HOLISTIC WATERSHED MANAGEMENT FOR EXISTING AND FUTURE LAND USE DEVELOPMENT ACTIVITIES: OPPORTUNITIES FOR ACTION FOR LOCAL DECISION MAKERS: PHASE 2 – FDC APPLICATION MODELING (FDC 2A PROJECT)

SUPPORT FOR SOUTHEAST NEW ENGLAND PROGRAM (SNEP) COMMUNICATIONS STRATEGY AND TECHNICAL ASSISTANCE

FINAL REPORT APPENDIX D
RUNOFF DURATION CURVES FOR HRU-SCALE SCM MODELING SCENARIOS

SEPTEMBER 30, 2022

Prepared for:

U.S. EPA Region 1

Prepared by:

Paradigm Environmental

Great Lakes Environmental Center

Blanket Purchase Agreement: BPA-68HE0118A0001-0003
Requisition Number: PR-R1-20-00322
Order: 68HE0121F0052

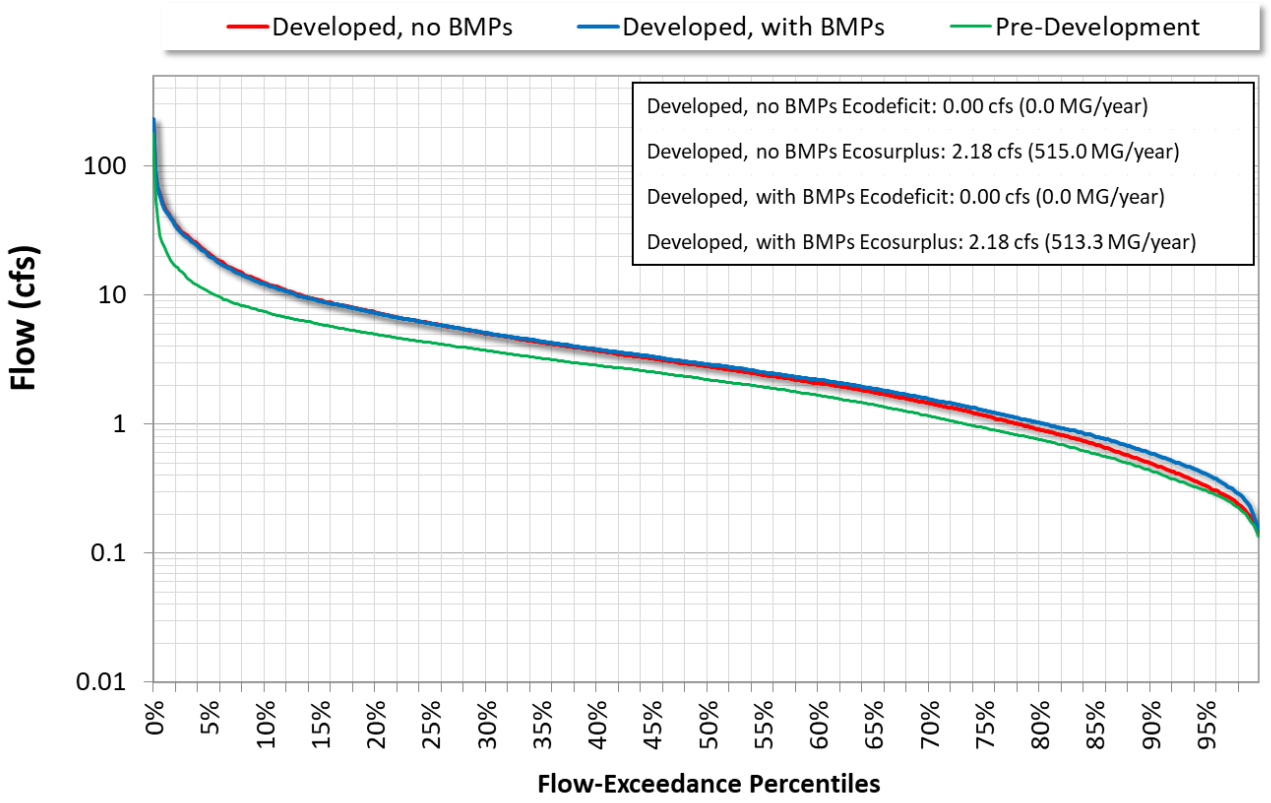

Figure 1. Flow duration curve with MS4 control of 30% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and climate conditions (Scenario 1).

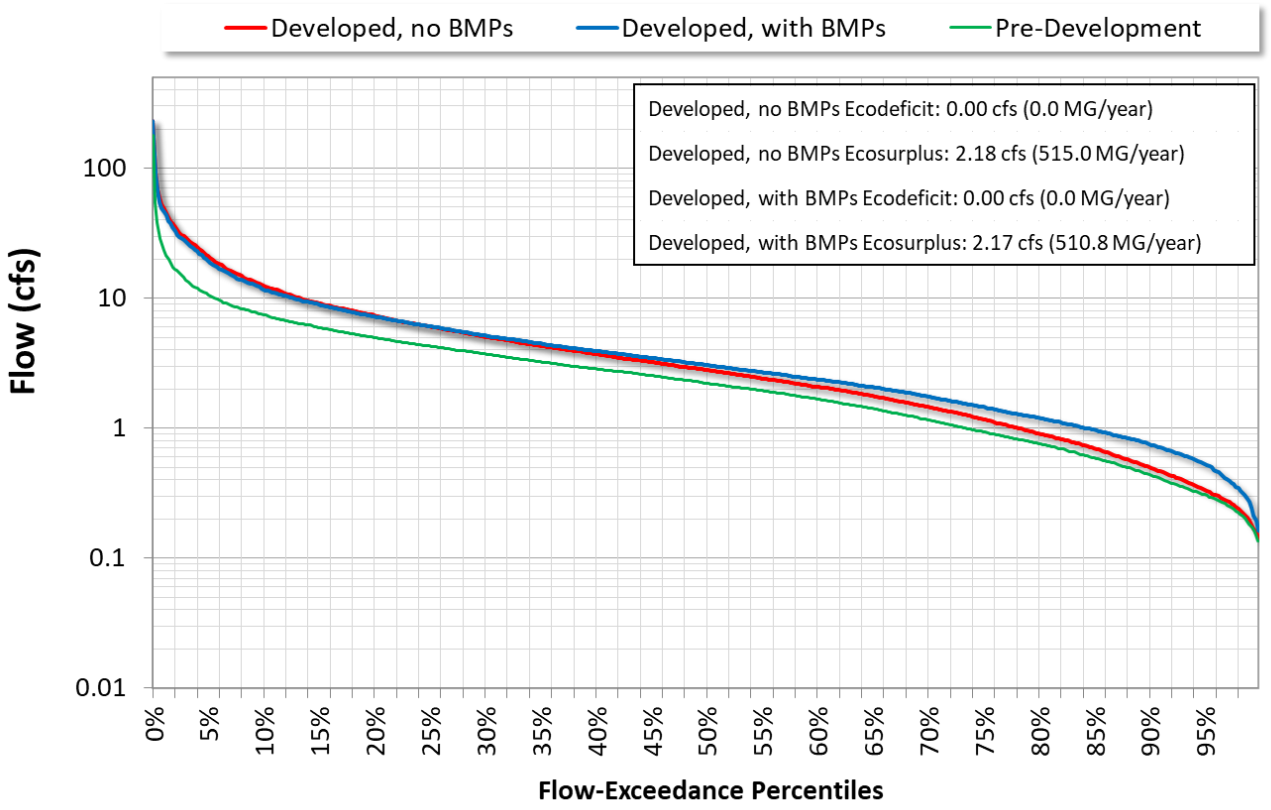

Figure 2. Flow duration curve with MS4 control of 80% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and climate conditions (Scenario 1).

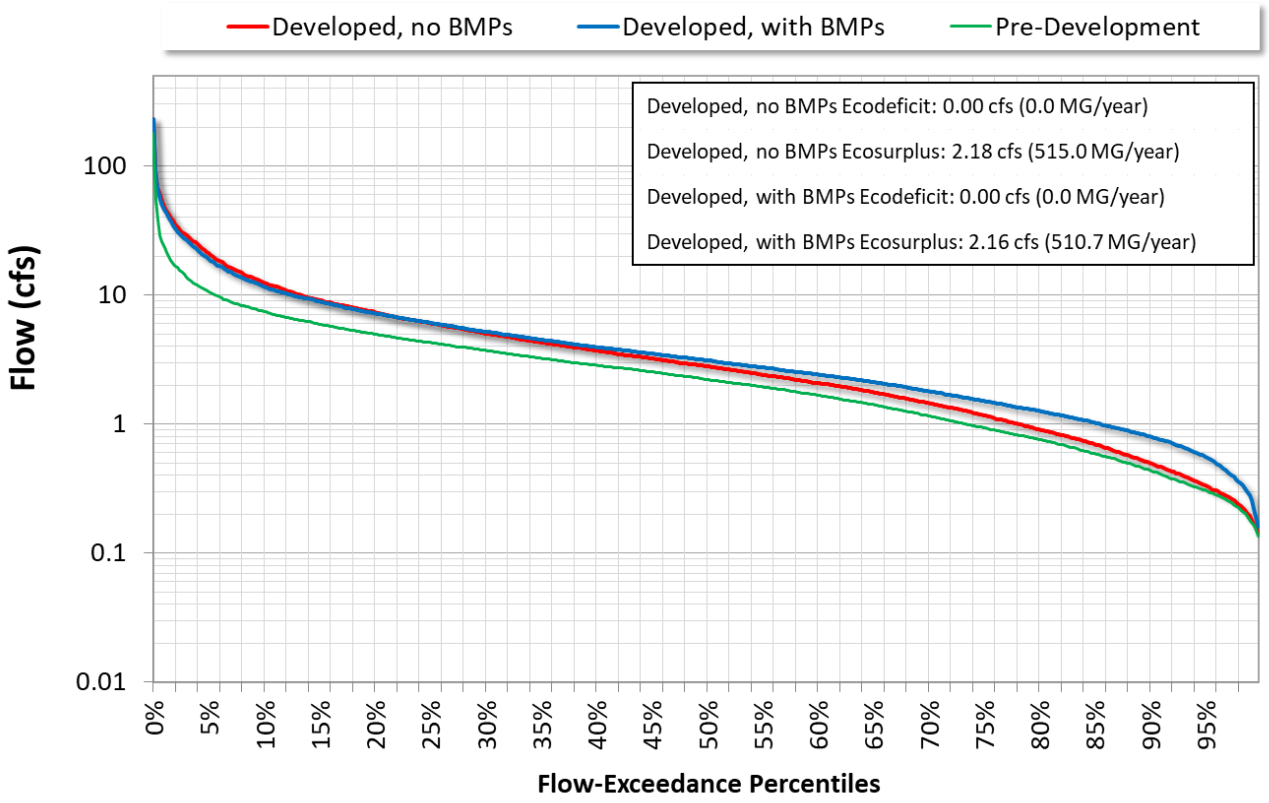

Figure 3. Flow duration curve with MS4 control of 100% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and climate conditions (Scenario 1).

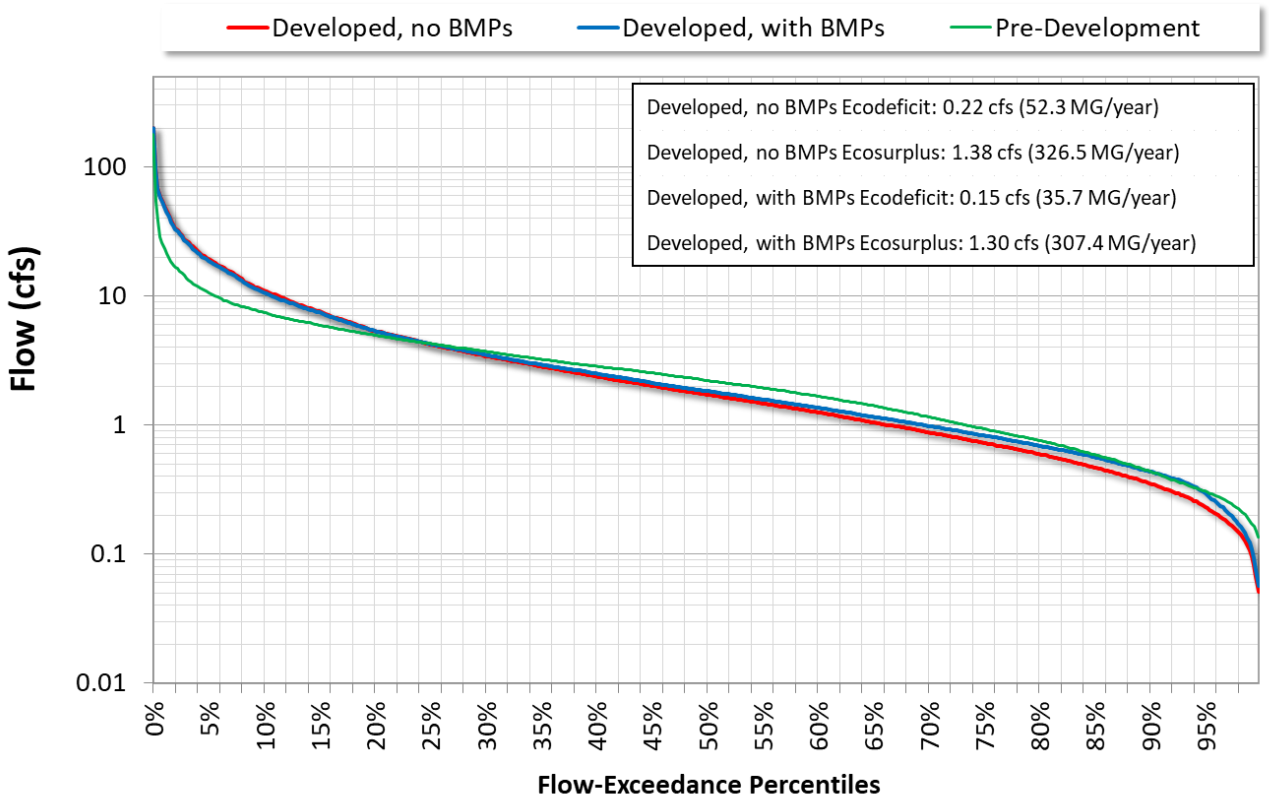

Figure 4. Flow duration curve with MS4 control of 30% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and future climate conditions (Scenario 2).

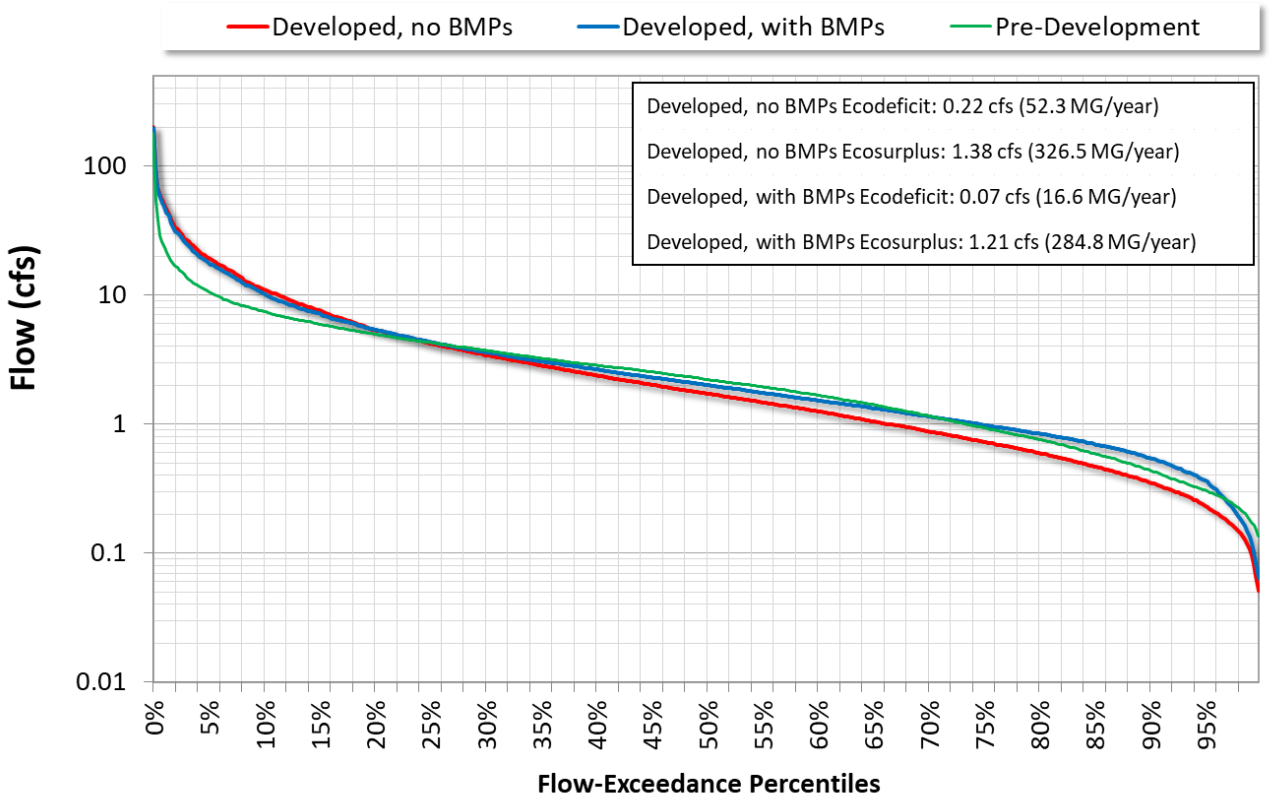

Figure 5. Flow duration curve with MS4 control of 80% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and future climate conditions (Scenario 2).

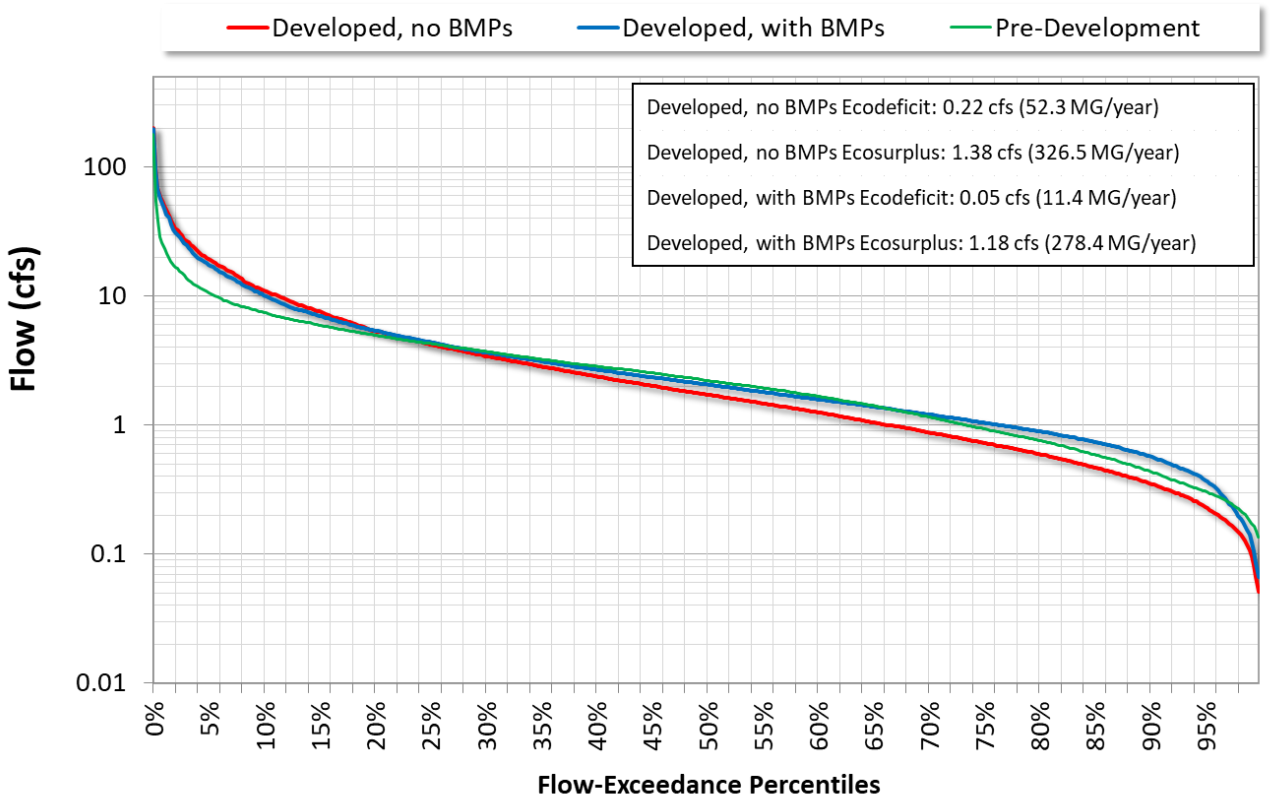

Figure 6. Flow duration curve with MS4 control of 100% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and future climate conditions (Scenario 2).

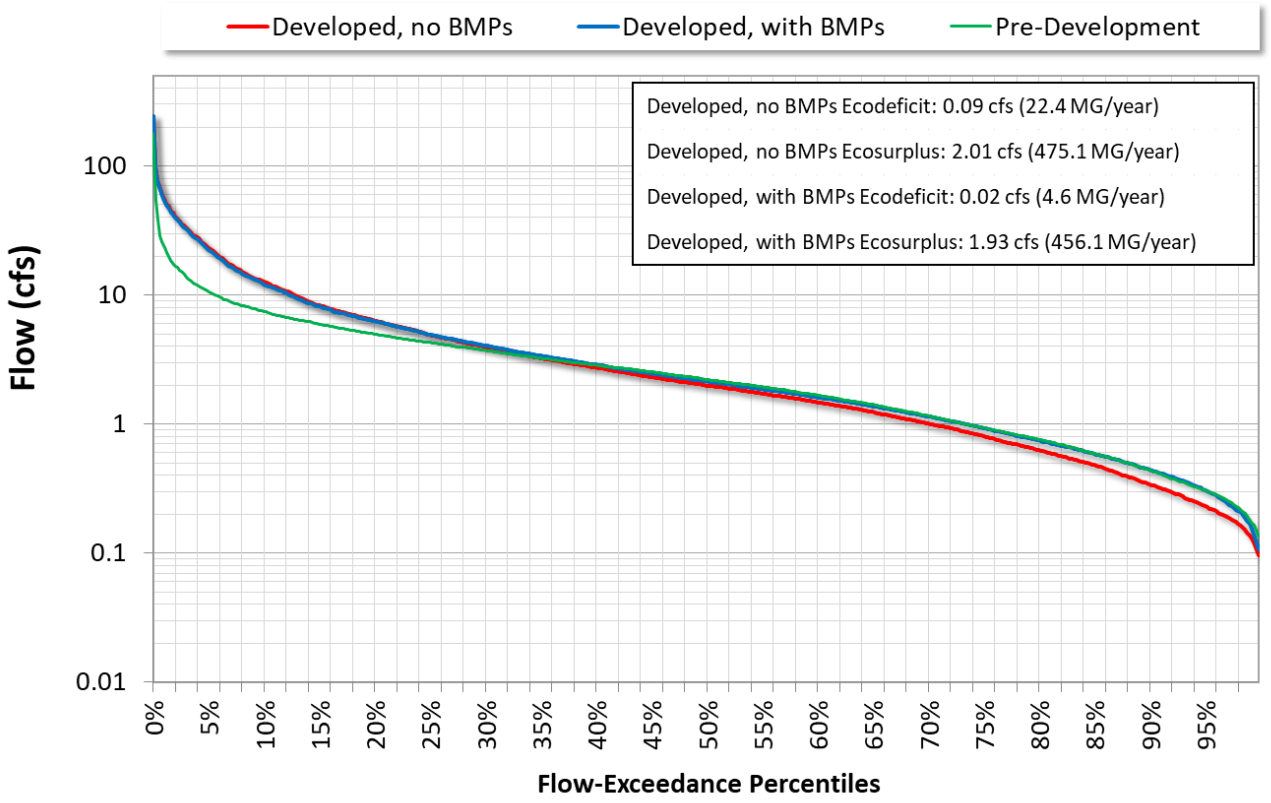

Figure 7. Flow duration curve with MS4 control of 30% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 3).

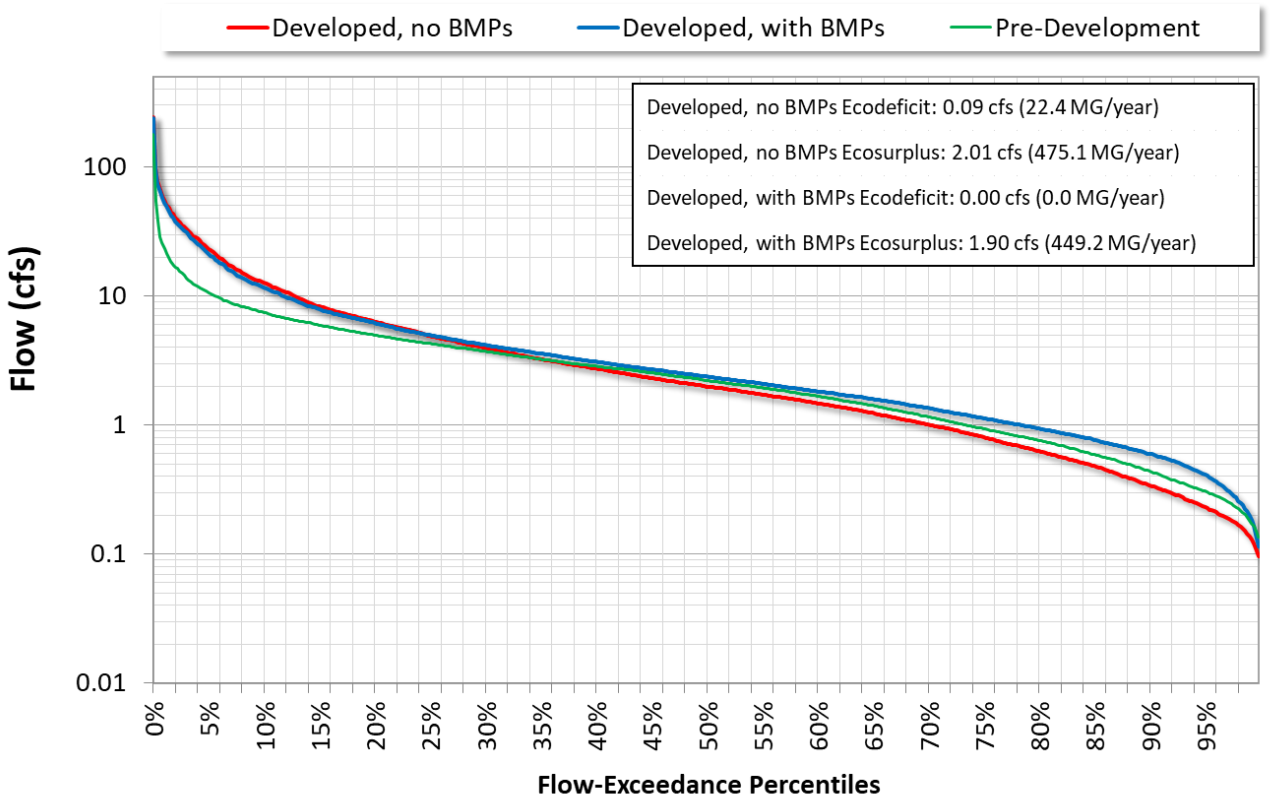

Figure 8. Flow duration curve with MS4 control of 80% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 3).

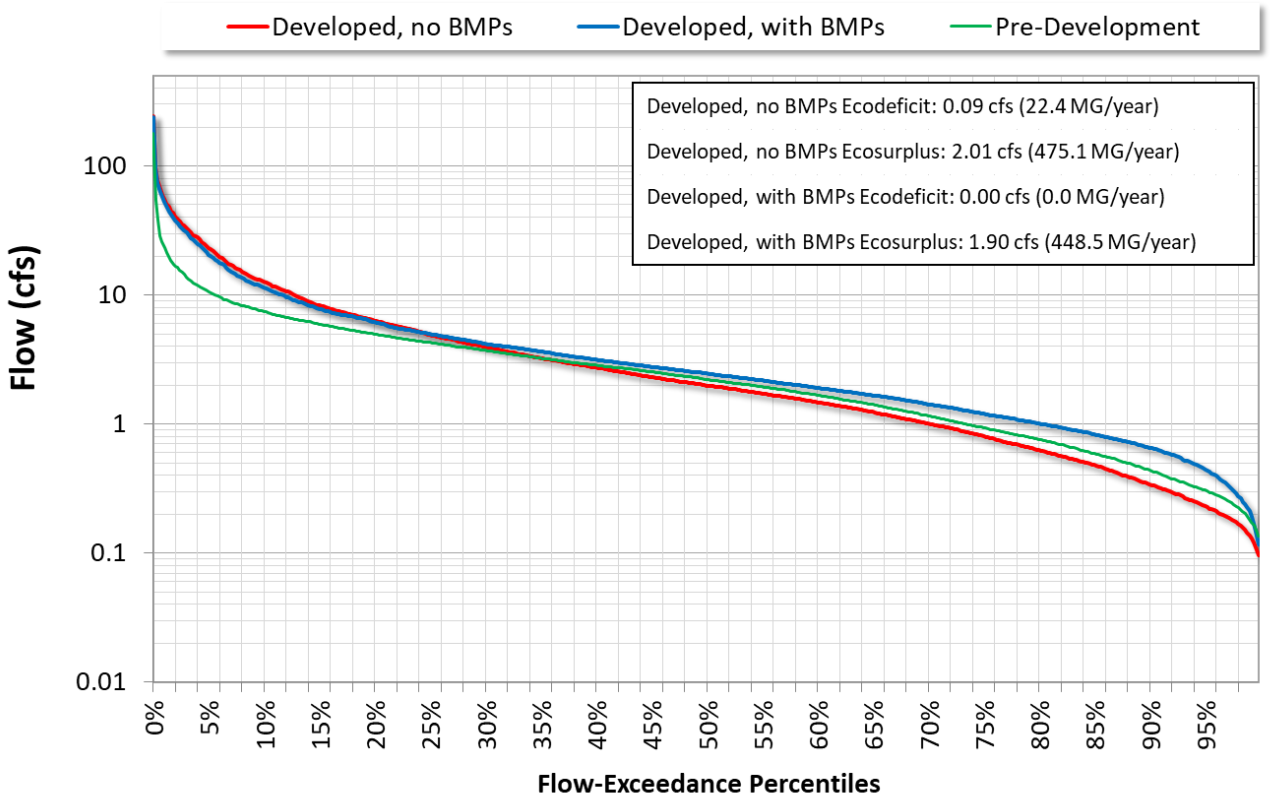

Figure 9. Flow duration curve with MS4 control of 100% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 3).

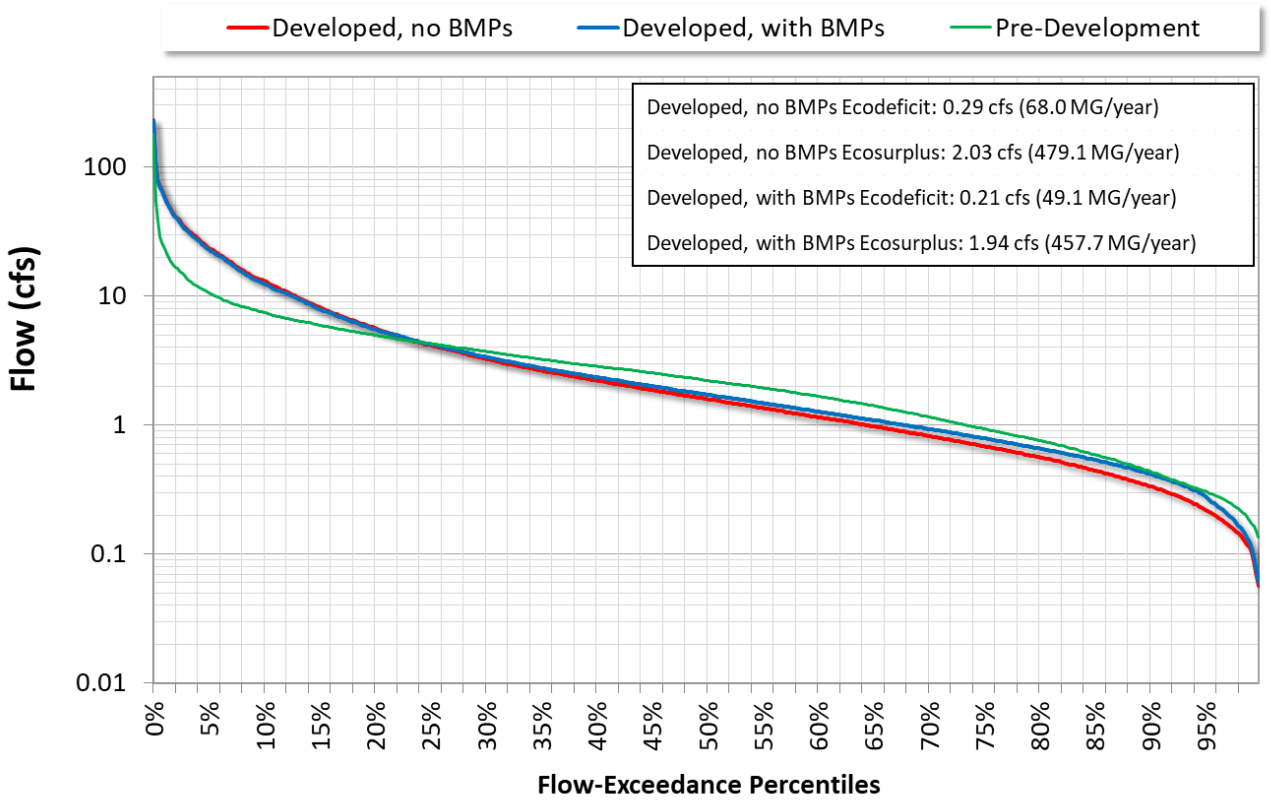

Figure 10. Flow duration curve with MS4 control of 30% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 4).

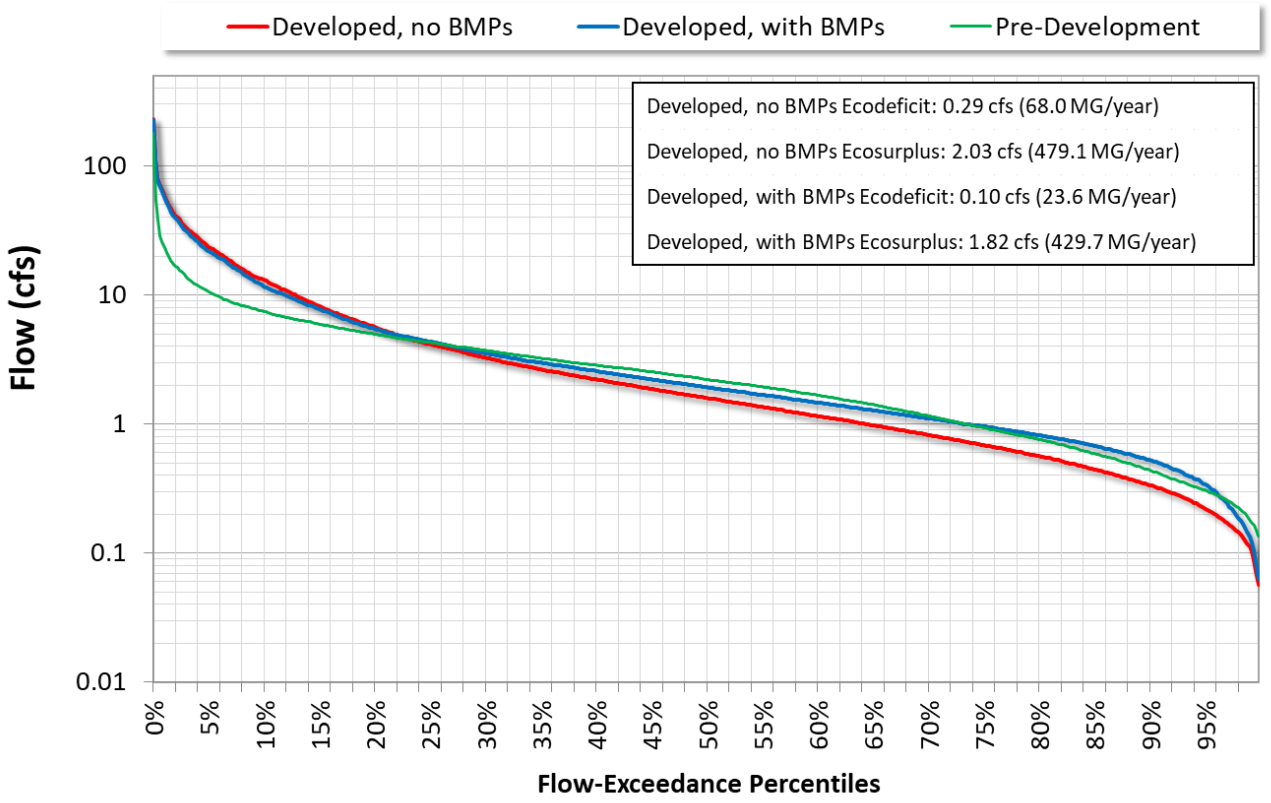

Figure 11. Flow duration curve with MS4 control of 80% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 4).

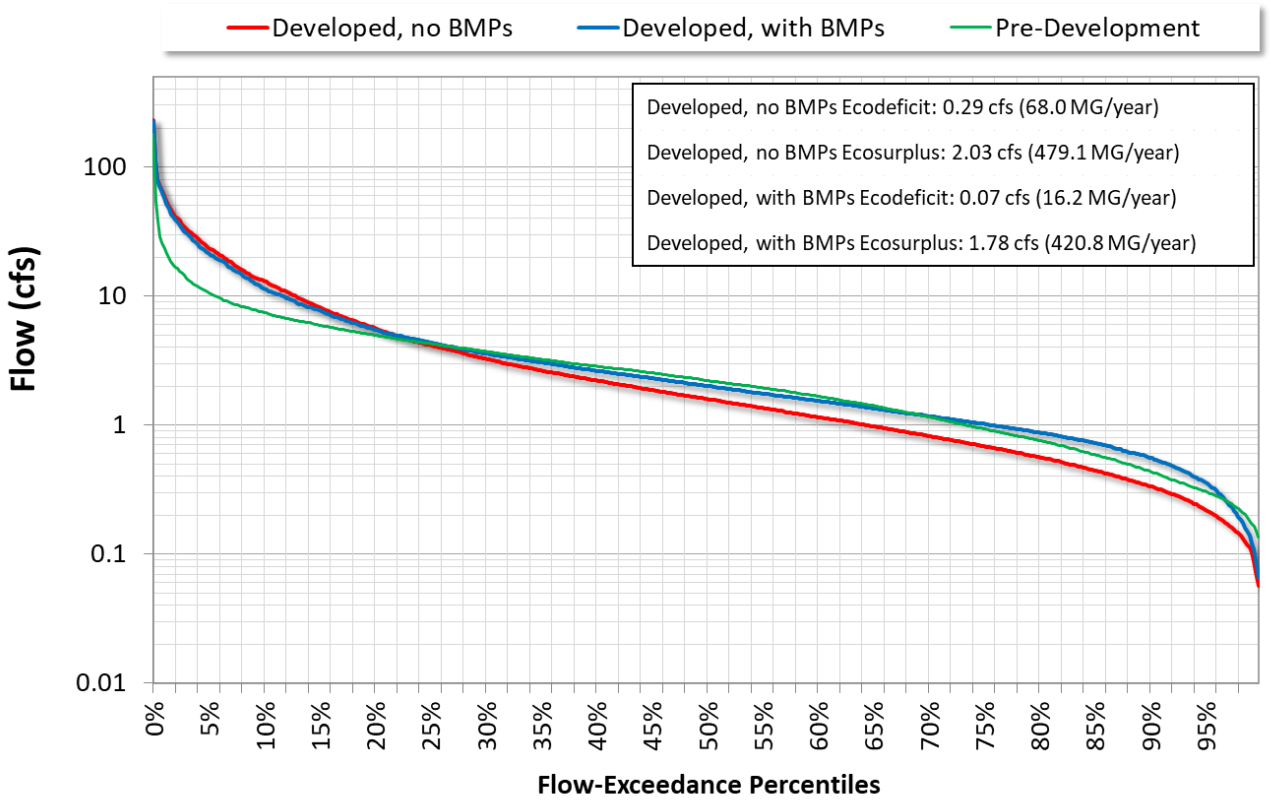

Figure 12. Flow duration curve with MS4 control of 100% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 4).

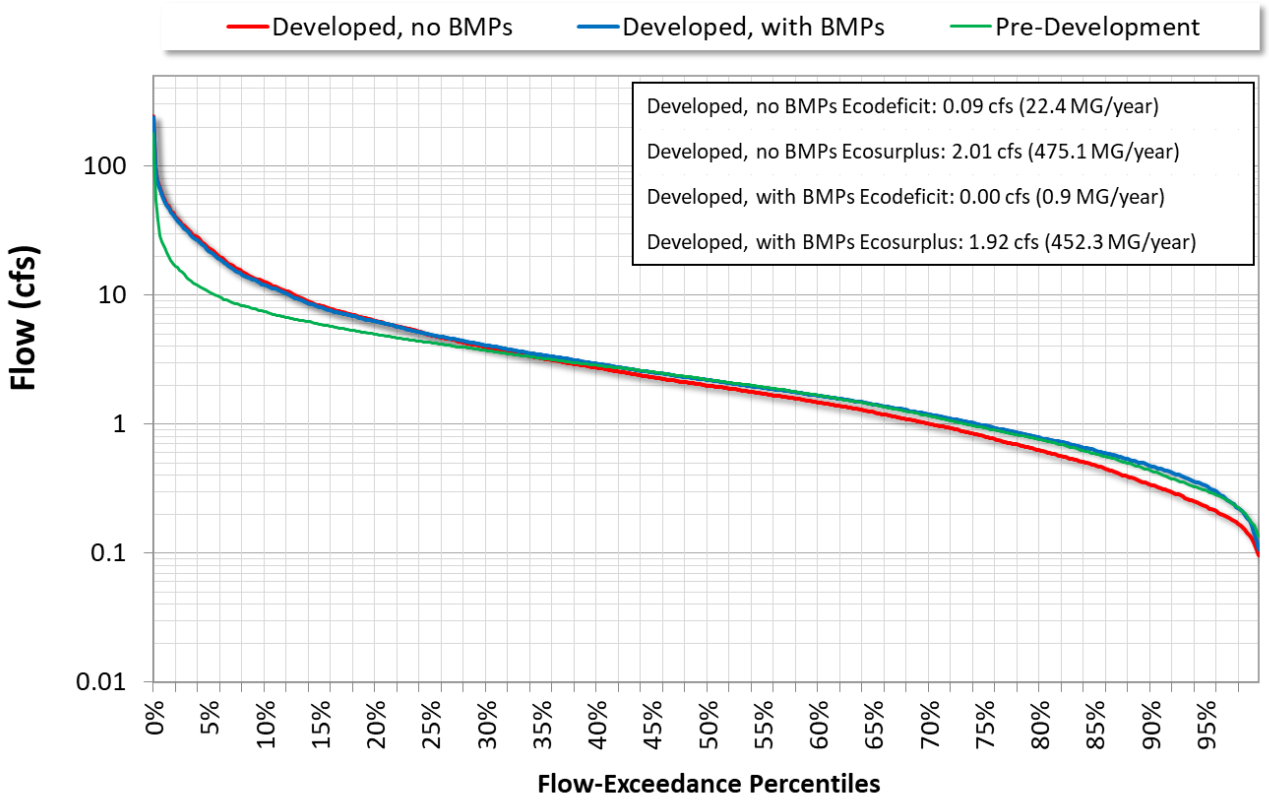

Figure 13. Flow duration curve with MS4 control of 30% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 5).

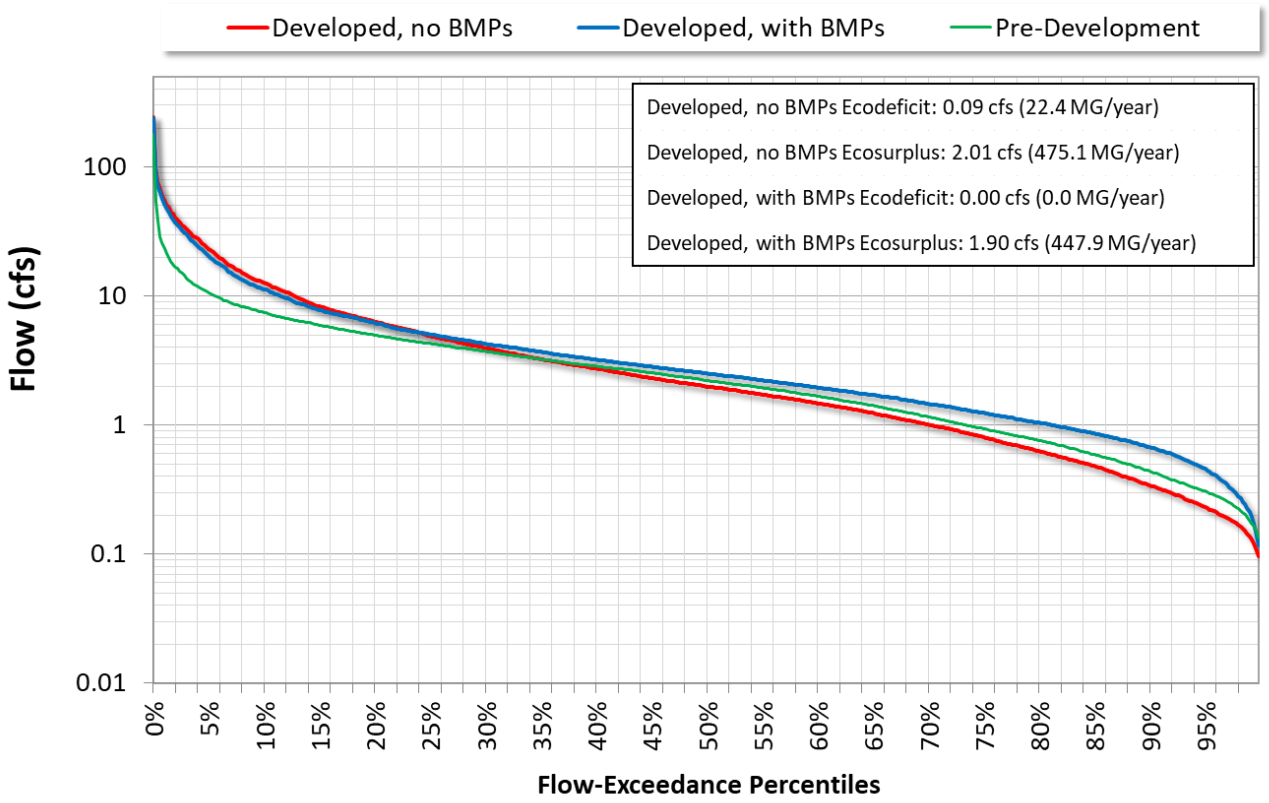

Figure 14. Flow duration curve with MS4 control of 80% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 5).

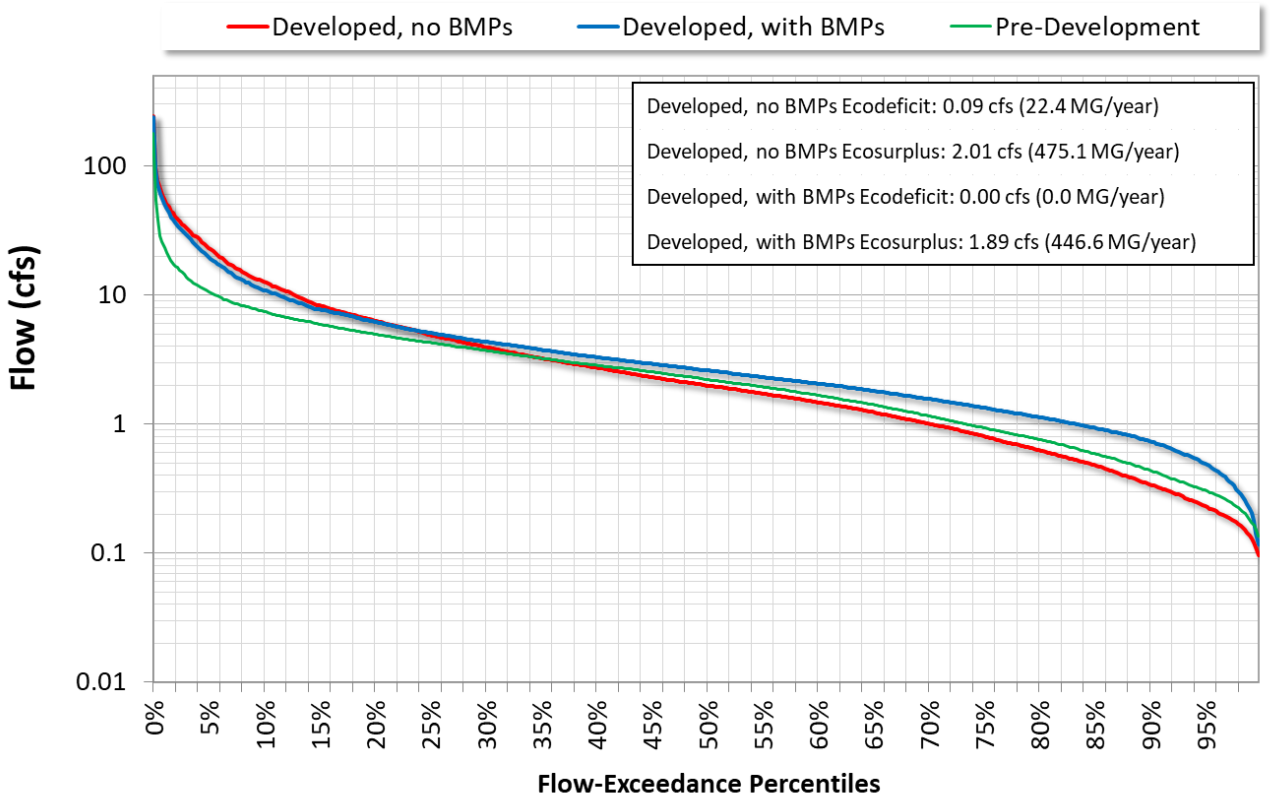

Figure 15. Flow duration curve with MS4 control of 100% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 5).

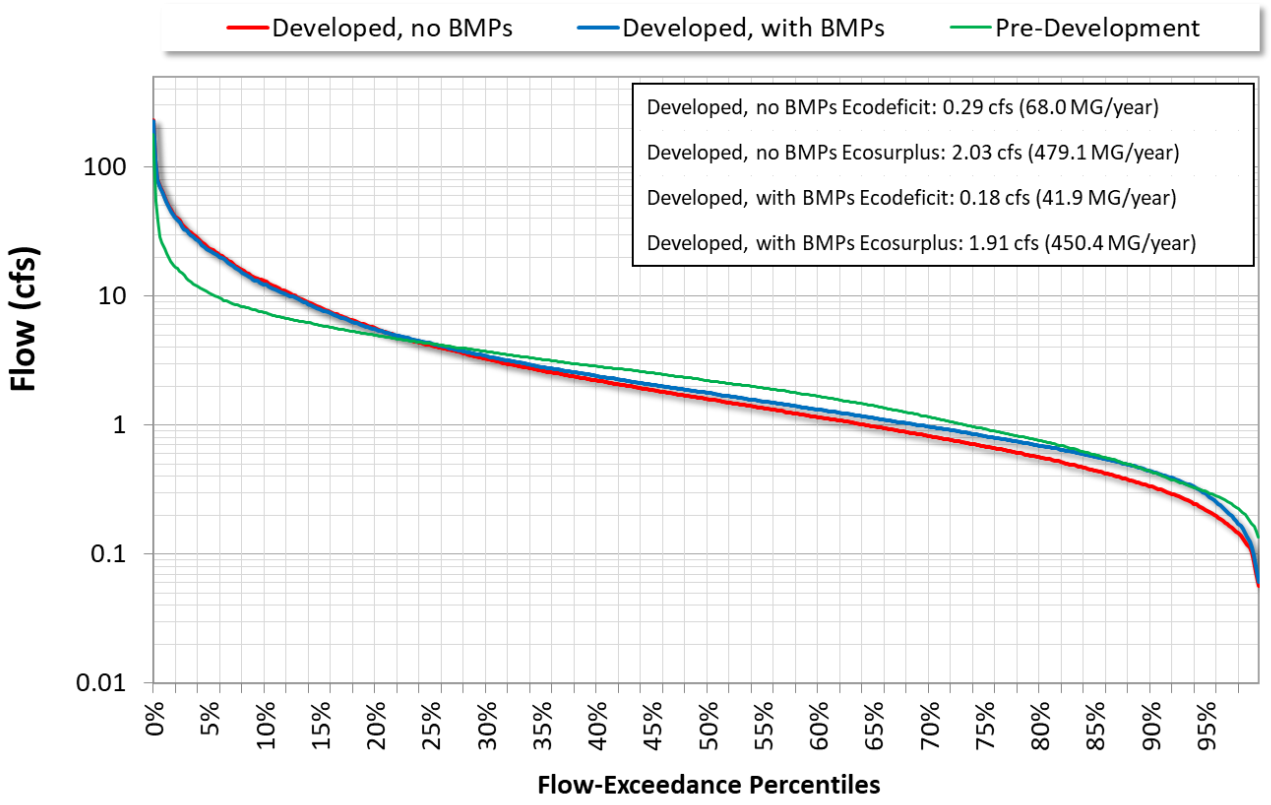

Figure 16. Flow duration curve with MS4 control of 30% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 6).

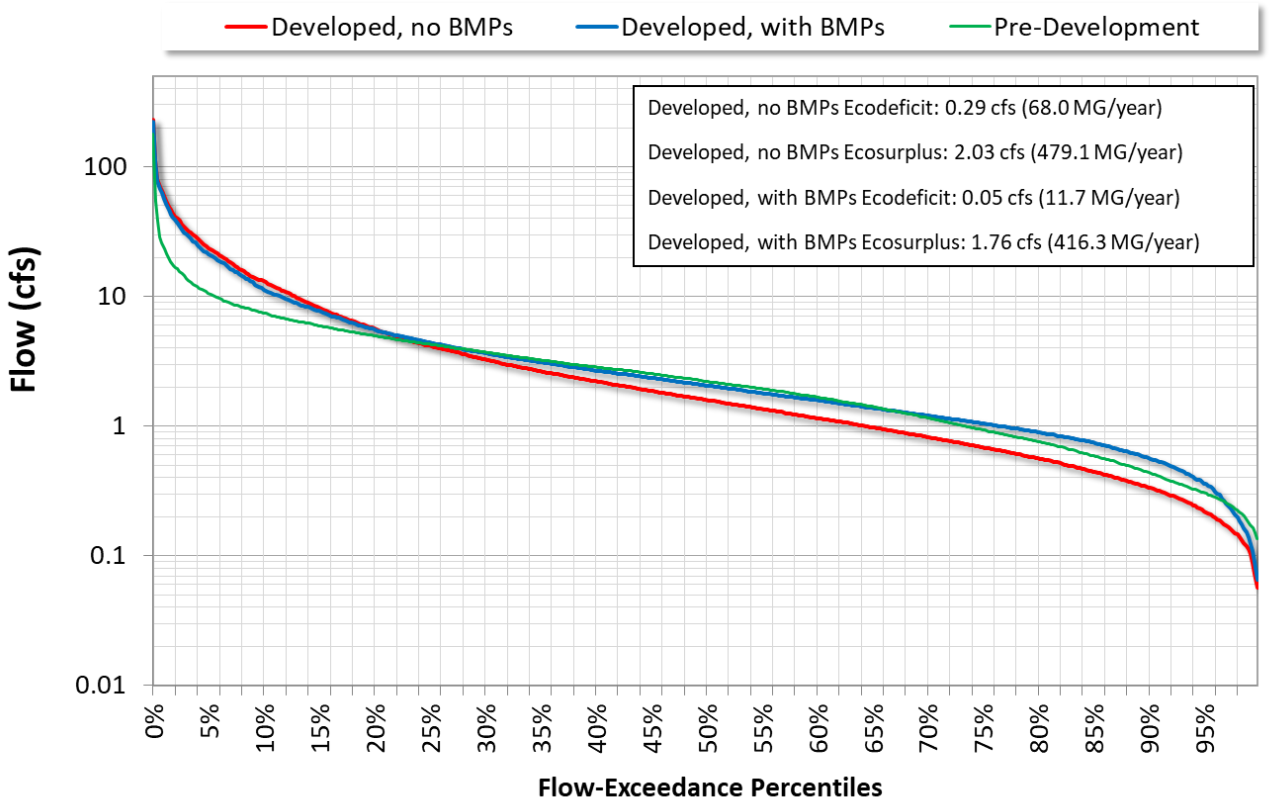

Figure 17. Flow duration curve with MS4 control of 80% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 6).

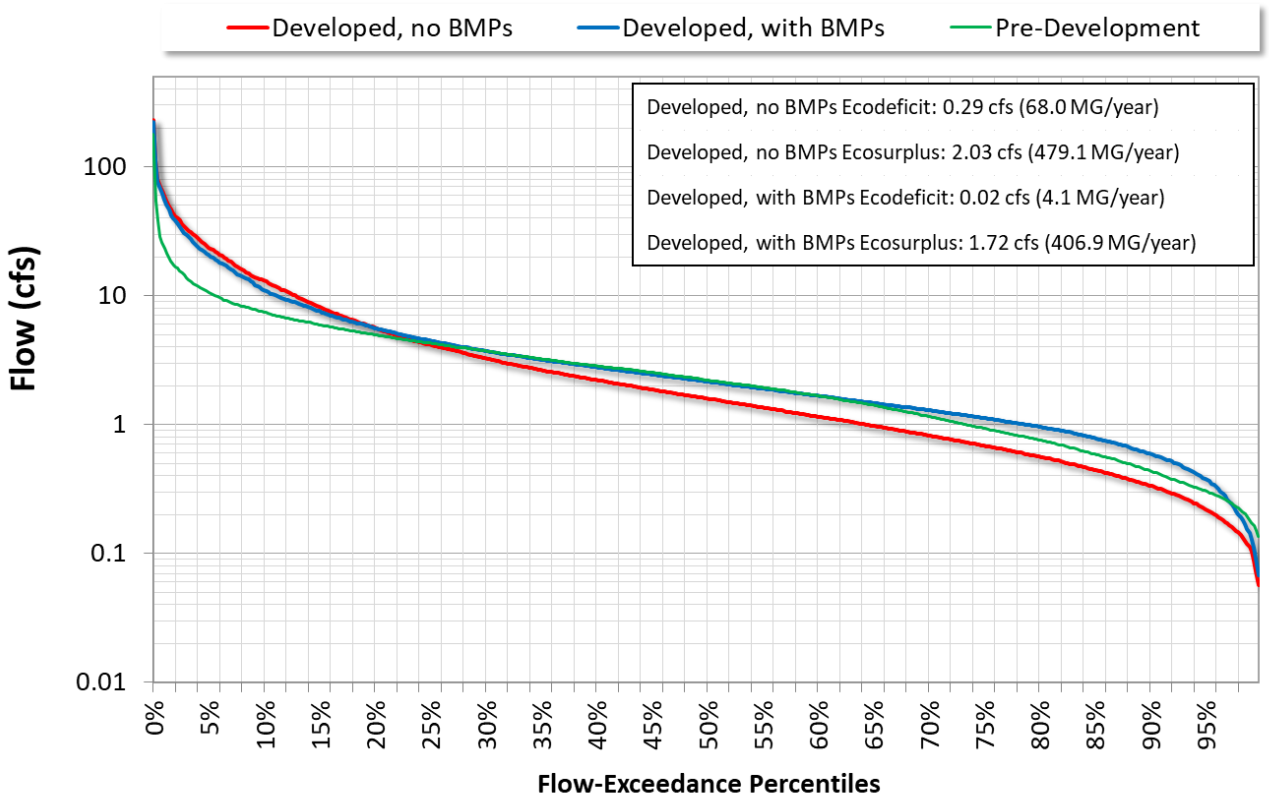

Figure 18. Flow duration curve with MS4 control of 100% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 6).

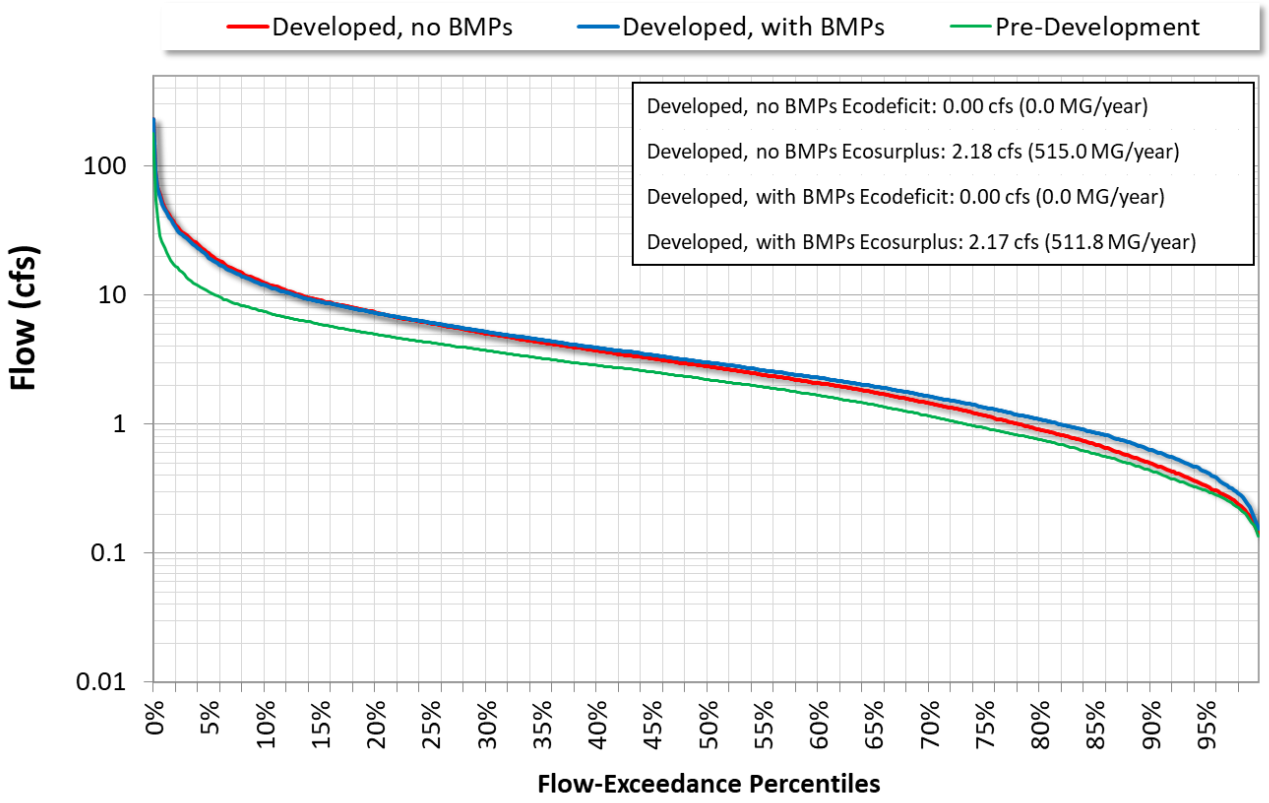

Figure 19. Flow duration curve with HIGH control of 30% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and climate conditions (Scenario 7).

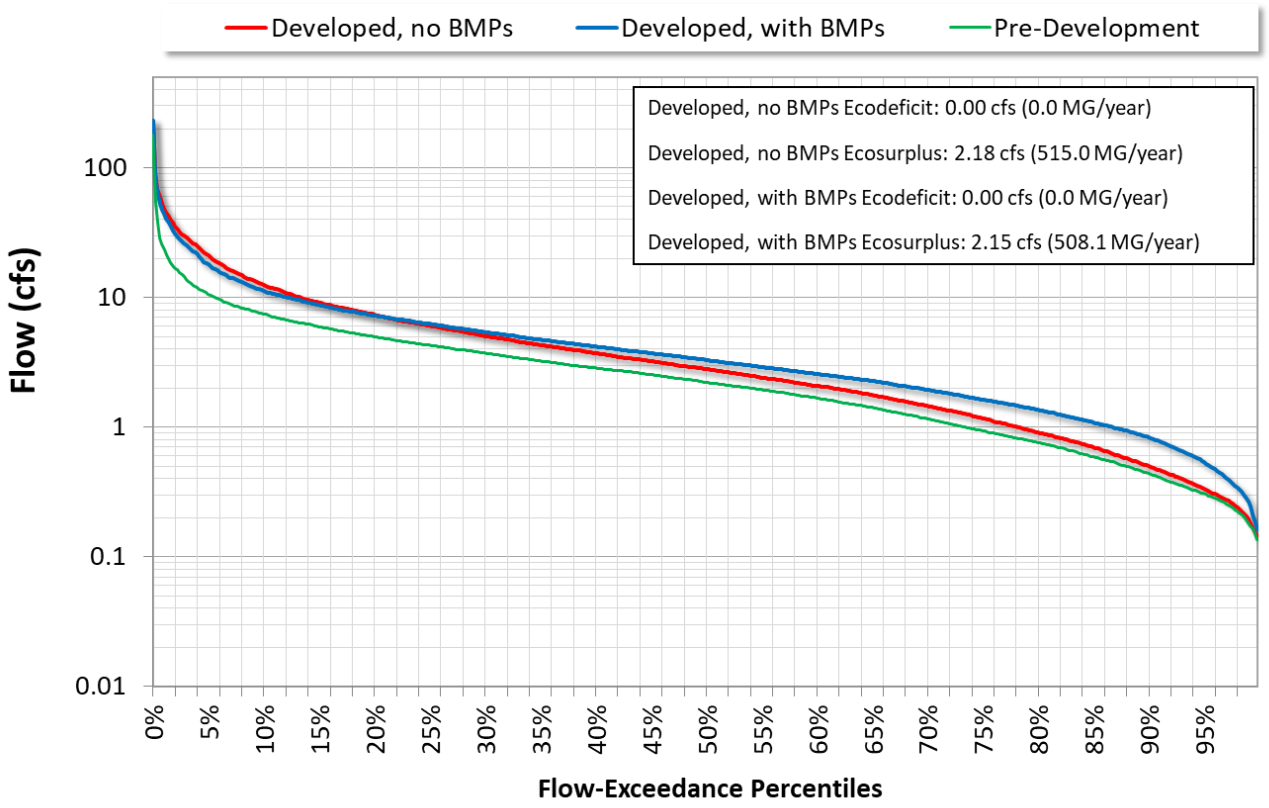

Figure 20. Flow duration curve with HIGH control of 80% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and climate conditions (Scenario 7).

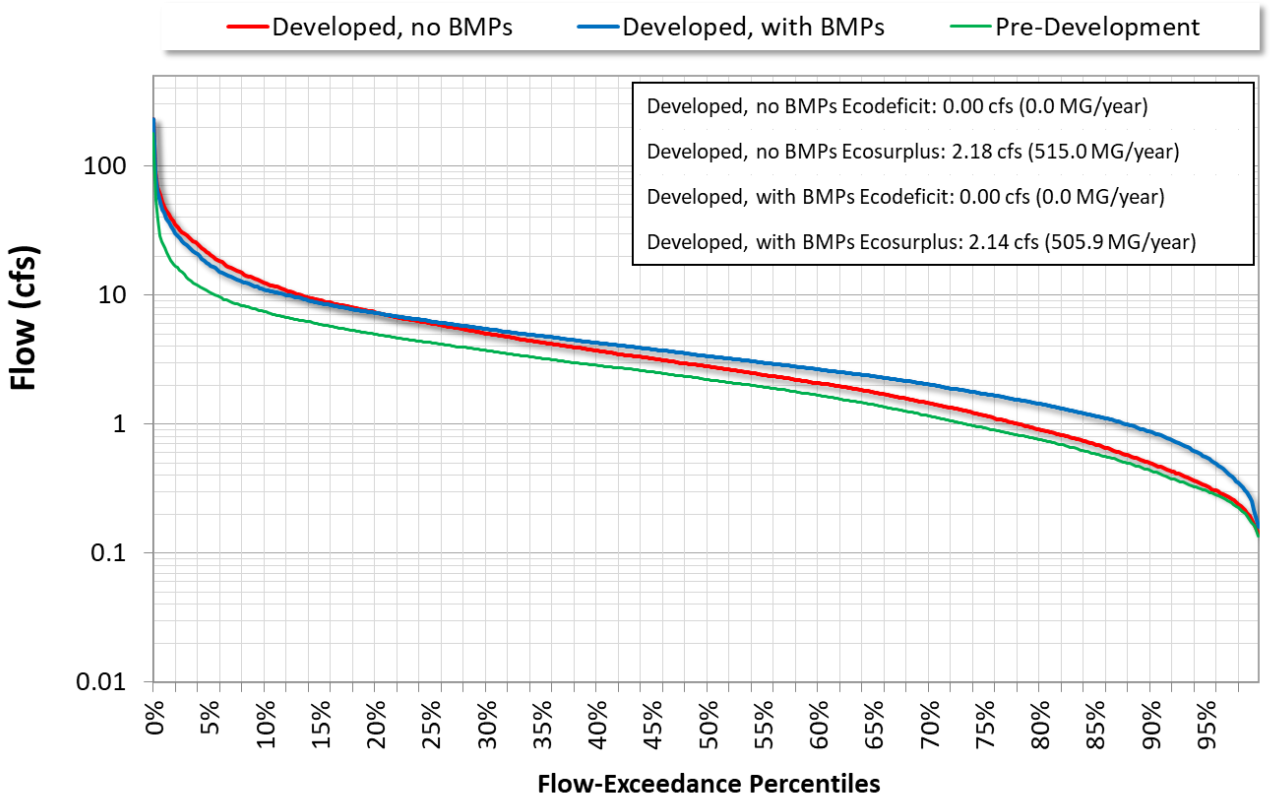

Figure 21. Flow duration curve with HIGH control of 100% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and climate conditions (Scenario 7).

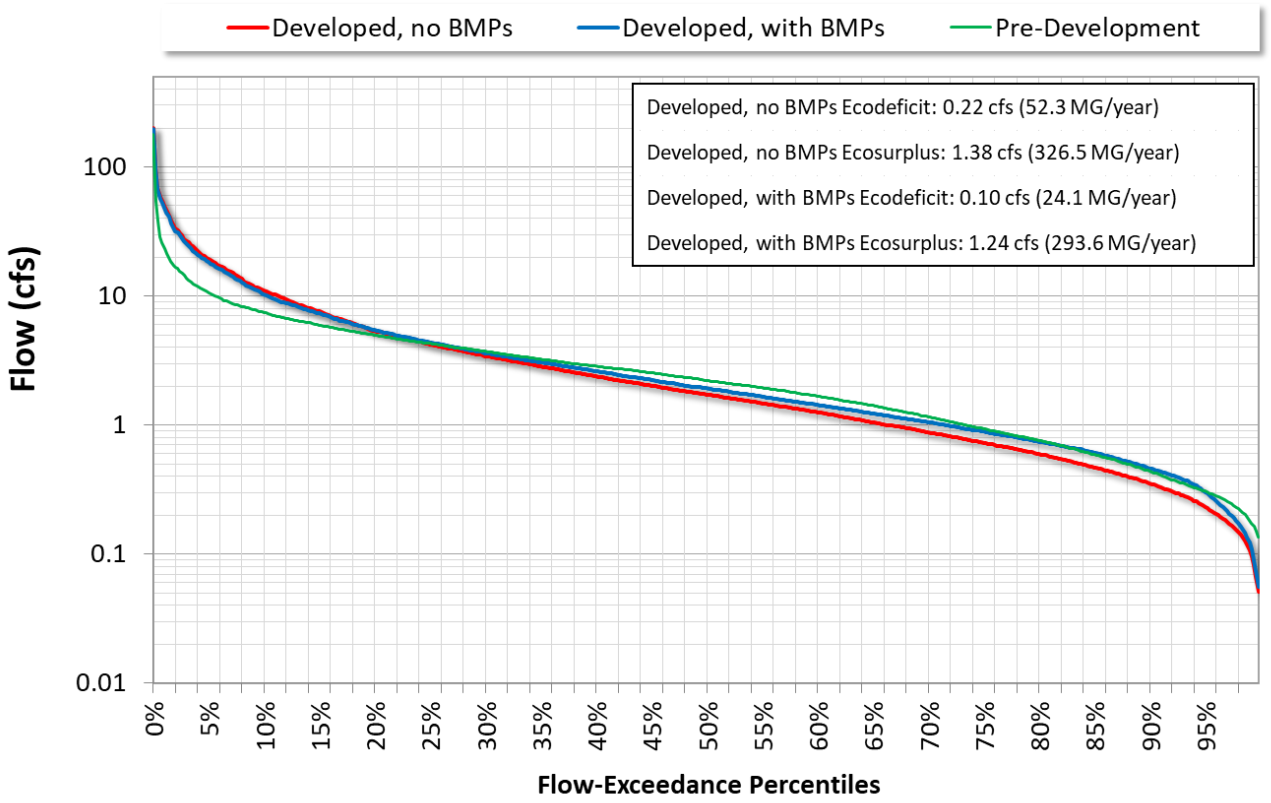

Figure 22. Flow duration curve with HIGH control of 30% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and future climate conditions (Scenario 8).

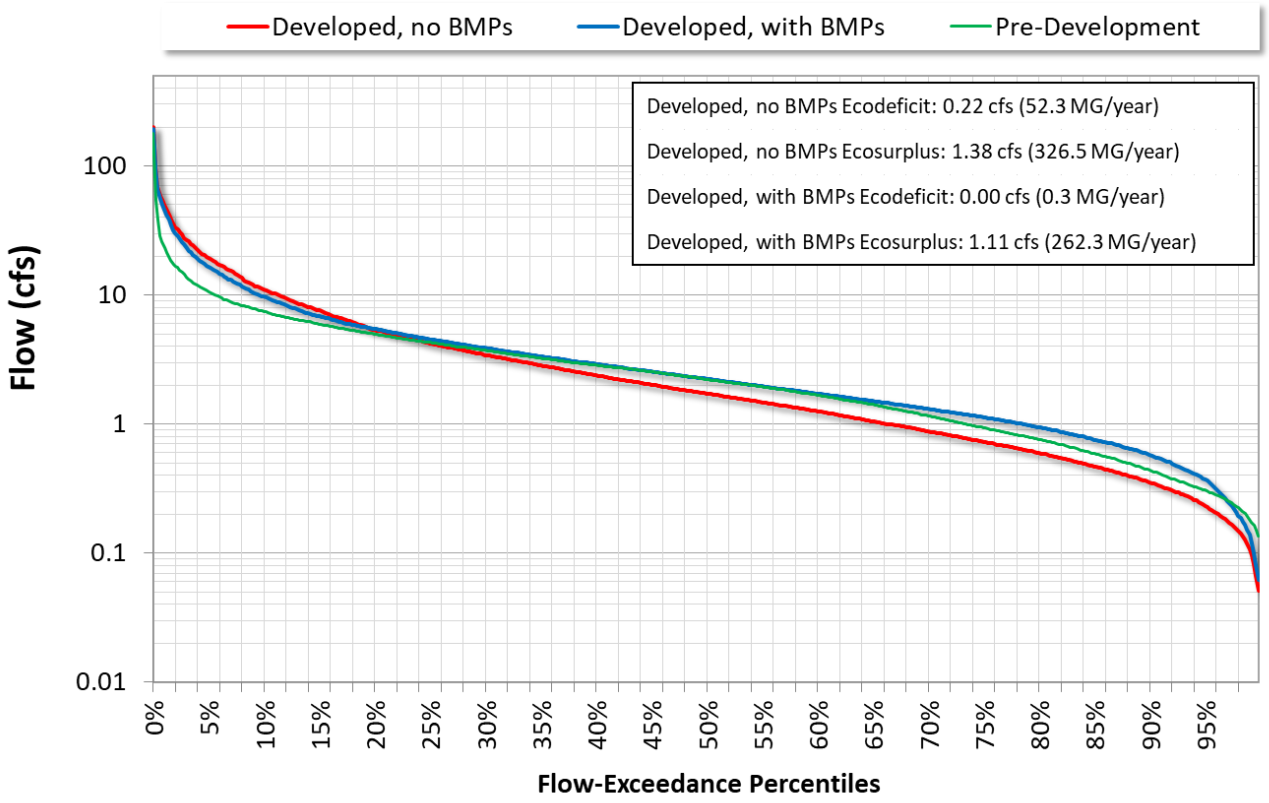

Figure 23. Flow duration curve with HIGH control of 80% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and future climate conditions (Scenario 8).

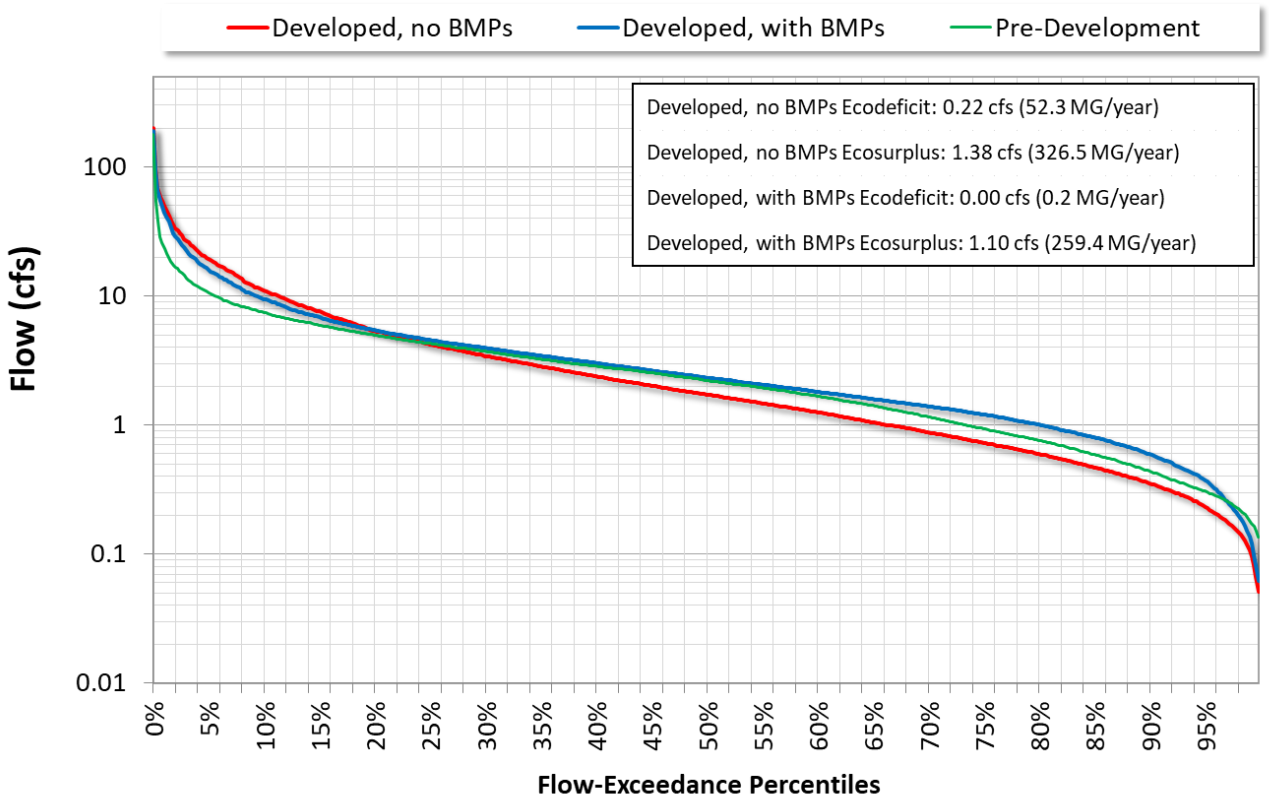

Figure 24. Flow duration curve with HIGH control of 100% of the Upper Hodges Brook subwatershed's impervious cover under historic LULC and future climate conditions (Scenario 8).

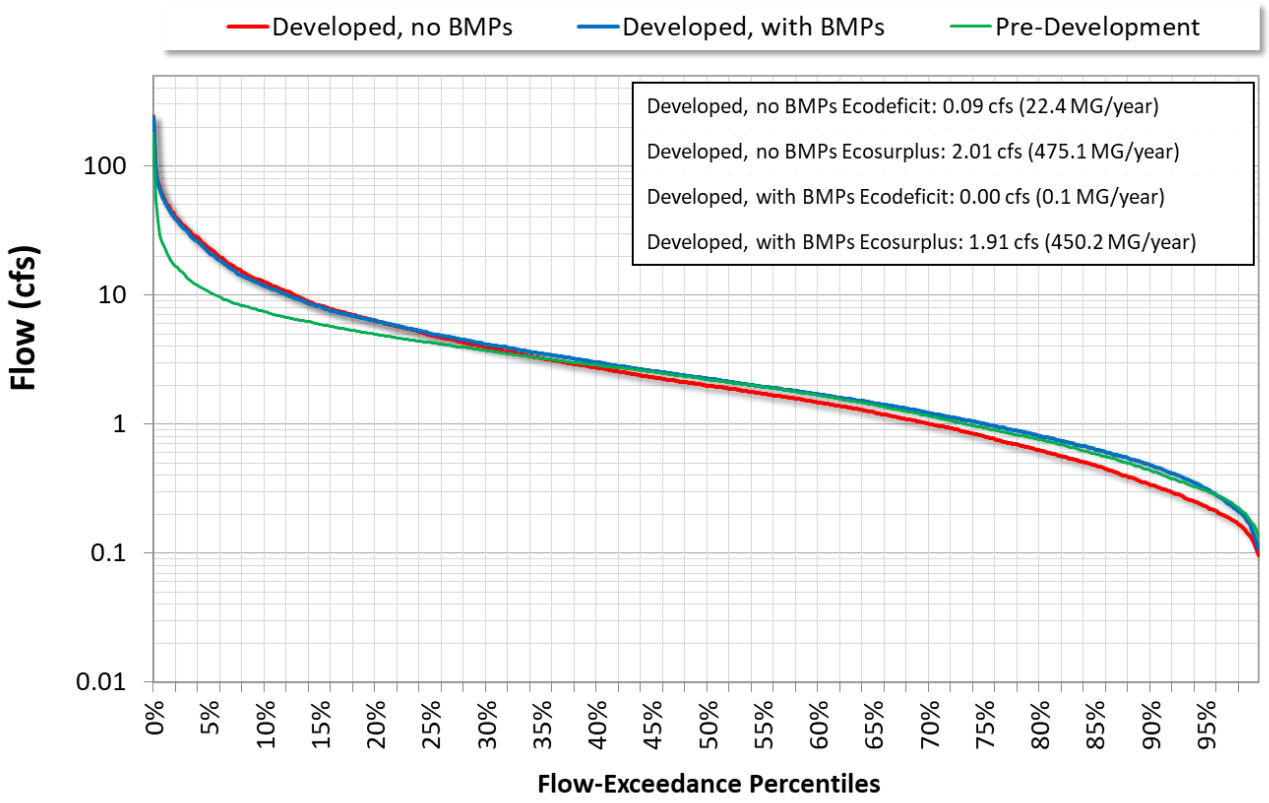

Figure 25. Flow duration curve with HIGH control of 30% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 9).

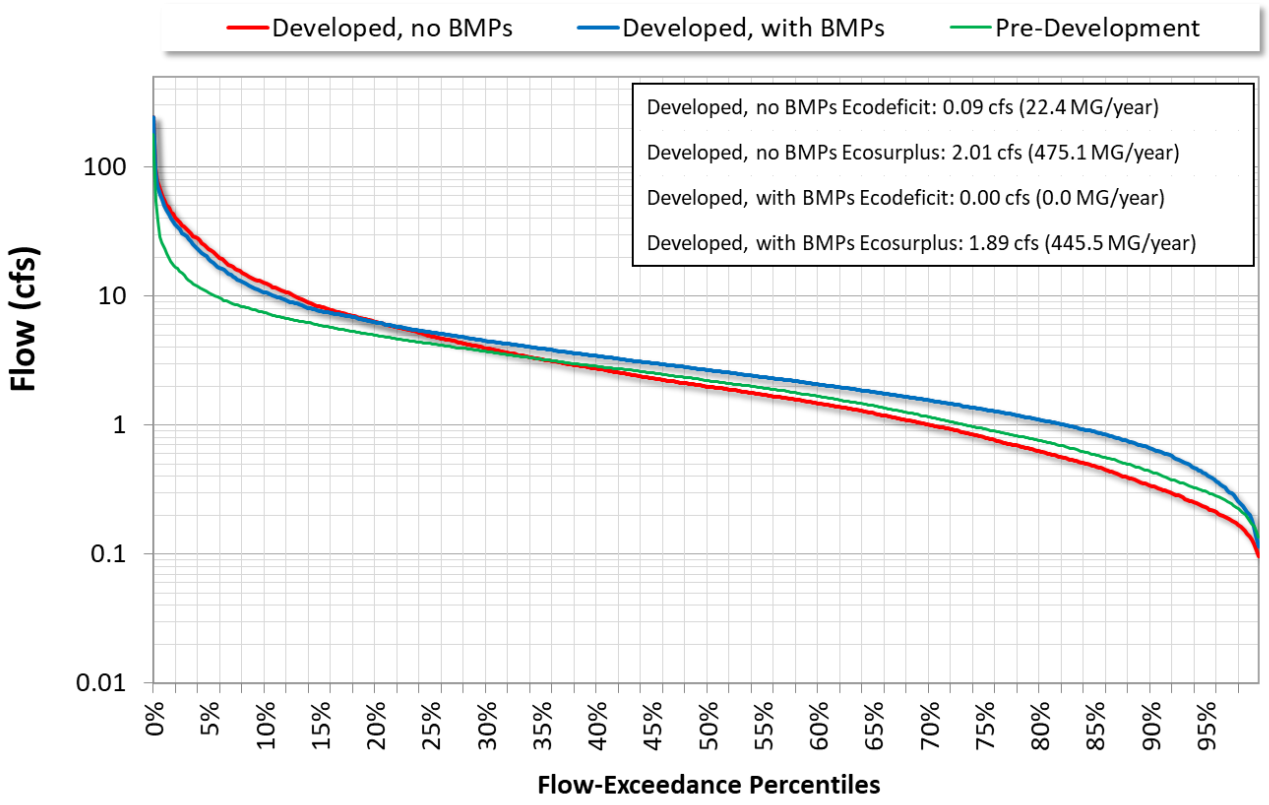

Figure 26. Flow duration curve with HIGH control of 80% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 9).

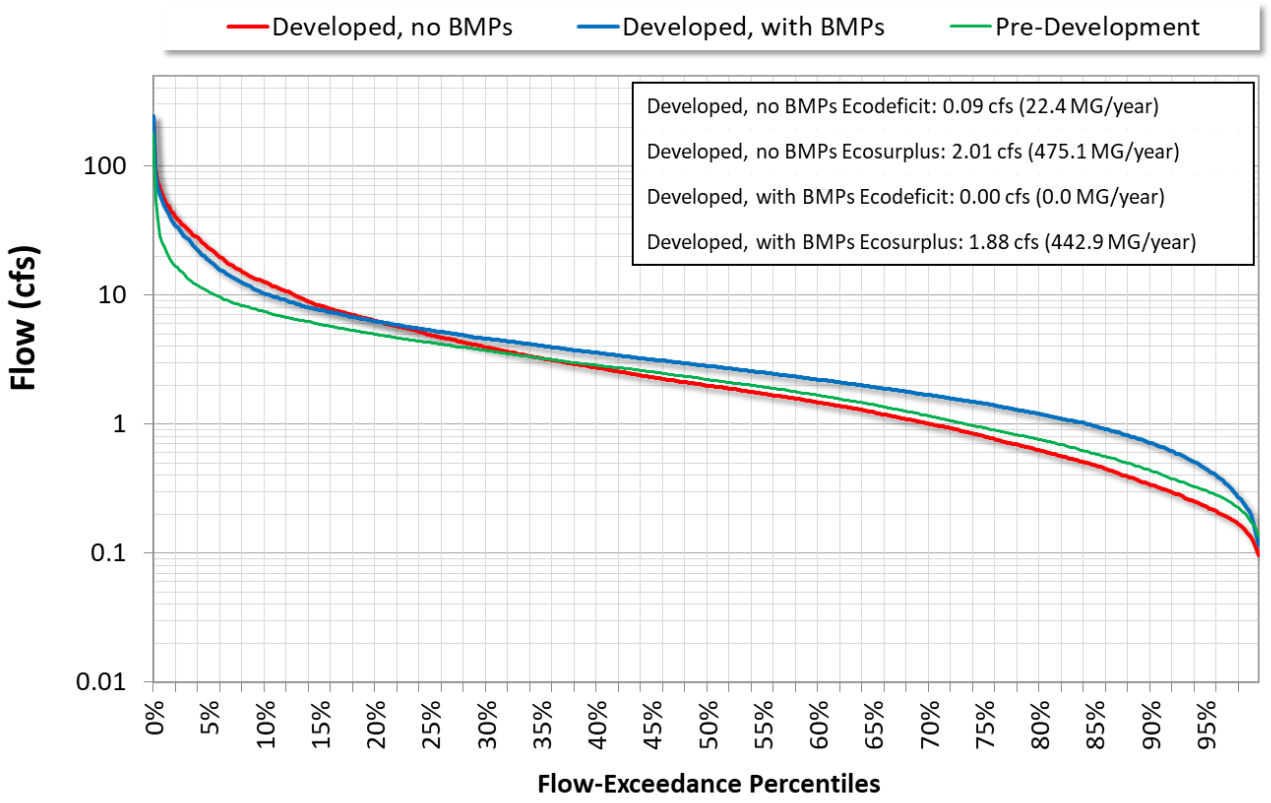

Figure 27. Flow duration curve with HIGH control of 100% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 9).

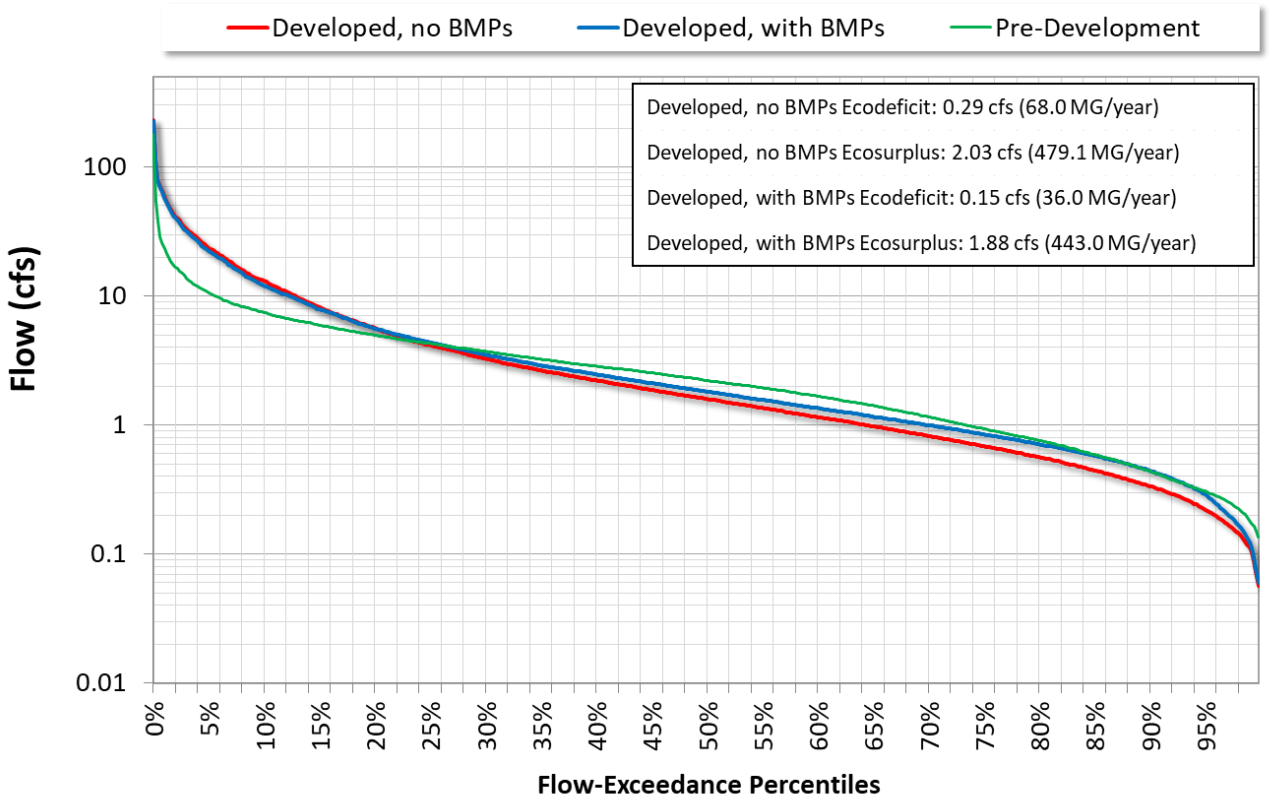

Figure 28. Flow duration curve with HIGH control of 30% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 10).

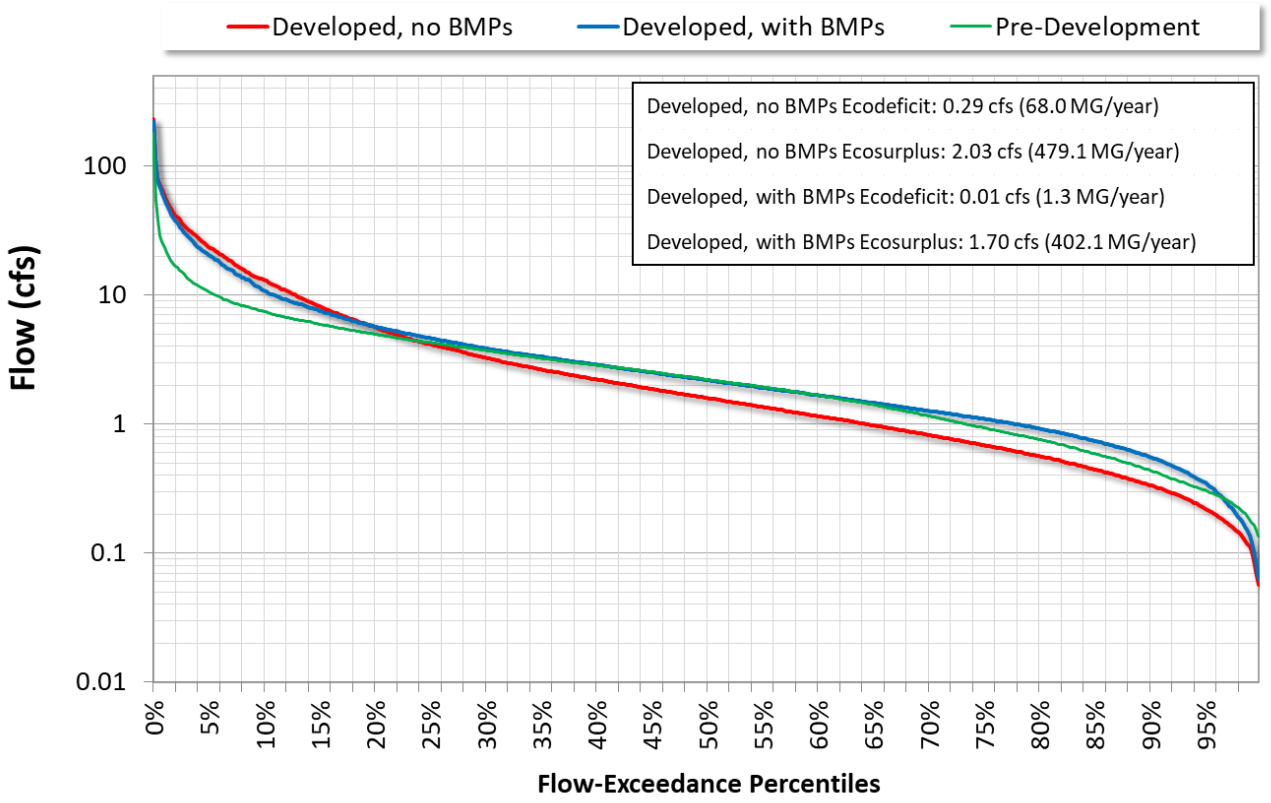

Figure 29. Flow duration curve with HIGH control of 80% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 10).

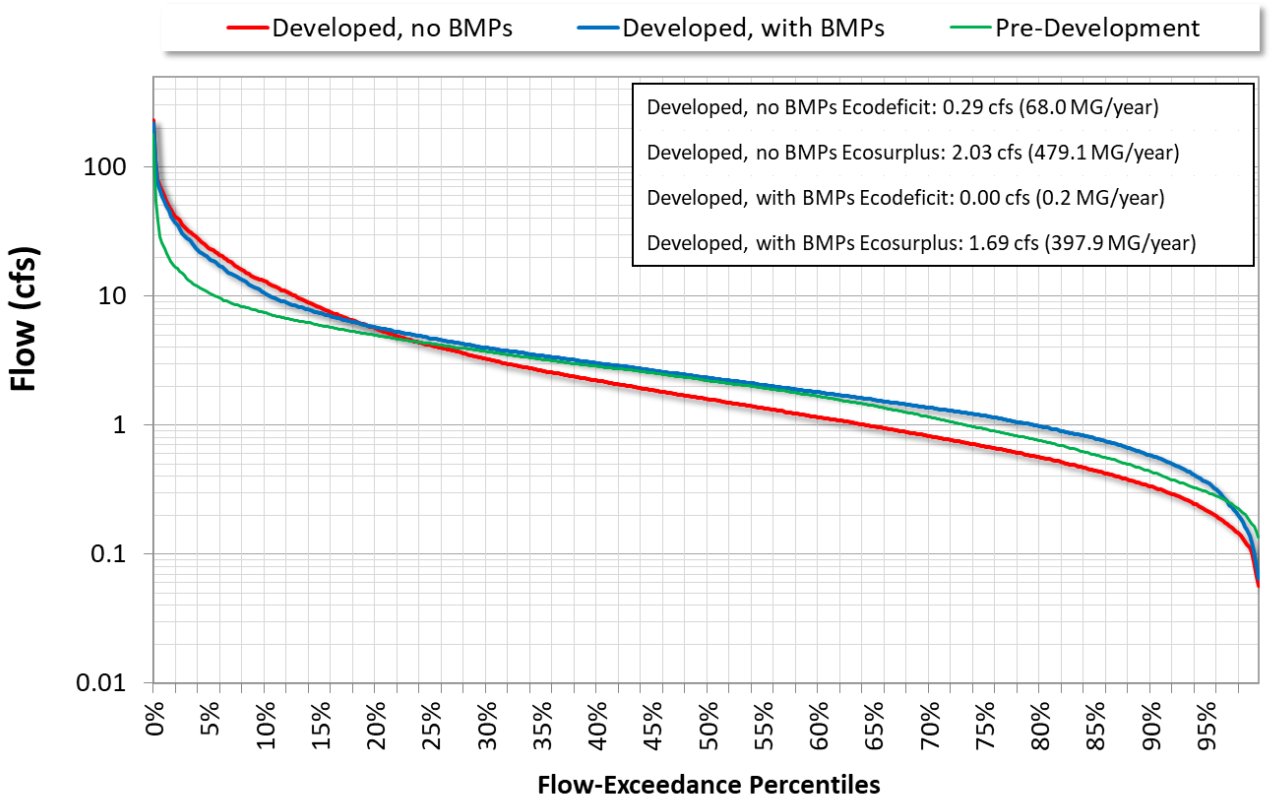

Figure 30. Flow duration curve with HIGH control of 100% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 10).

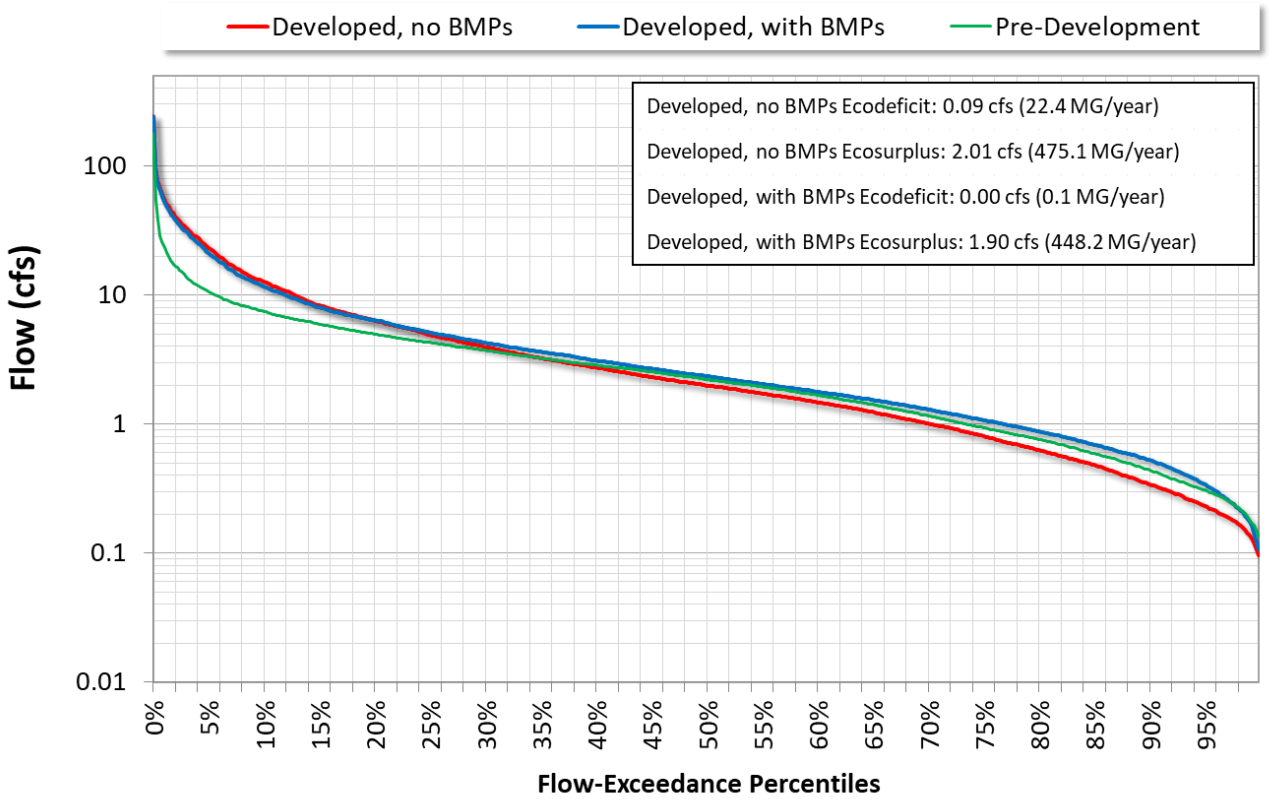

Figure 31. Flow duration curve with HIGH control of 30% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 11).

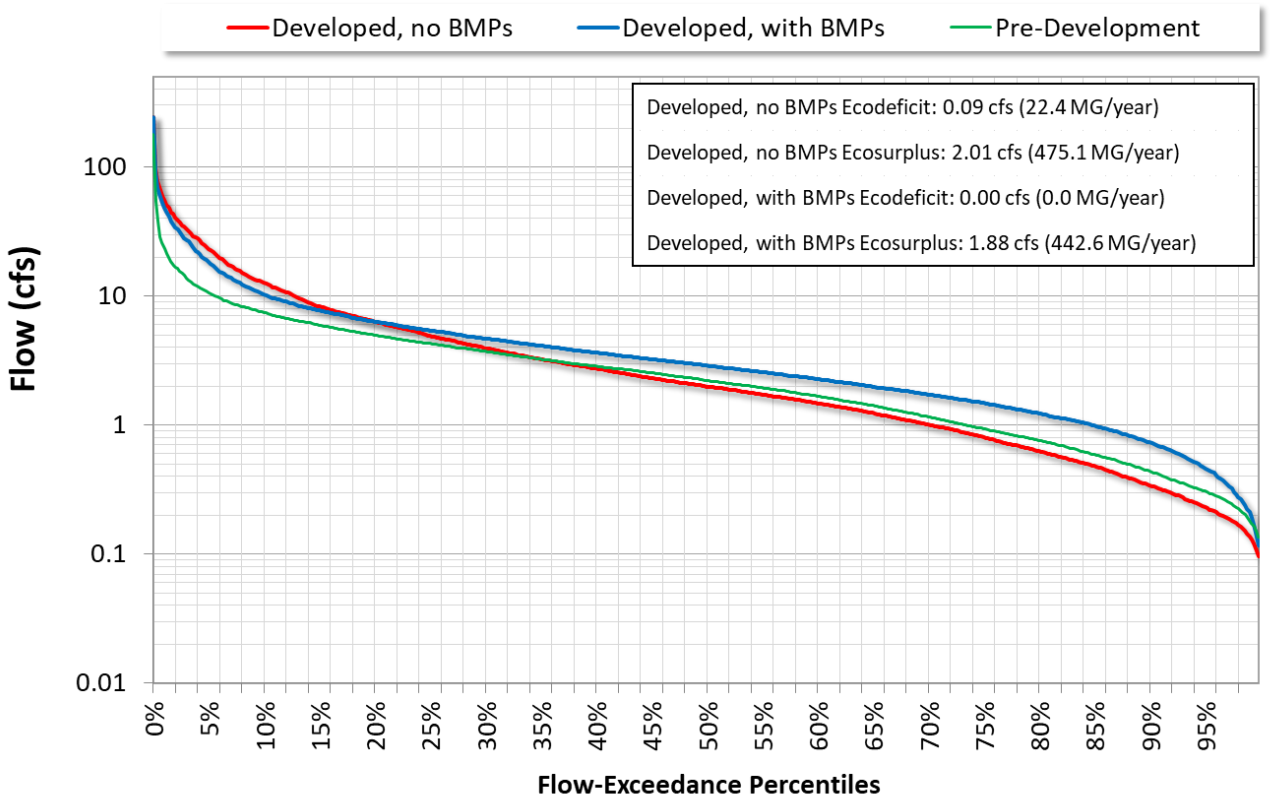

Figure 32. Flow duration curve with HIGH control of 80% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 11).

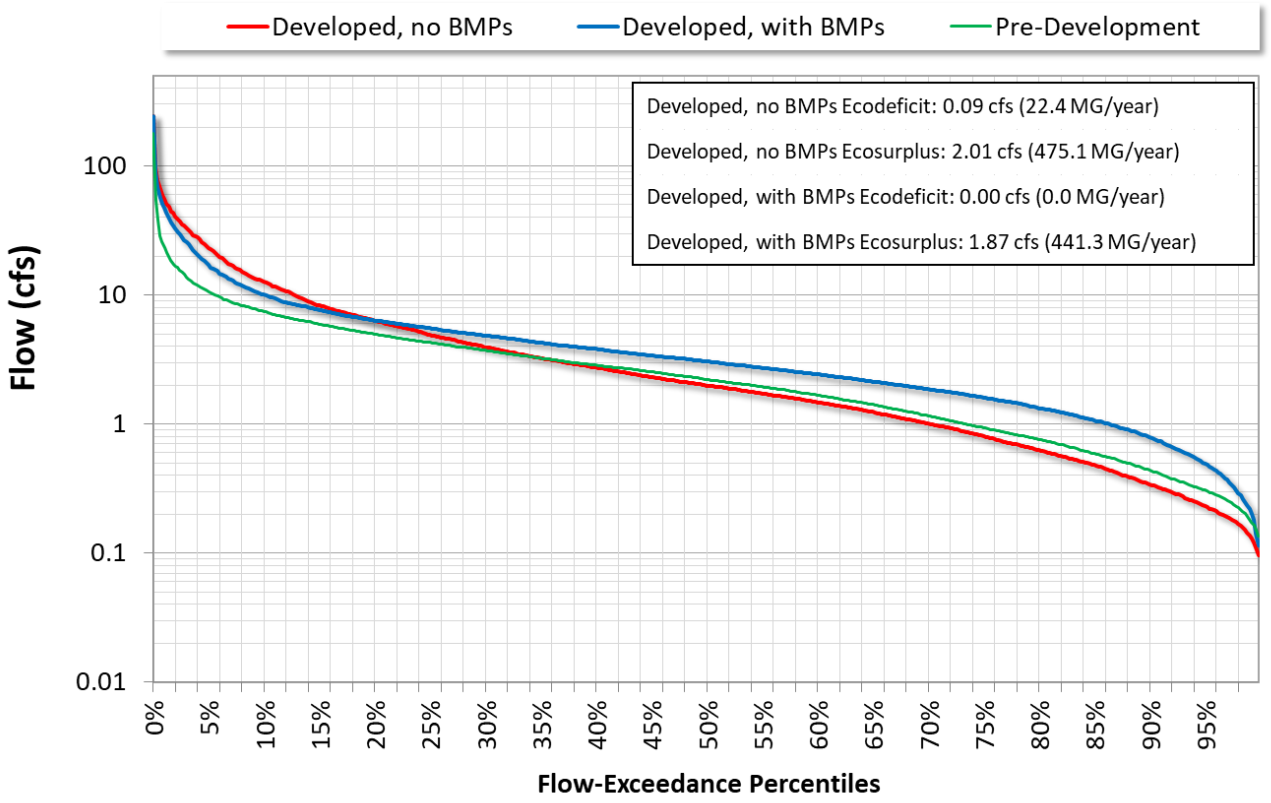

Figure 33. Flow duration curve with HIGH control of 100% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and historic climate conditions (Scenario 11).

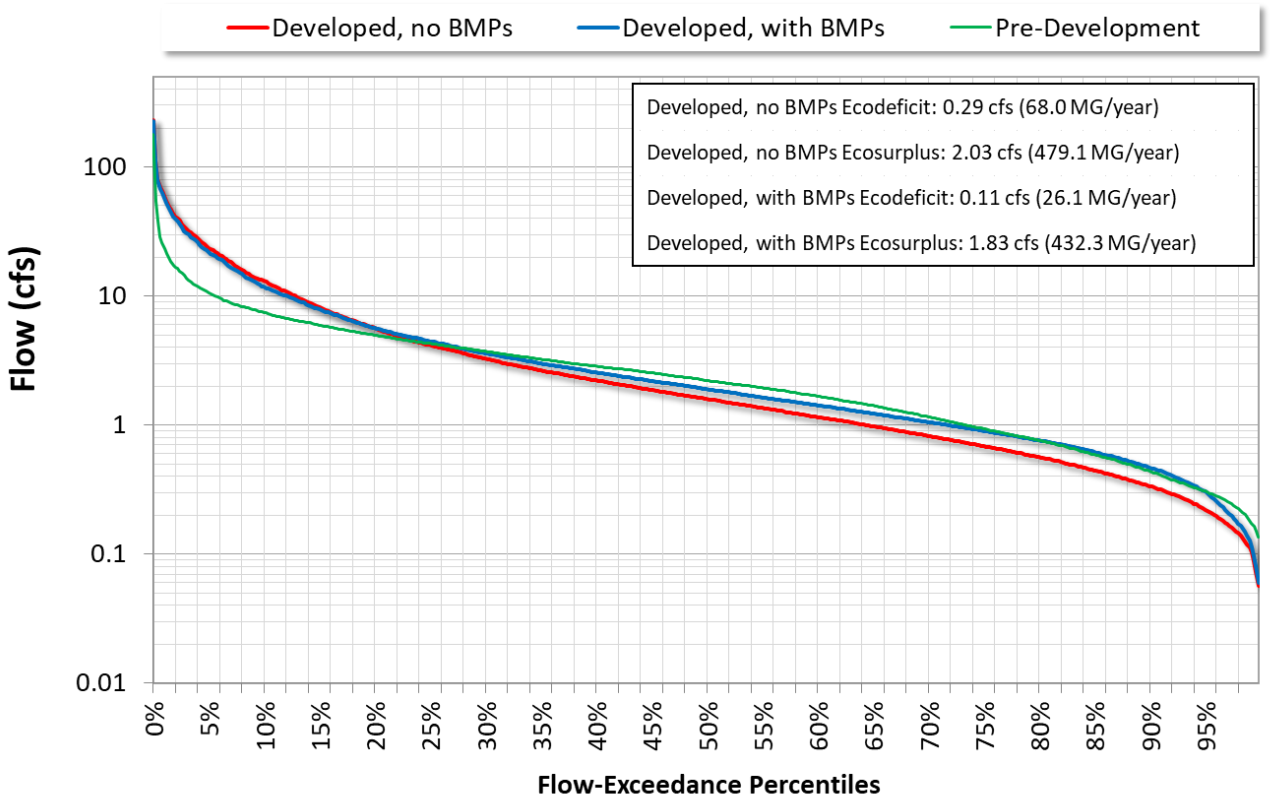

Figure 34. Flow duration curve with HIGH control of 30% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 12).

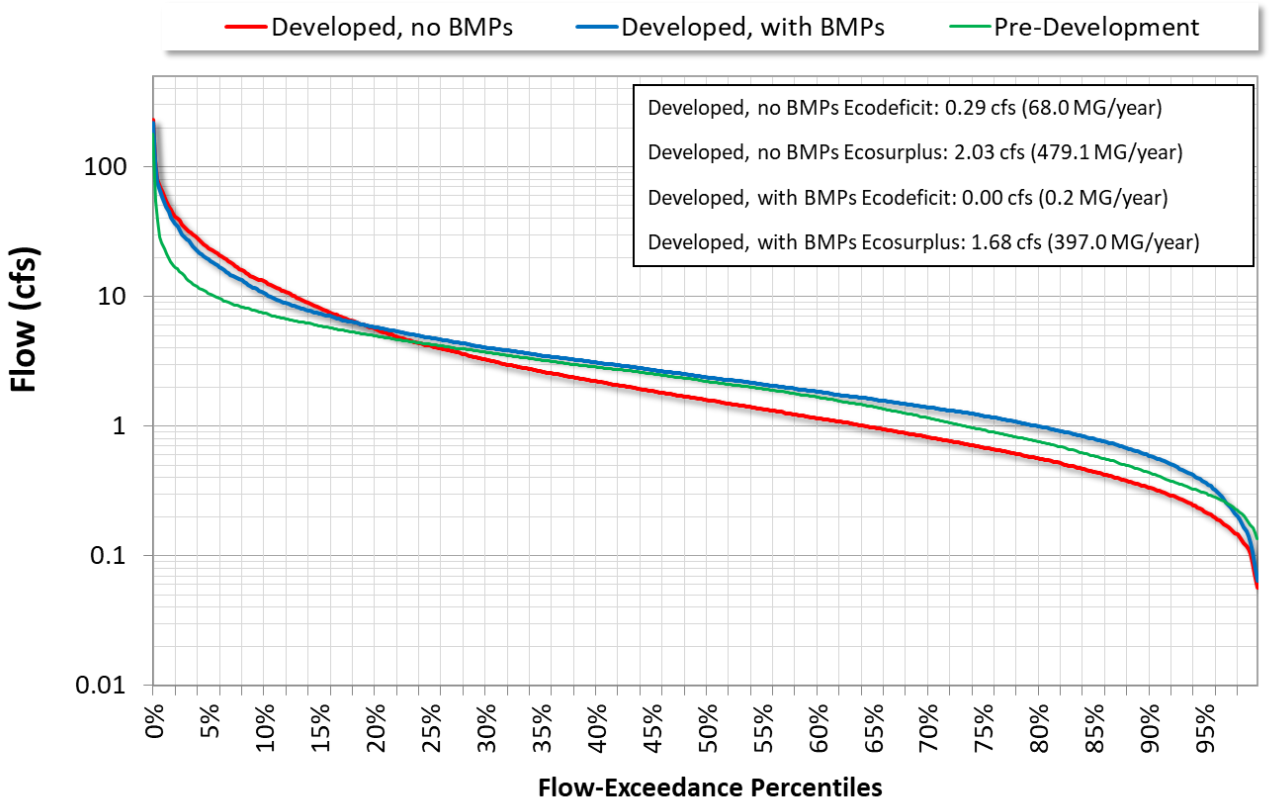

Figure 35. Flow duration curve with HIGH control of 80% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 12).

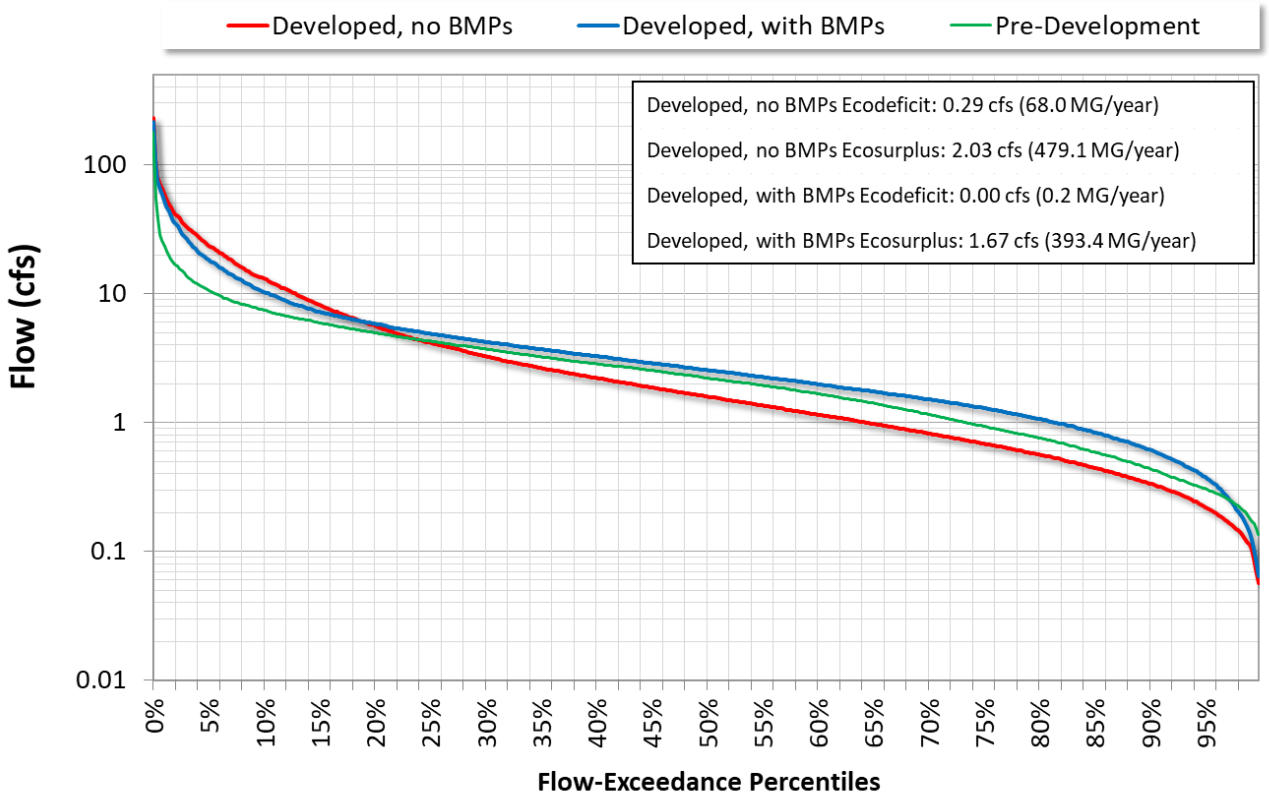

Figure 36. Flow duration curve with HIGH control of 100% of the Upper Hodges Brook subwatershed's impervious cover under future LULC and future climate conditions (Scenario 12).