Flood Study Checklist

Requirement	Submitted? (Y, N, N/A)	Reviewer Comments
Report		
1. Report clearly explains project location, topographic data sources, and changes from effective hydraulic model		
2. If effective hydrology is not used/available, report identifies data sources and assumptions for rainfall data, loss method, time of concentration calculations, channel routing, modeling software		
3. Report clearly explains any unusual cross section or structure geometry		
4. Tables are provided that demonstrate the water surface changes from duplicate effective, corrected effective, and proposed conditions		
5. Tables are provided that document changes in flow between existing site conditions and proposed site conditions		
6. Verify acceptable model file is submitted; run model to verify report conclusions		
Hydrology work maps and output		
7. Drainage area maps for existing and proposed site conditions		
8. Existing and Proposed contours are clearly shown on drainage area map and extend beyond boundaries to show impacts to proposed site		
9. Stream reaches are clearly identified		
10. Existing and Proposed conditions land use maps with impervious areas clearly hatched. Impervious and Pervious areas summarized in a table. Land use matches Design Criteria Manual land use designations.		
11. Drainage areas are clearly identified, time of concentration and curve numbers are displayed, and appropriate acreage is shown		
12. Longest Flow paths are defined		
13. Drainage area details match hydrology model input		
Hydraulic work maps and output		
14. Existing hydraulic work map included & contains all cross sections shown in model and fully urbanized conditions 100-year floodplains currently on site		
15. Proposed hydraulic work map is included and contains all cross sections shown in model and fully urbanized conditions 100-year floodplains proposed on site		

Flood Study Checklist (cont.)

Requirement	Submitted? (Y, N, N/A)	Reviewer Comments
16. Existing and Proposed Flood Profiles -Stationing consistent with effective models -Roadways shown with low chord, top of road, etc. 2-, 10-, 25-, 50-, 100-, 500-year existing and 100-year fully urbanized flood profiles shown		
17. Existing and Proposed Cross sections -Stationing consistent with effective models -Roadways shown with low chord, top of road, etc. -2-, 10-, 25-, 50-, 100-, 500-year existing and 100-year fully urbanized flood profiles shown		
18. Map showing erosion hazard setbacks, riparian areas, wetlands, jurisdictional waters of the U.S., existing and proposed floodway		
19. Label minimum finished floor elevations of affected structures		
20. Tables comparing duplicate effective, corrected effective, and proposed conditions water surface elevations		
Model parameter check		
21. Model Input/Output for hydraulic and hydrology models are included in report		
22. Downstream boundary condition set to normal depth		
23. Channel reach lengths match cross-section stationing		
24. Reach lengths through junctions are from downstream to upstream cross-section (not to actual junction itself)		
25. Contraction/Expansion coefficients are increased through modeled structures		
26. Water surface elevations are contained within the cross sections		
27. Water surface profiles for different storm events do not intersect or cross one another (i.e., 100-yr WSEL is not lower than 10-yr WSEL at any point in the model)		
28. If structures are overtopped, flow distribution does not suddenly change between the upstream and downstream cross sections		
29. Water surface profiles do not default to critical depth in consecutive cross sections		
30. Floodway encroachment stations are located outside channel banks		
31. CheckRAS results are provided (if applicable-FEMA effective floodplain only)		