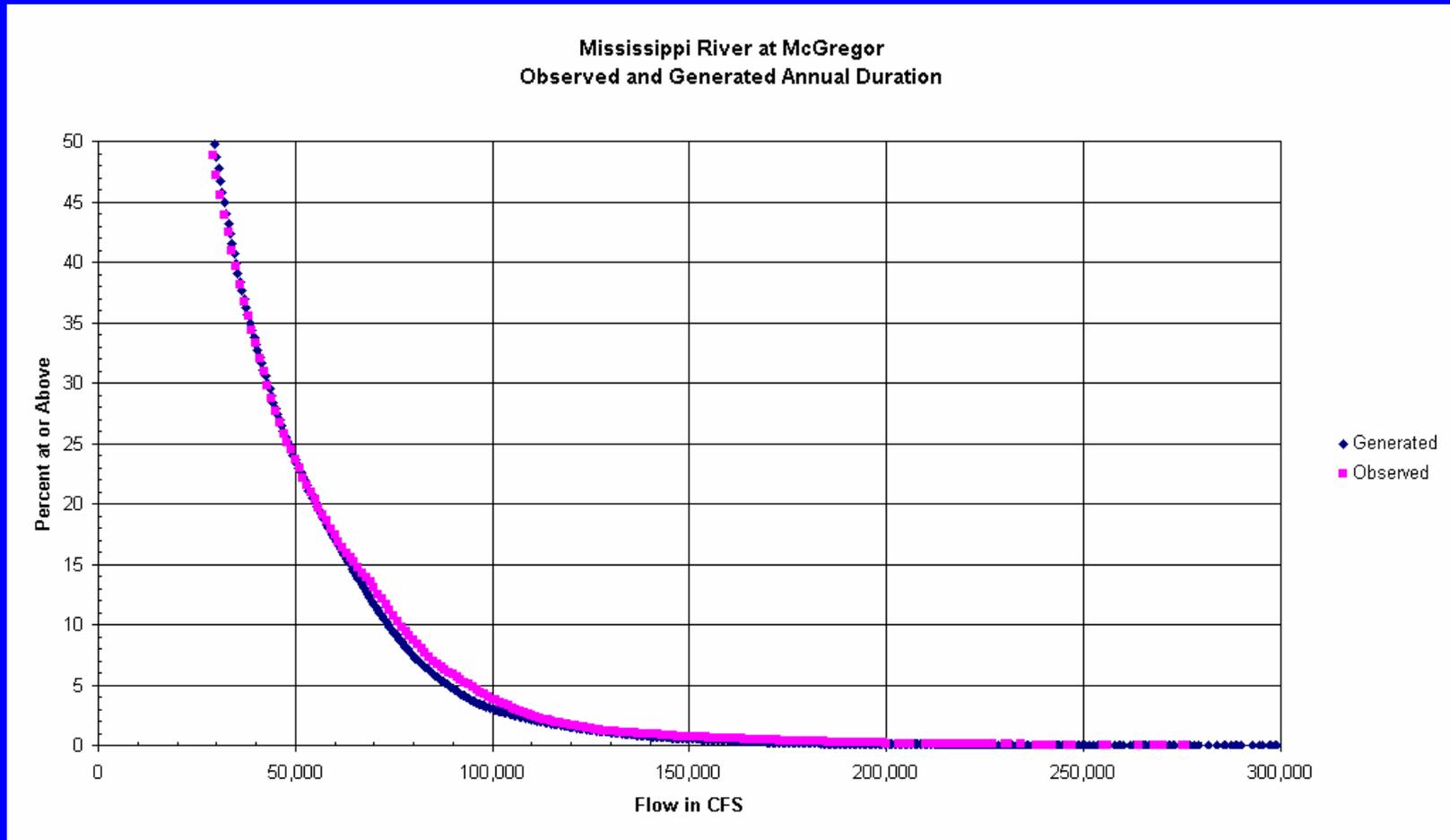


Figure C-14. Annual duration at McGregor below the 50% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Appendix D

Observed and Generated
Statistics at Mississippi River
USGS Discharge Stations within
the St. Paul District

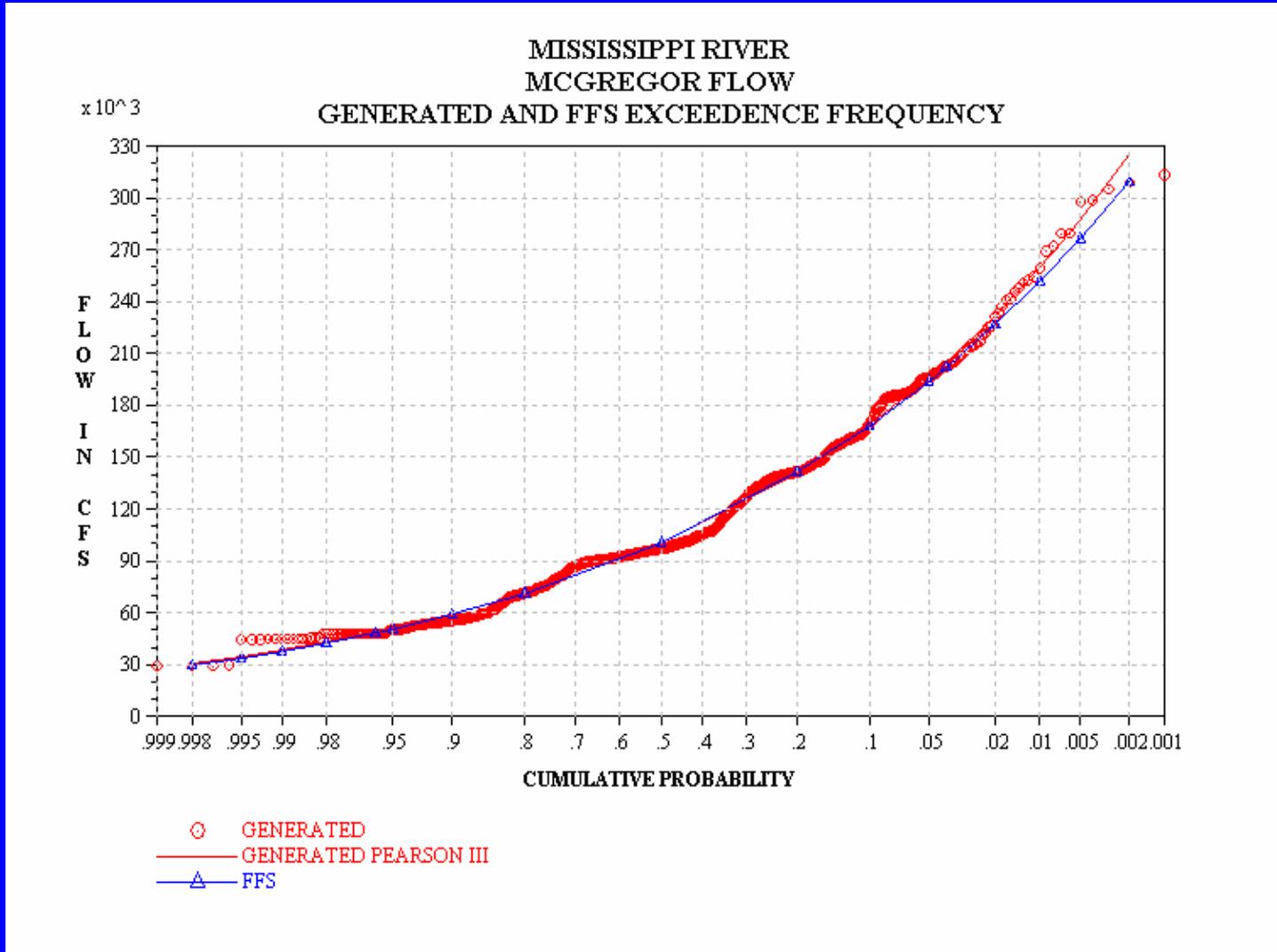


Figure D-1. Maximum flow exceedence frequency at McGregor for FFS and for generated data from 2101 to 3100.

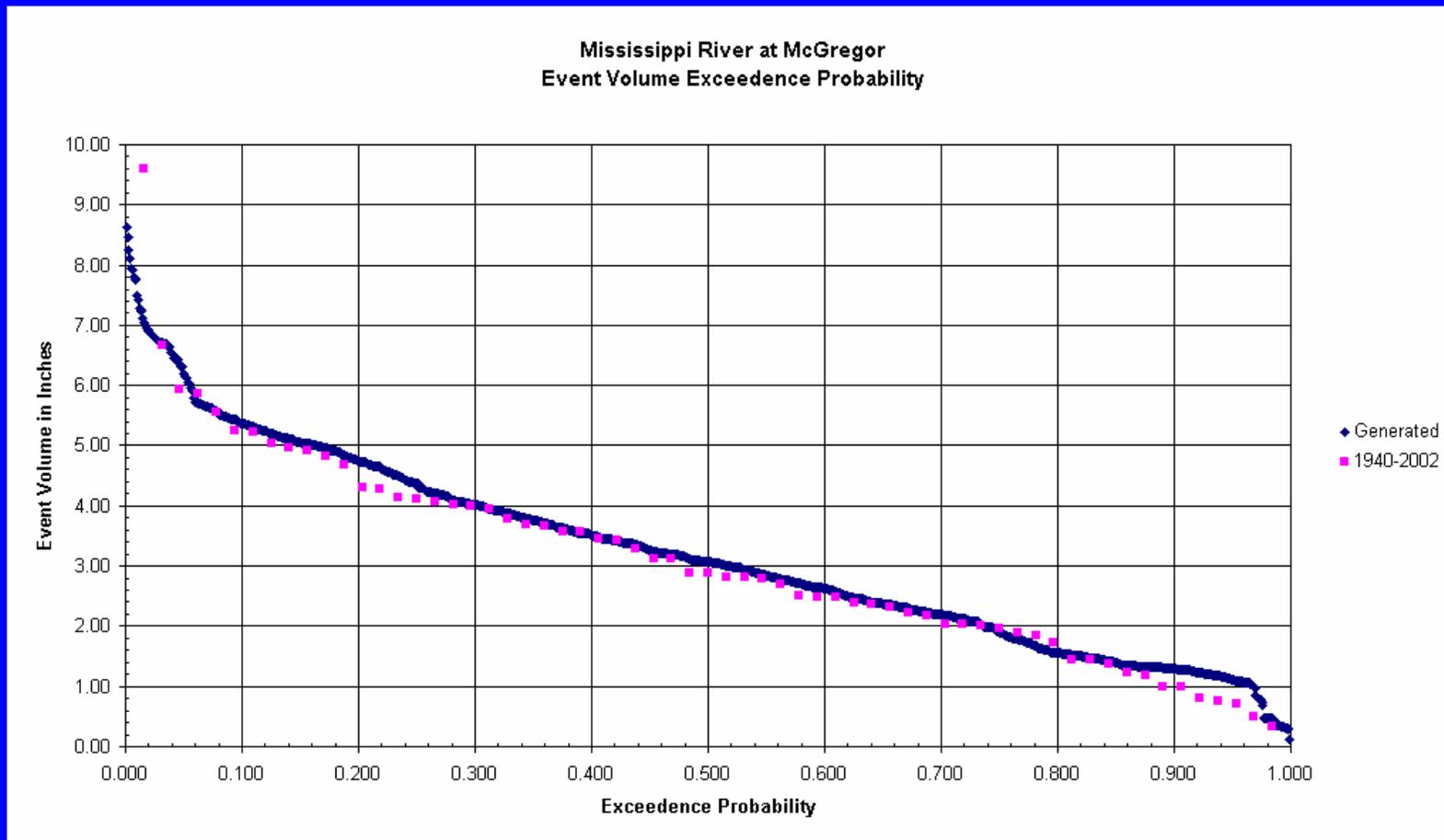


Figure D-2. Event volume frequency for observed data from 1940 to 2002 and for generated data from 2101 to 3100

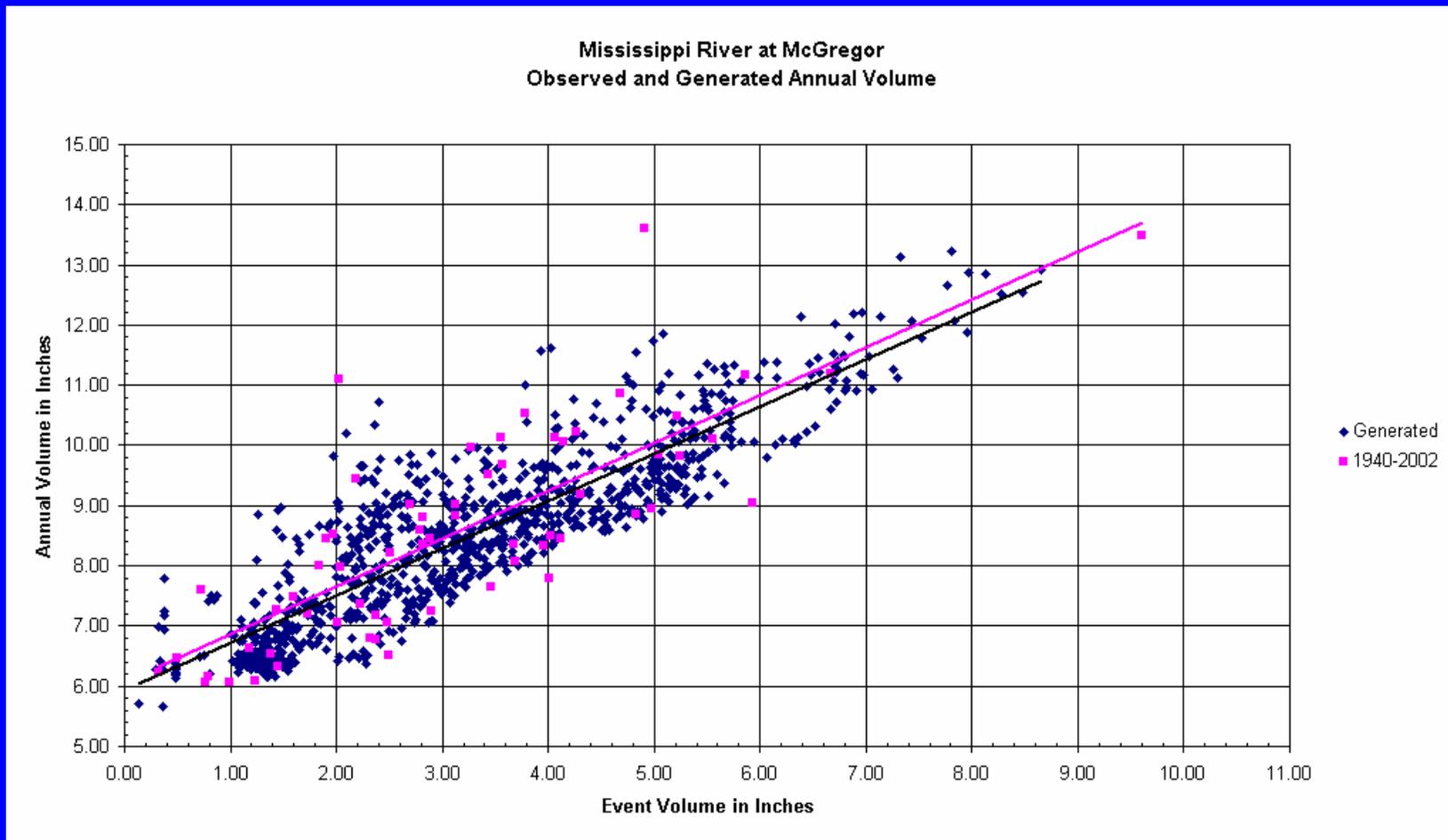


Figure D-3. Annual volume at McGregor for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

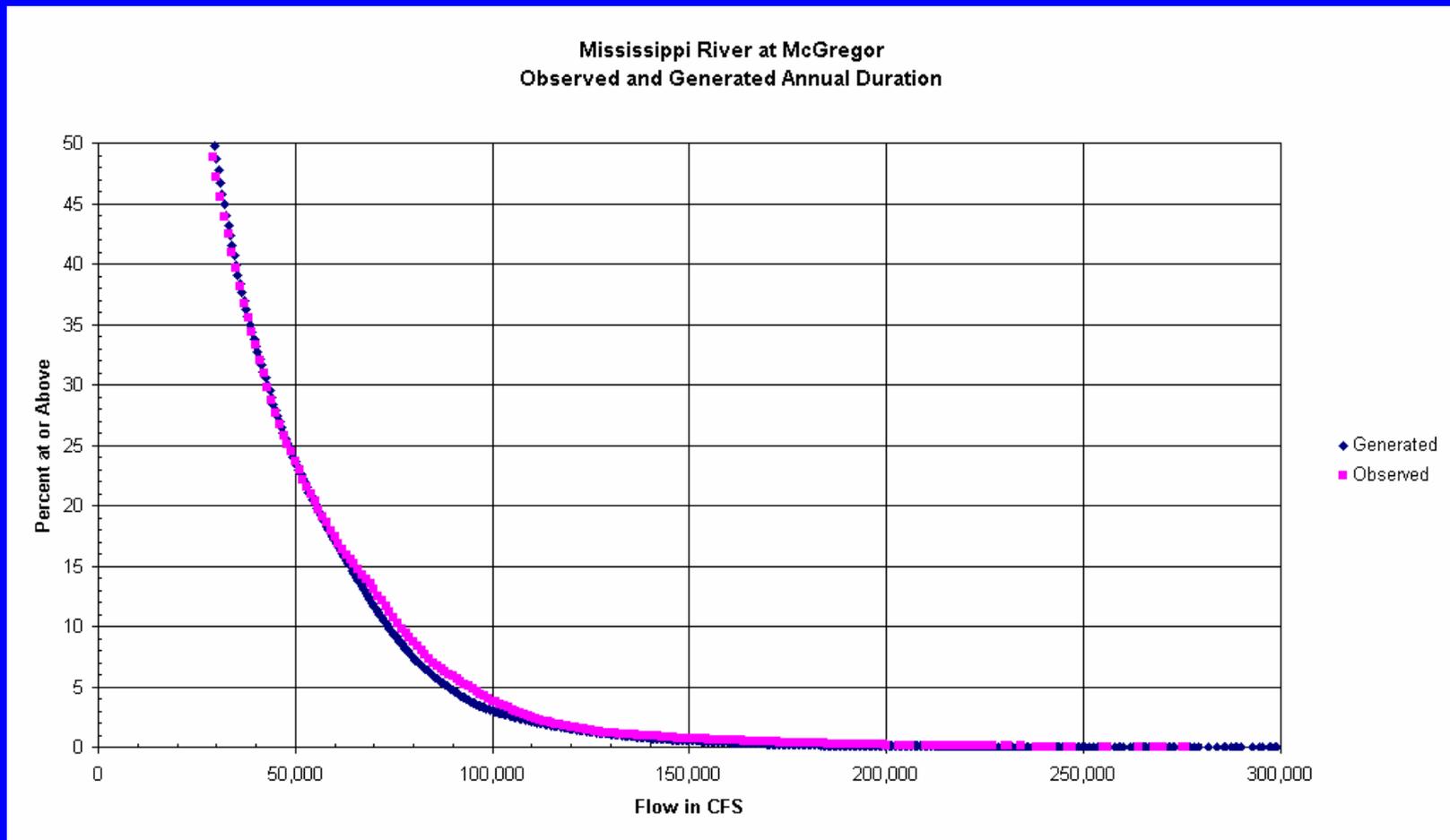


Figure D-4. Annual duration at McGregor below the 50% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

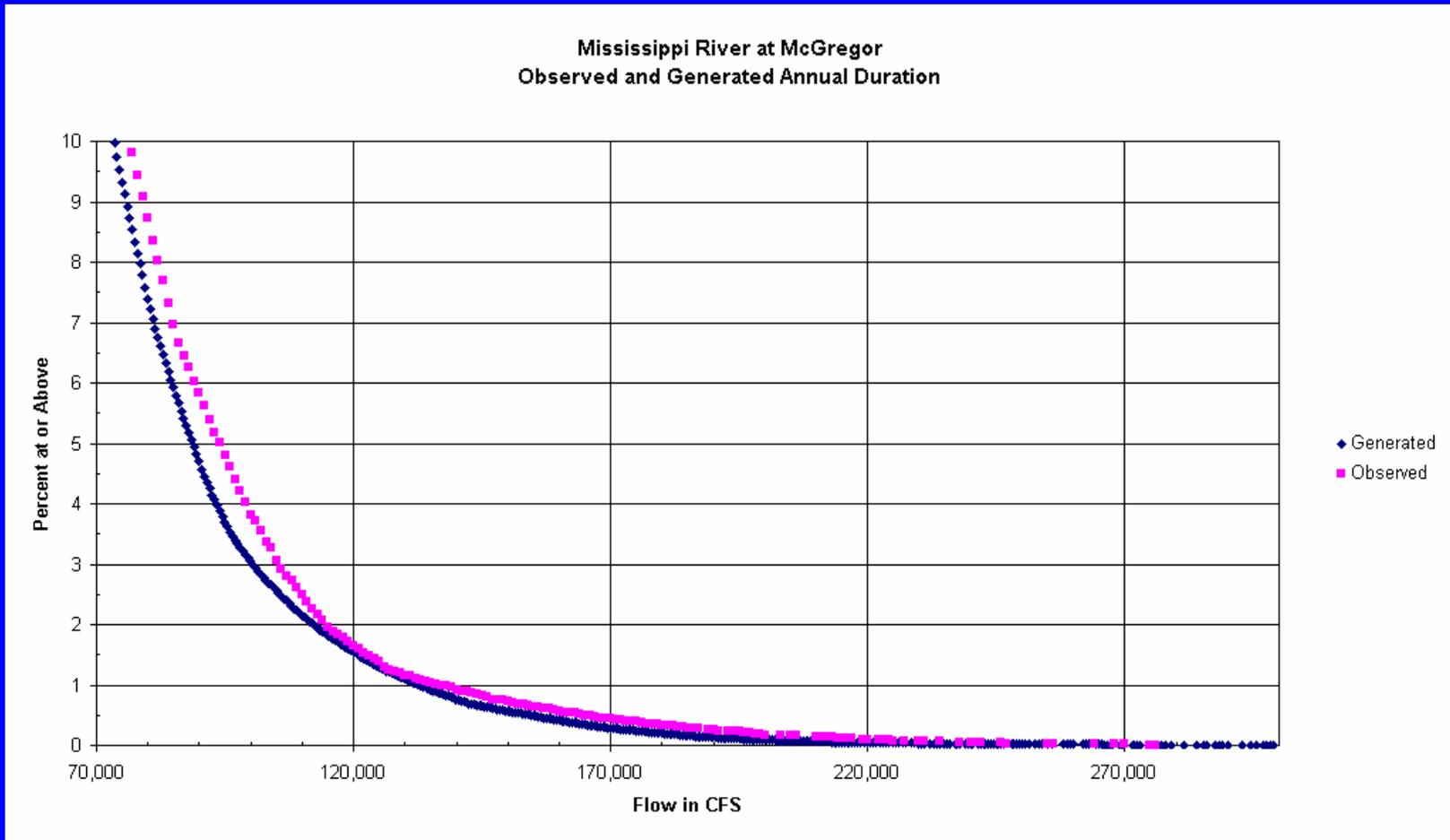


Figure D-5. Annual duration at McGregor below the 10% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

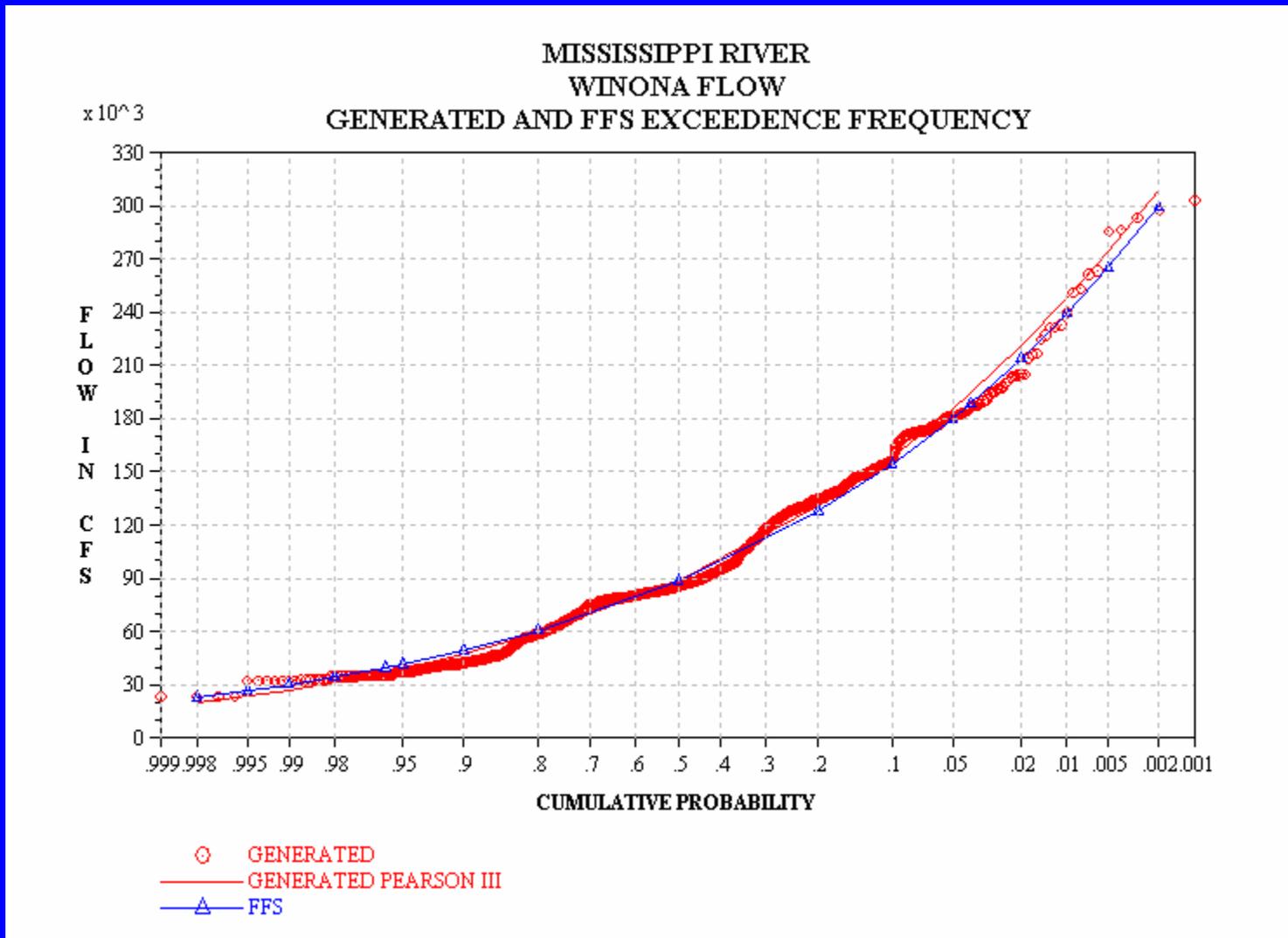


Figure D-6. Maximum flow exceedence frequency at Winona for FFS and for generated data from 2101 to 3100.

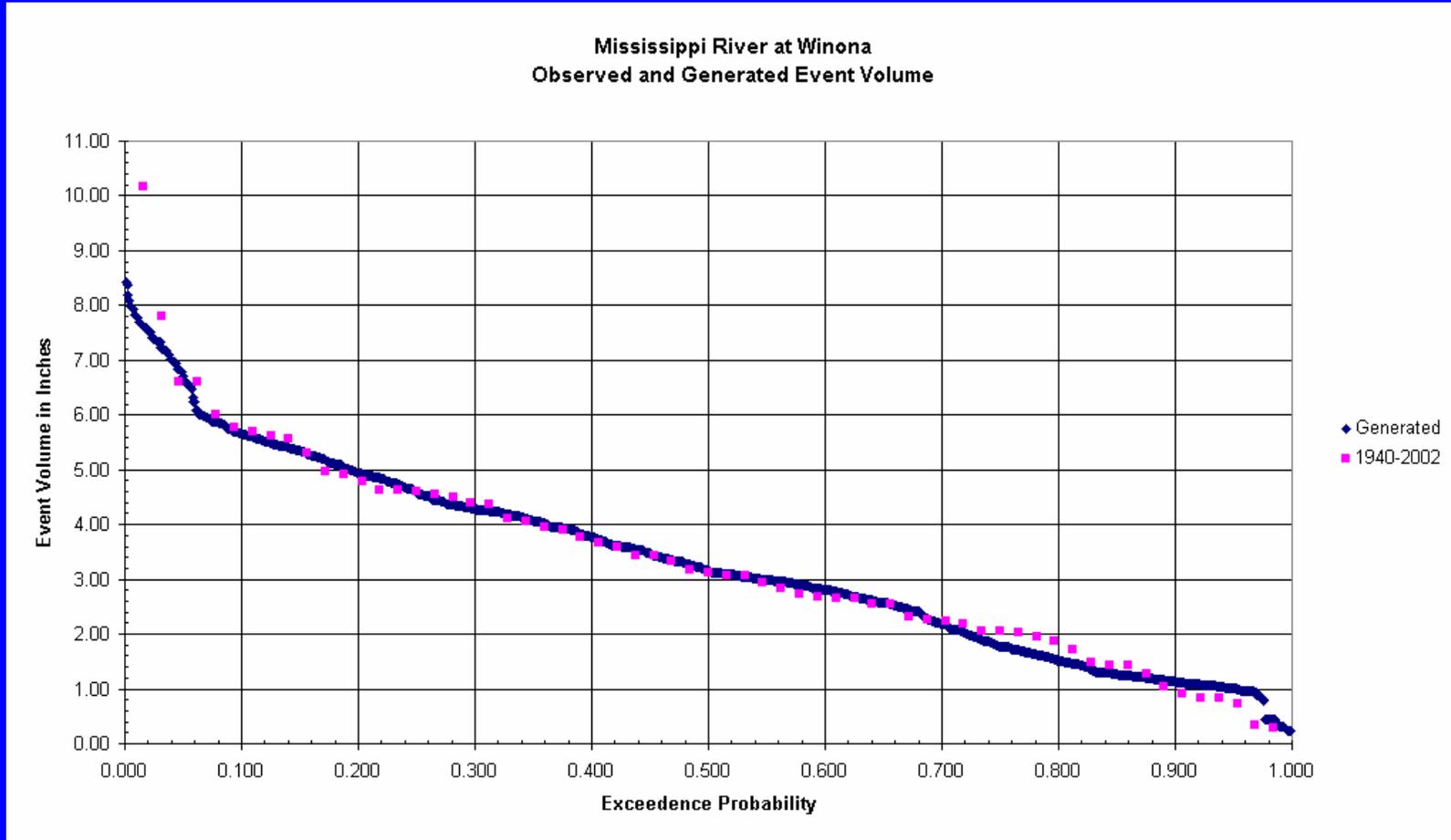


Figure D-7. Event volume frequency at Winona for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

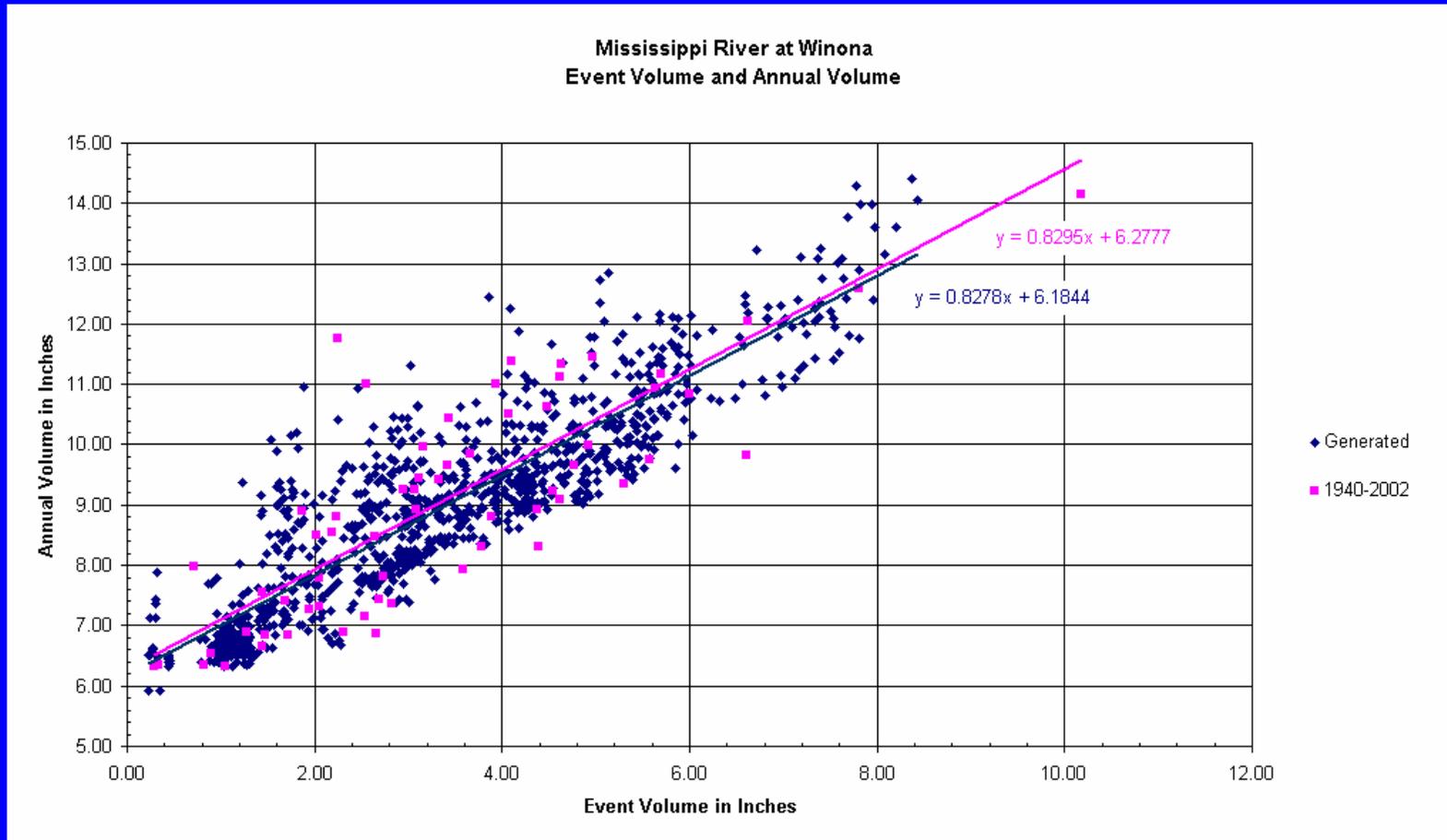


Figure D-8. Annual volume at Winona for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

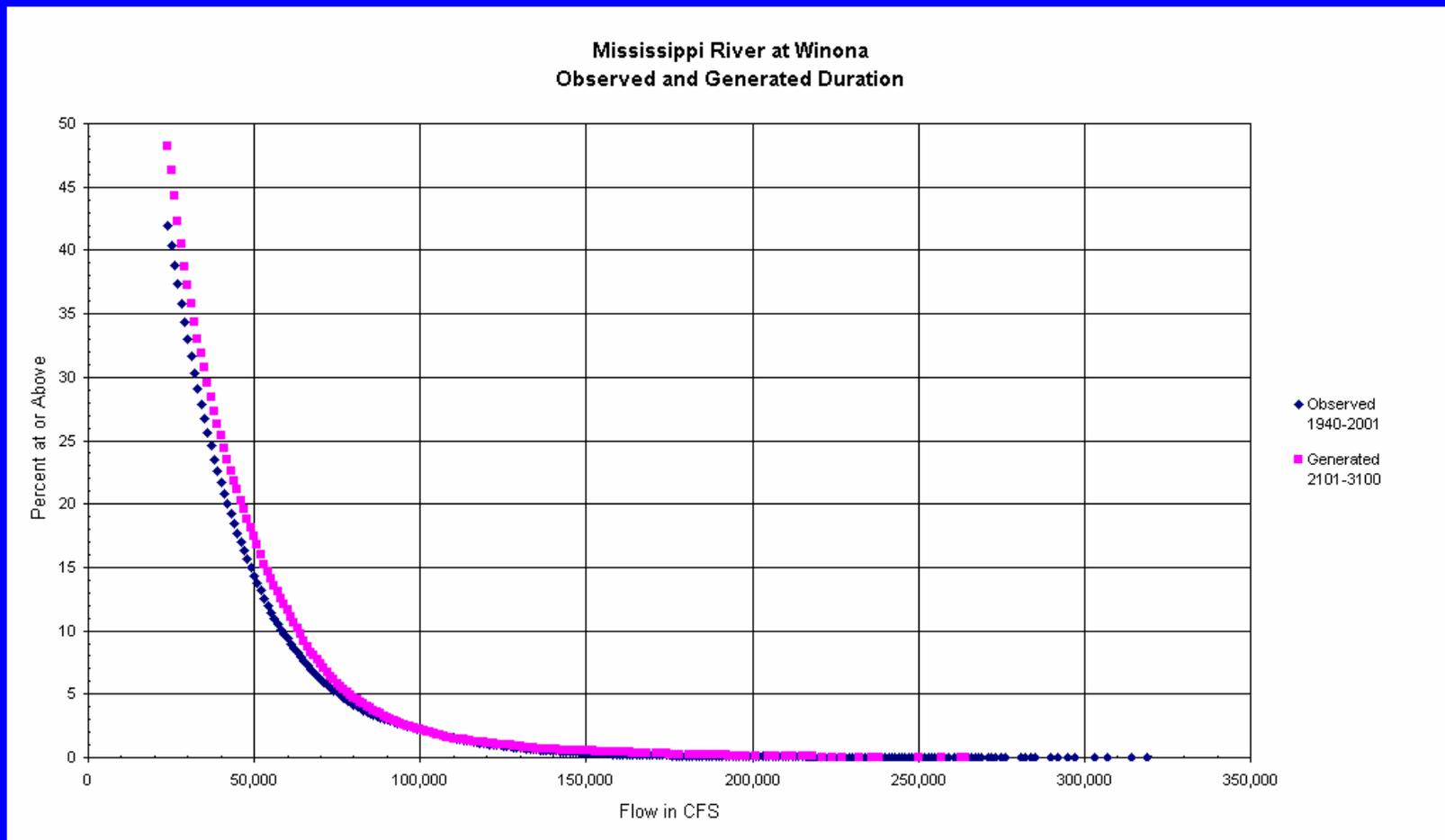


Figure D-9. Annual duration at Winona below the 50% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

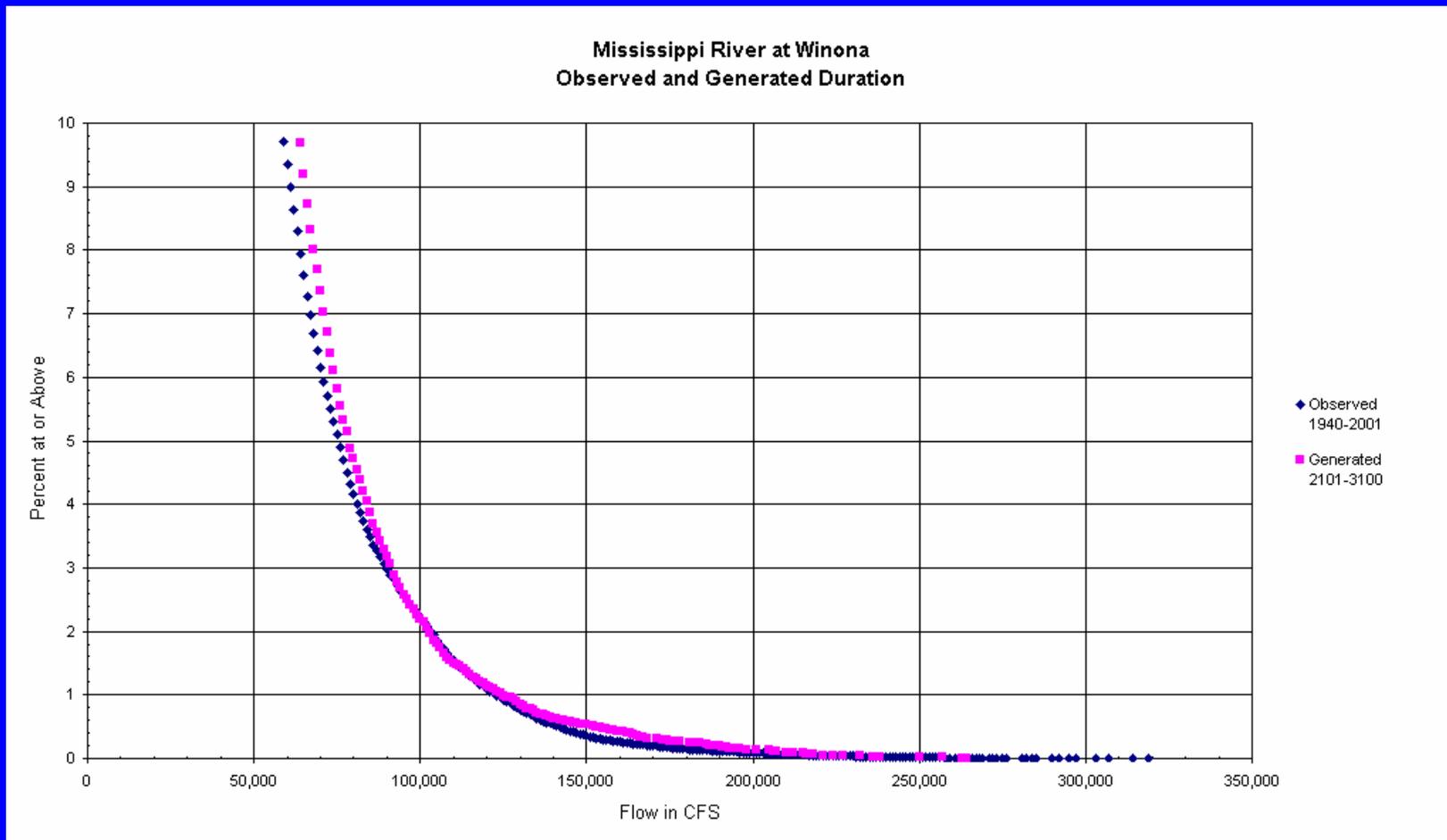


Figure D-10. Annual duration at Winona below the 10% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

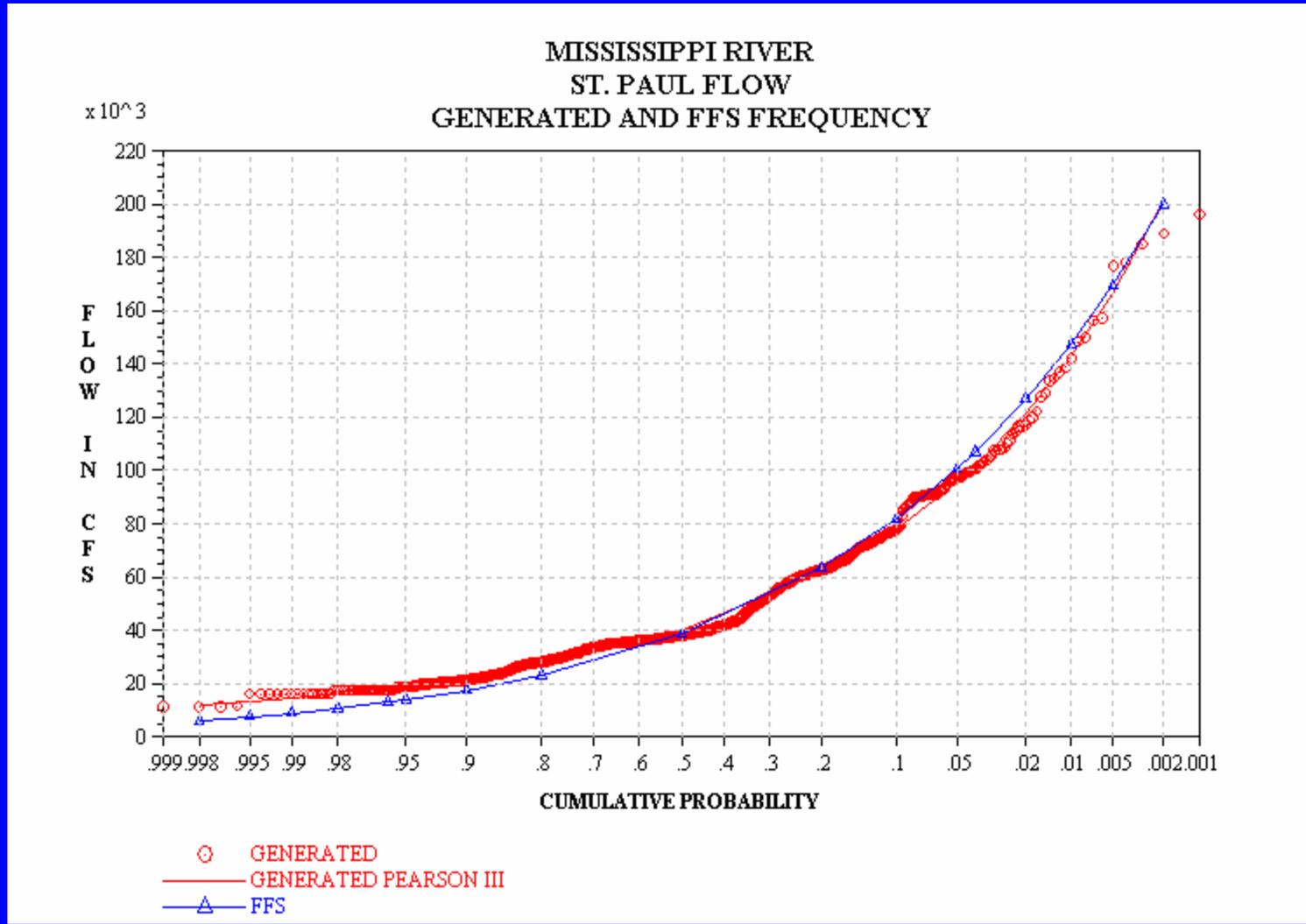


Figure D-11. Maximum flow exceedence frequency at St. Paul for FFS and for generated data from 2101 to 3100.

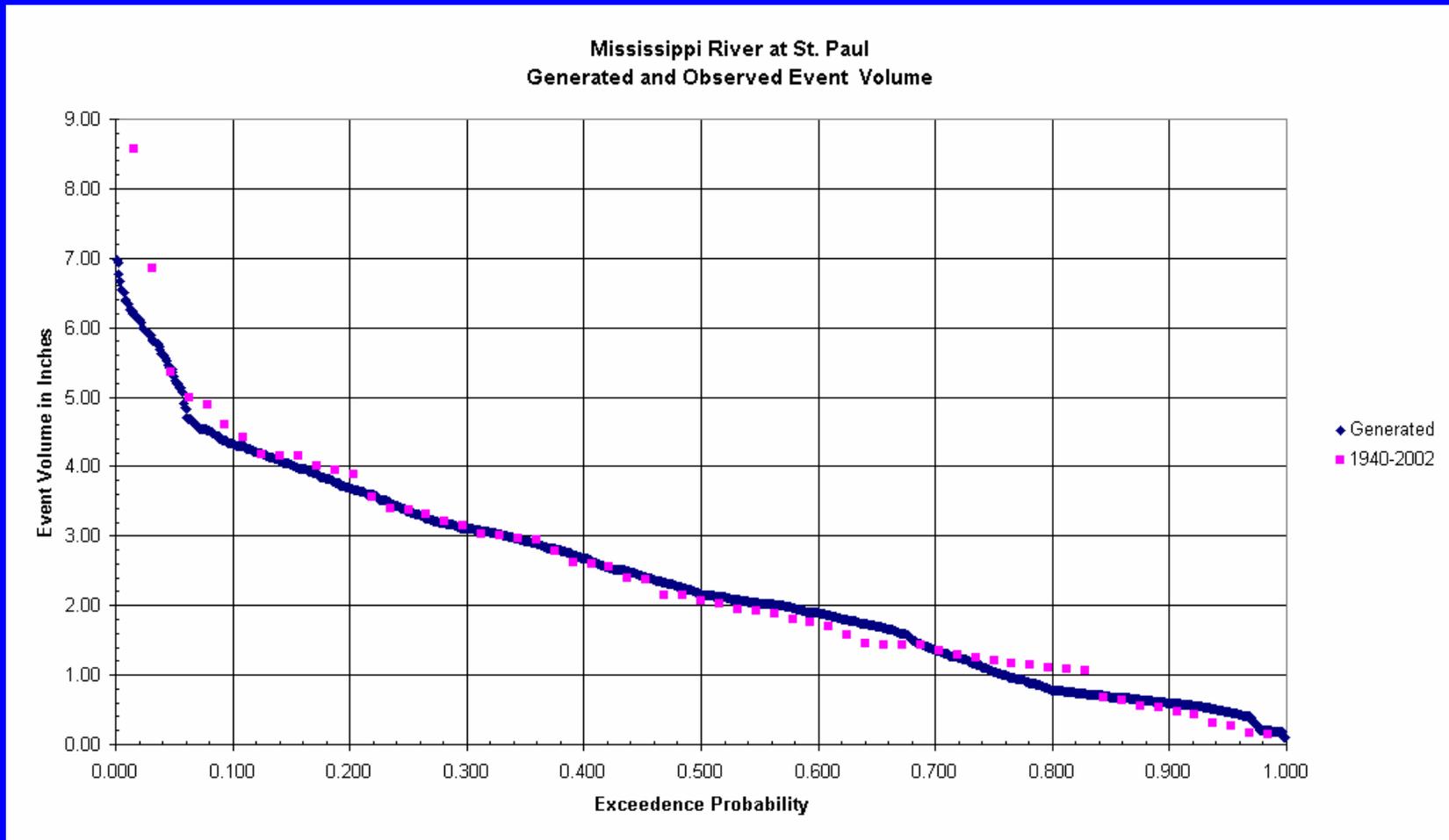


Figure D-12. Event volume frequency at St. Paul for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

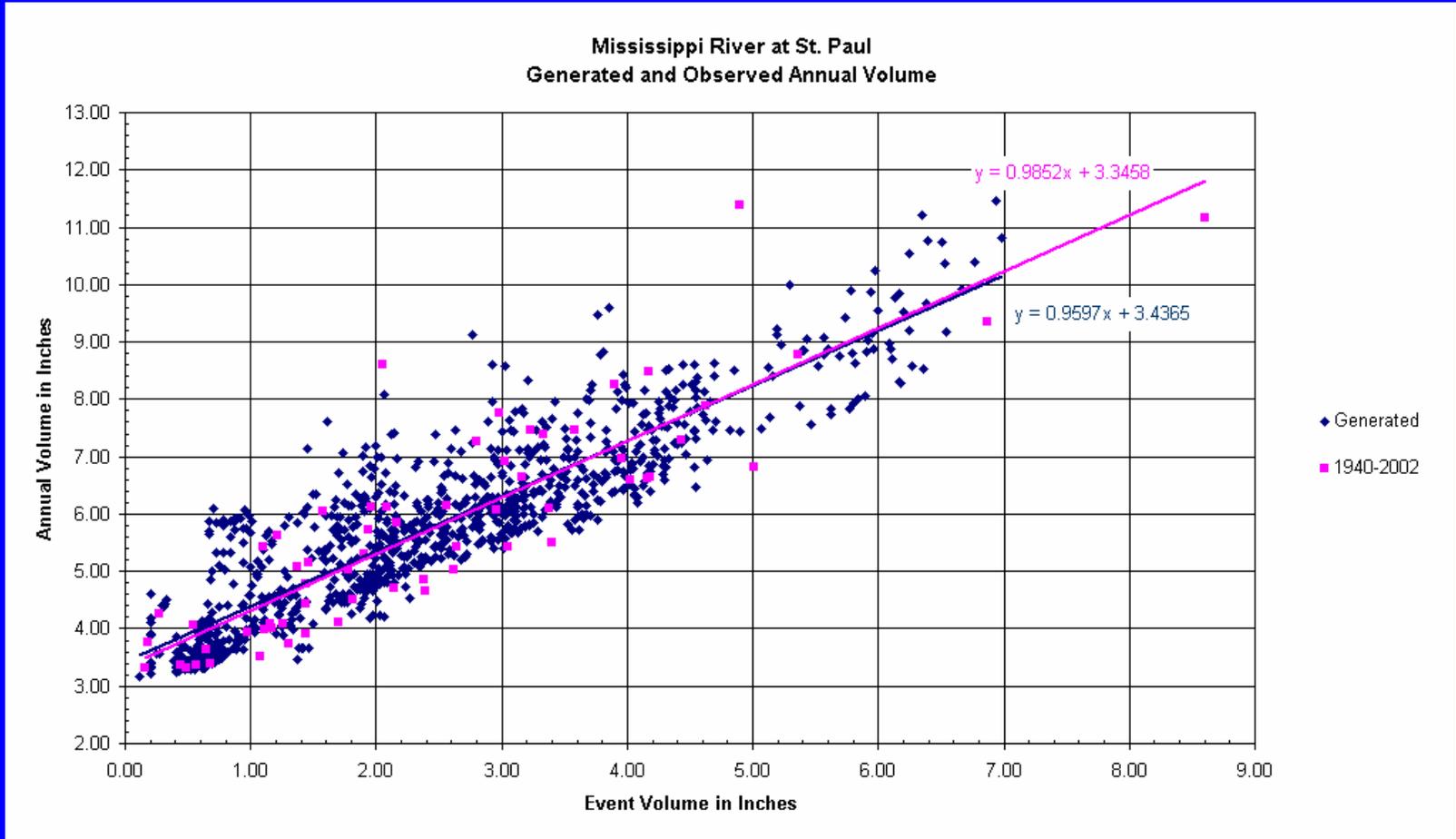


Figure D-13. Annual volume at St. Paul for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

Mississippi River at St. Paul
Observed and Generated Annual Duration

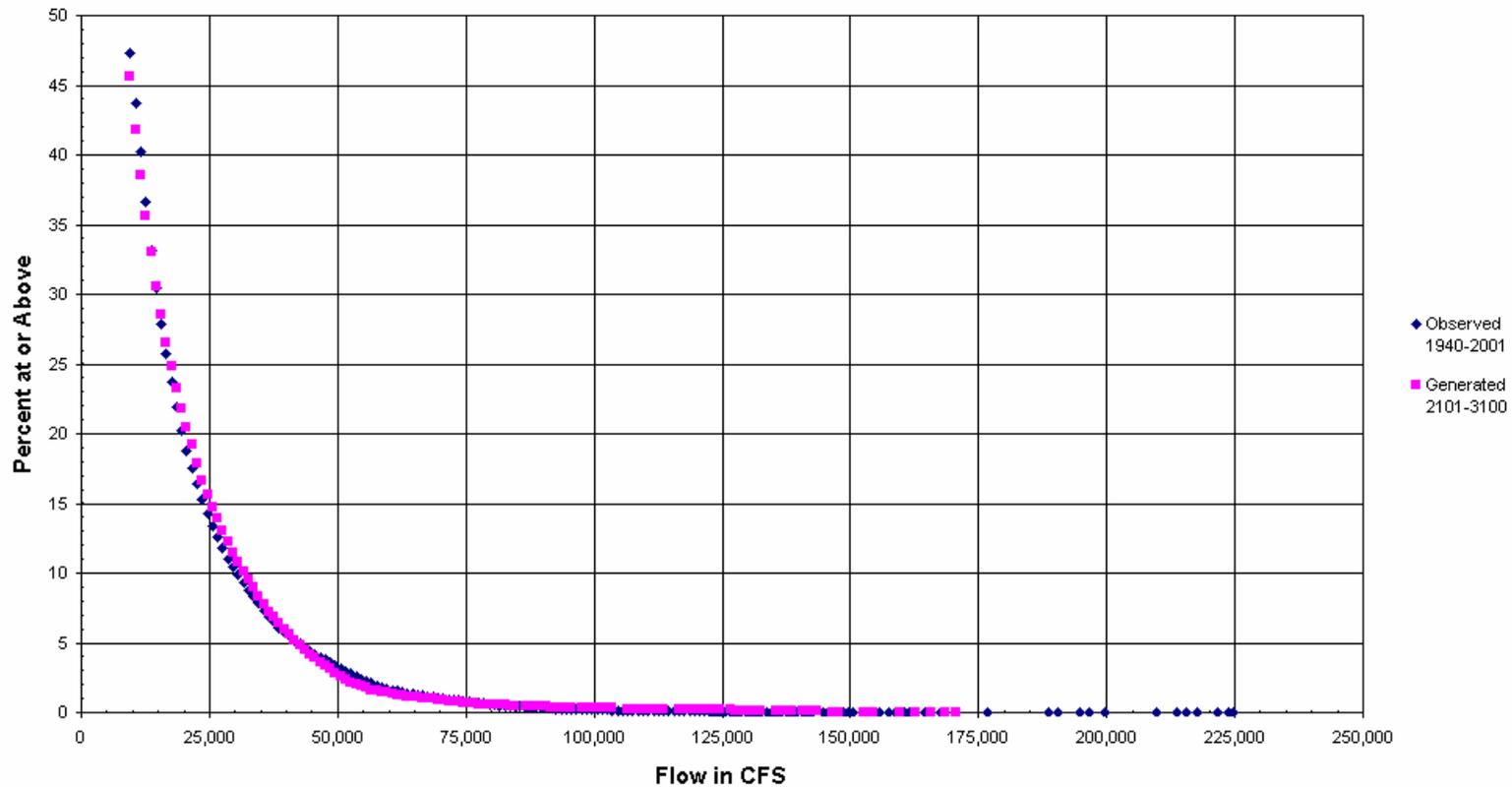


Figure D-14. Annual duration at St. Paul below the 50% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

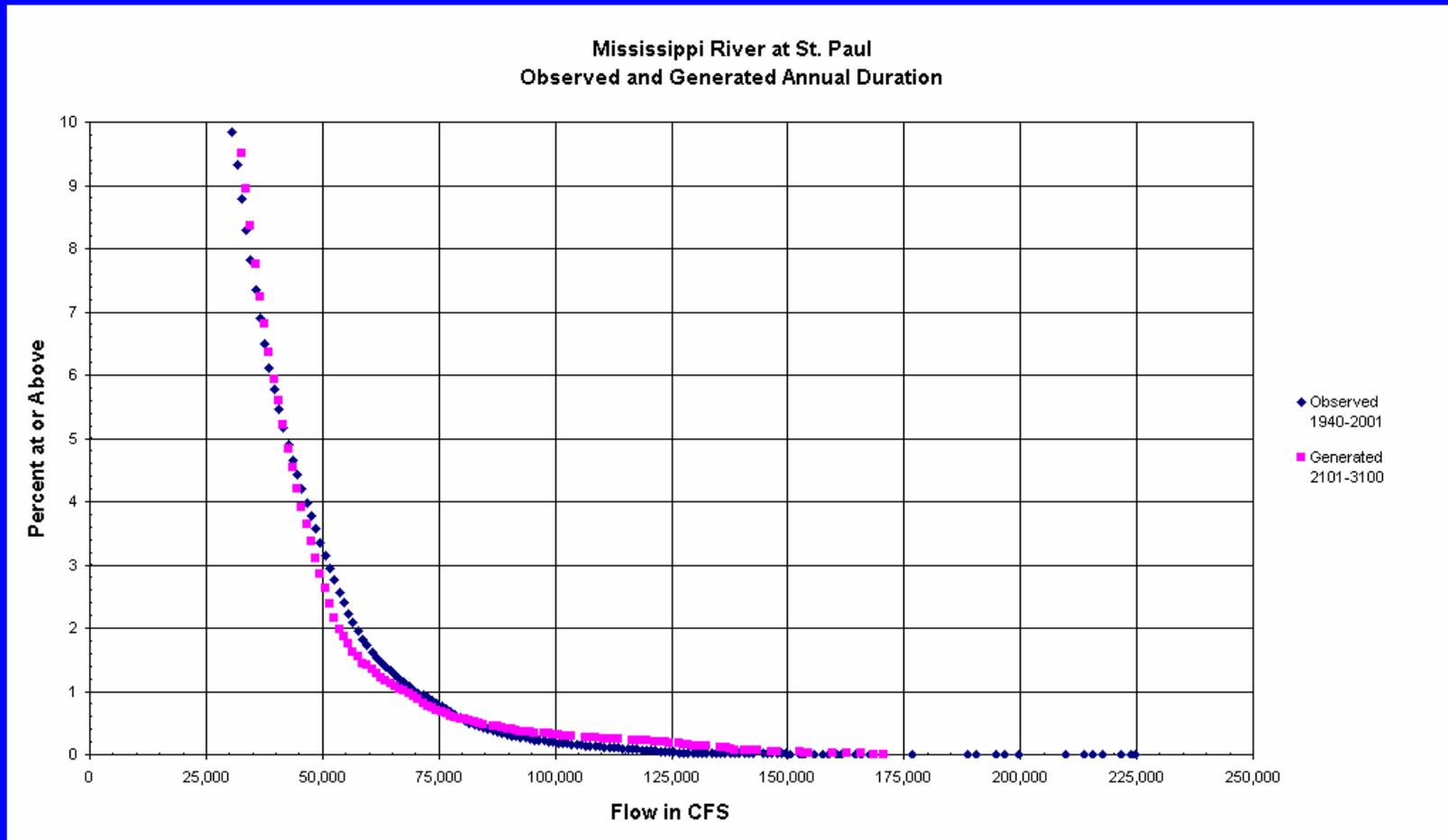


Figure D-15. Annual duration at St. Paul below the 10% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

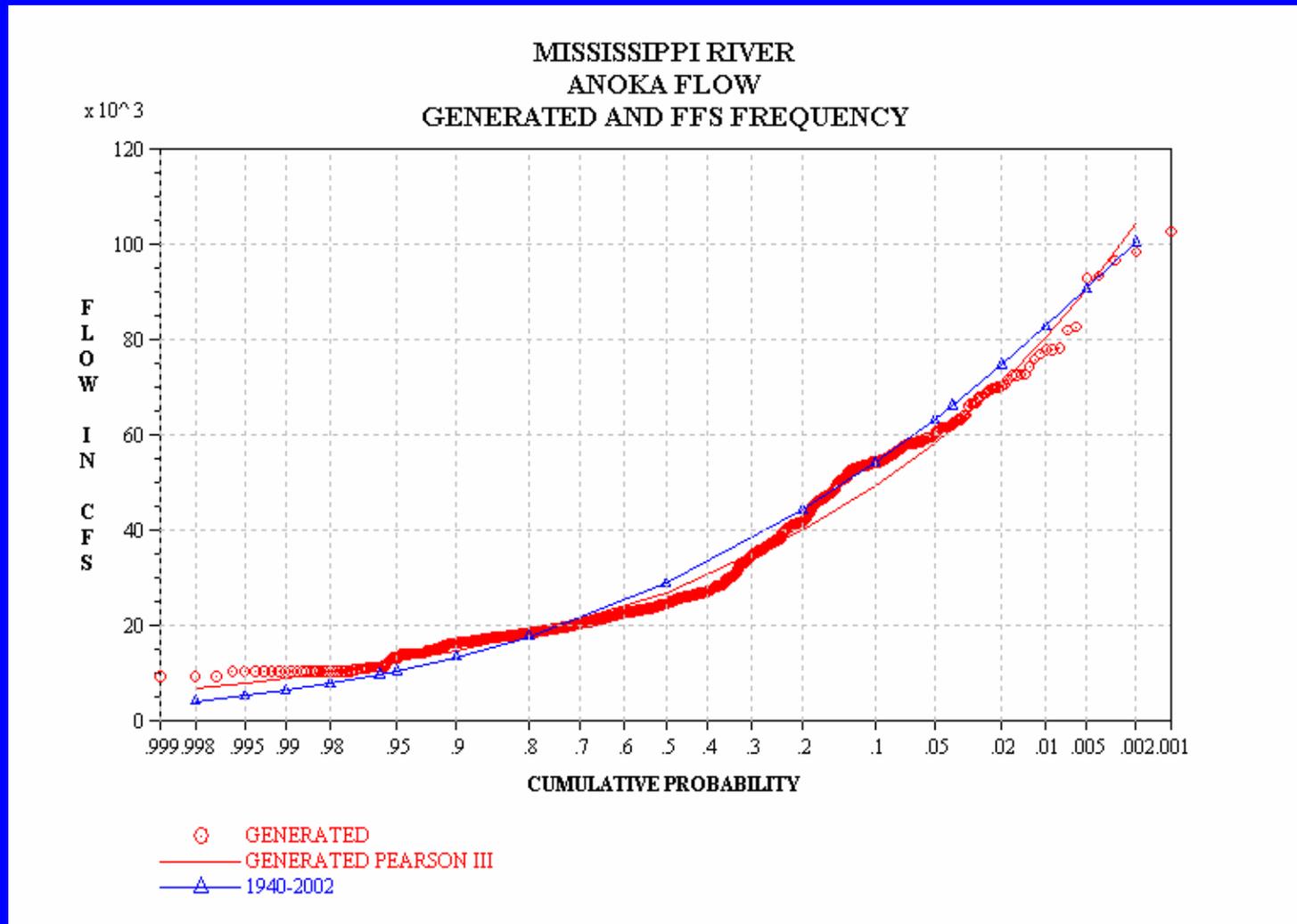


Figure D-16. Maximum flow exceedence frequency at Anoka for FFS and for generated data from 2101 to 3100.

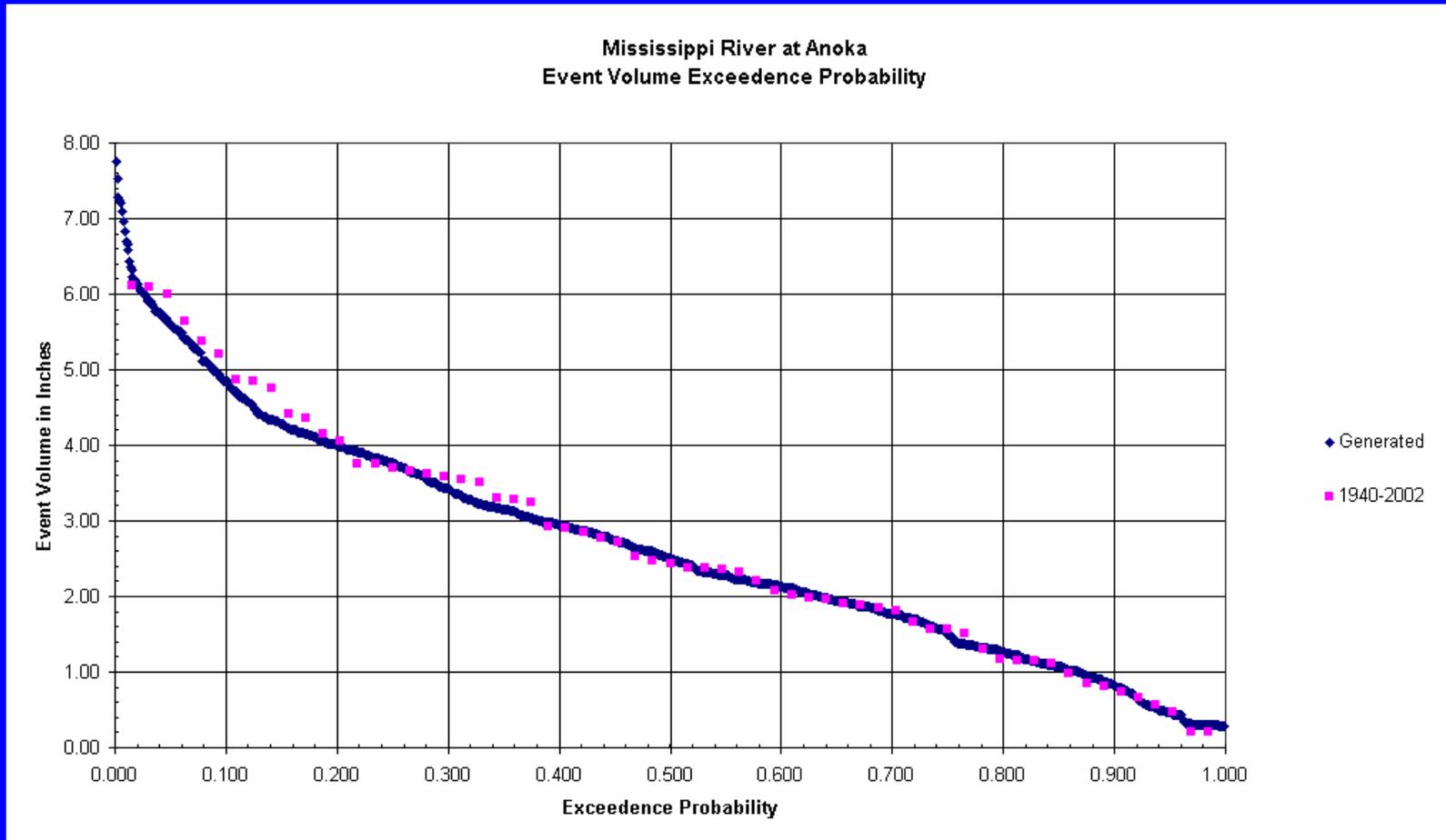


Figure D-17. Event volume frequency at Anoka for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

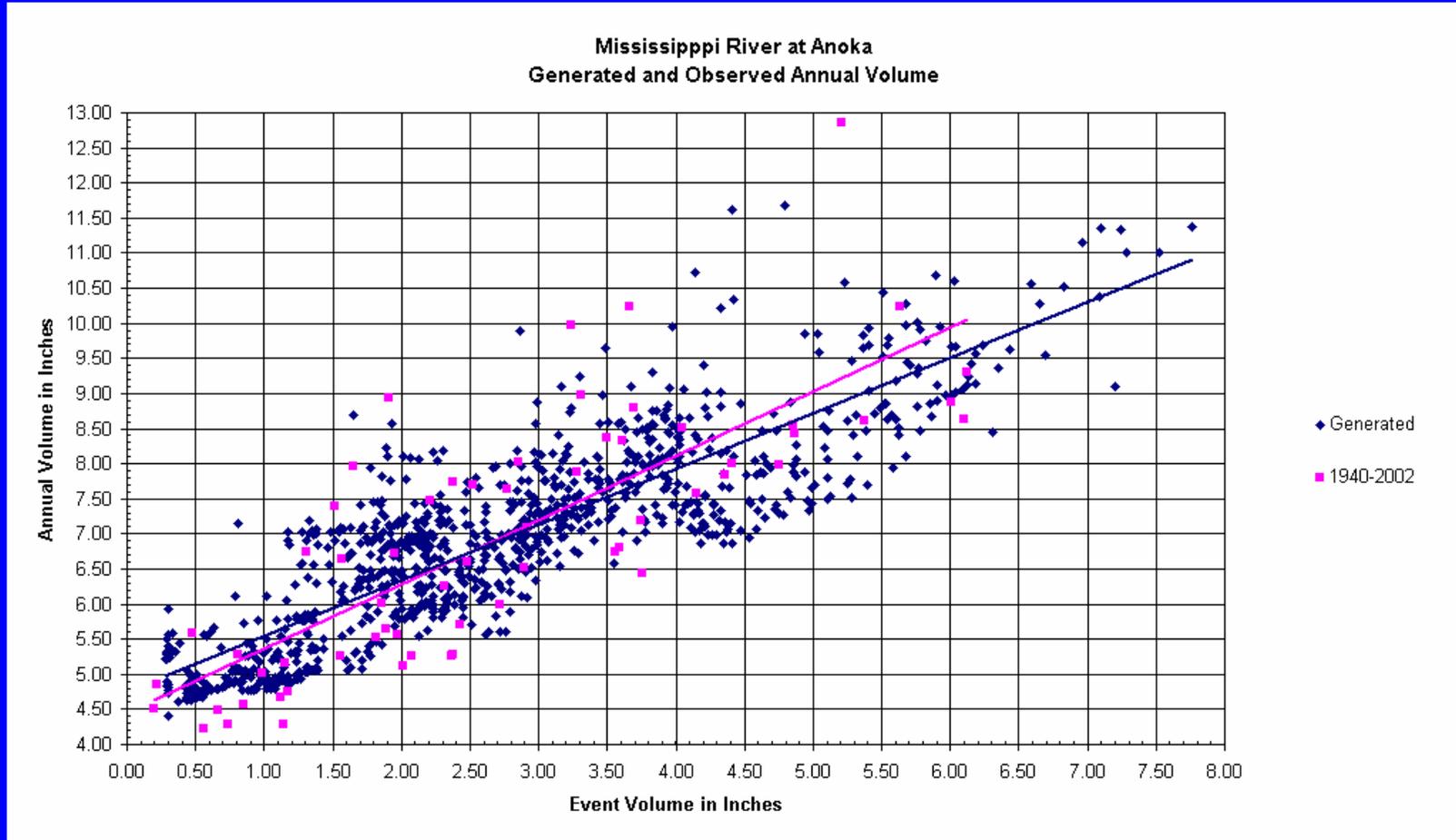


Figure D-18. Annual volume at Anoka for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

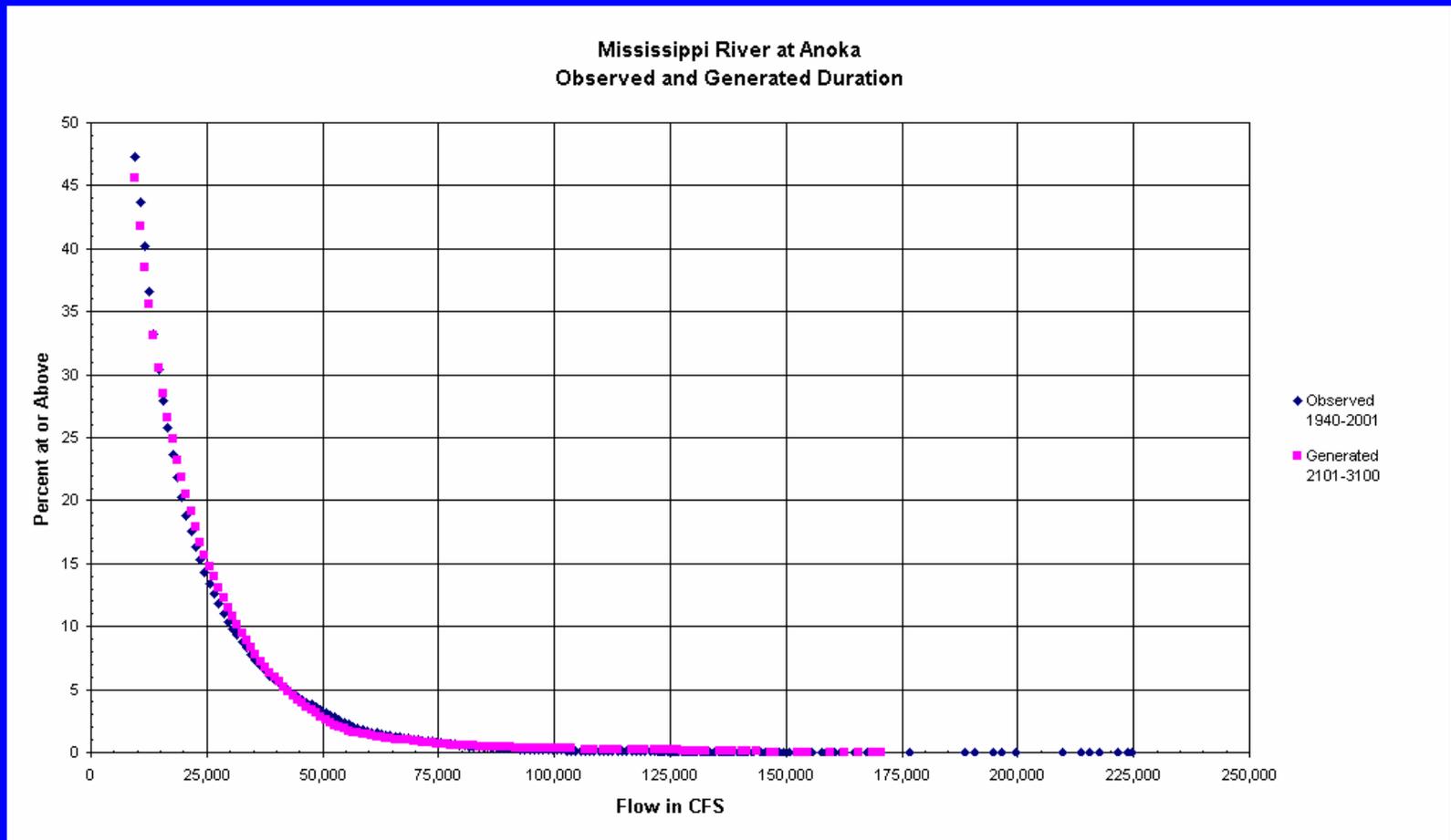


Figure D-19. Annual duration at Anoka below the 50% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

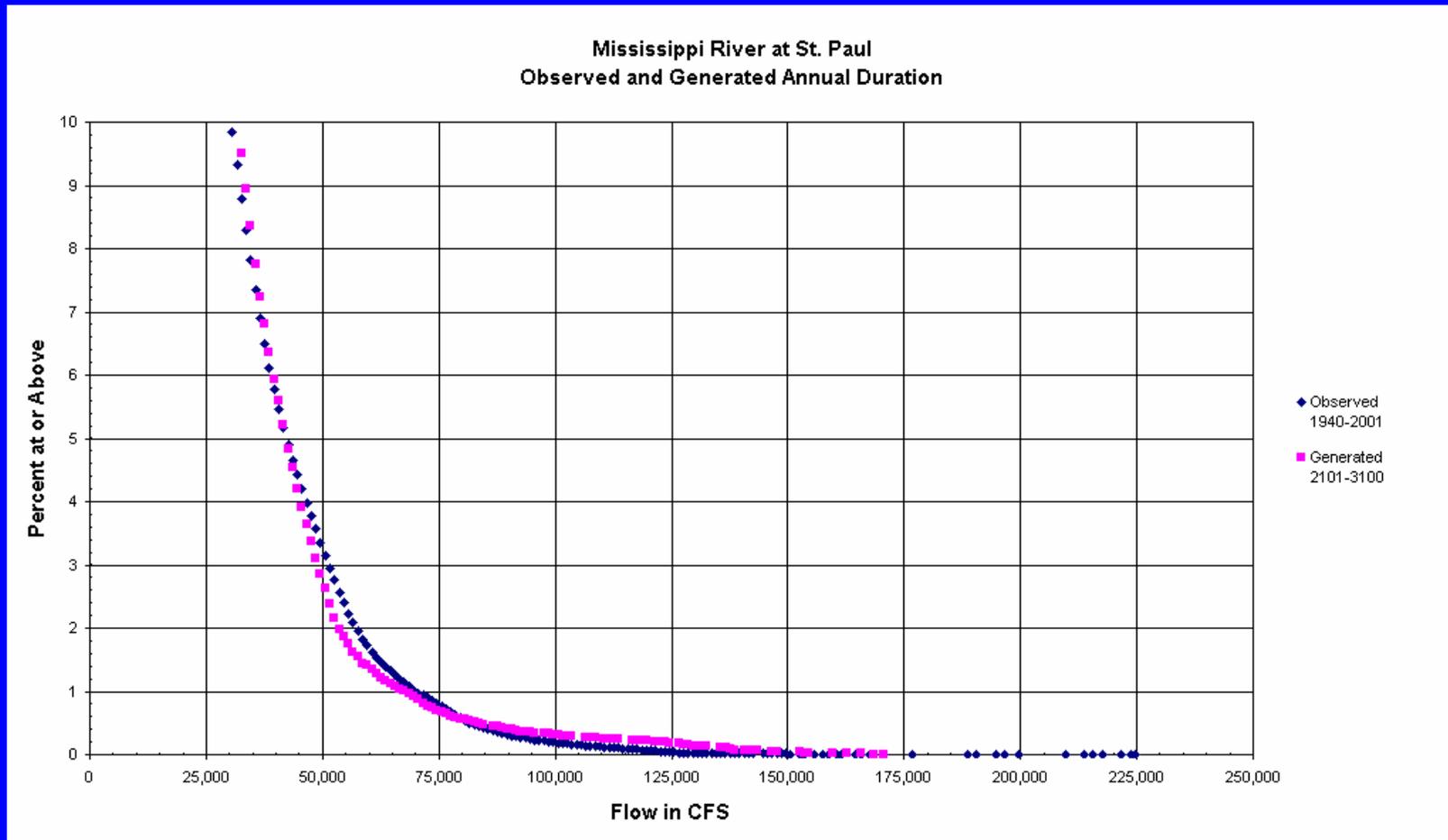


Figure D-20. Annual duration at Anoka below the 10% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.

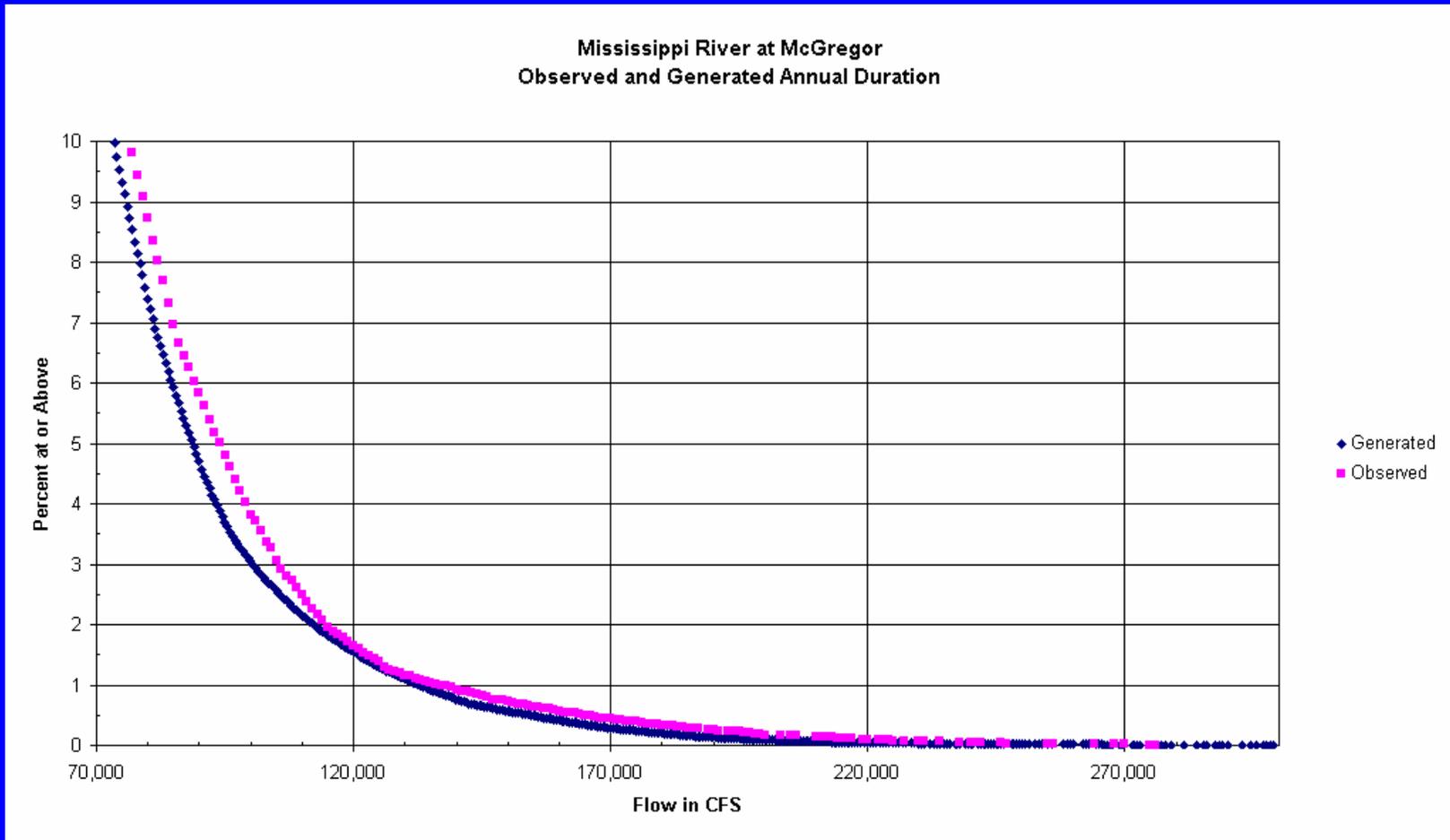


Figure C-15. Annual duration at McGregor below the 10% at or above level for observed data from 1940 to 2002 and for generated data from 2101 to 3100.