

Chapter Six

Development of Numerical Models for the Zomar/Alexander Watershed

6.1 Introduction:

The ultimate goal of this chapter is to develop an estimation of the rainfall/runoff for the Zomar/Alexander transboundary watershed. This model will help the Israelis and the Palestinians in the West Bank characterize the hydrological response of the watershed. In addition to that, the model may be used to quantify the pollution load of the point and non point sources. Finally, the model will give the decision makers on both sides the tools to test any action that could be taken to restore this transboundary watershed.

The modeled area extends from the upper stream of the Zomar Watershed (east of Nablus City) down to the coast of the Mediterranean Sea, Figure 6.1. The watershed is composed of three main streams; Nablus-Tulkarem steam which is generated from the eastern part of Nablus City crossing the border near Tulkarem City, the flow during the dry period is mainly sewage generated from urban areas around the stream. The second stream is At Teen; it is dry all around the year except during large storms (one or two storms during the rainfall season). The third main stream is the Alexander which starts from the West Bank Mountains and crosses At Taybieh and At Tira cities on the Israeli side. In addition to the three main streams, there is a small stream called Amatz located in the Israeli part of the watershed. The fourth main streams are mixed in the coastal region to form the Zomer/Alexander stream.

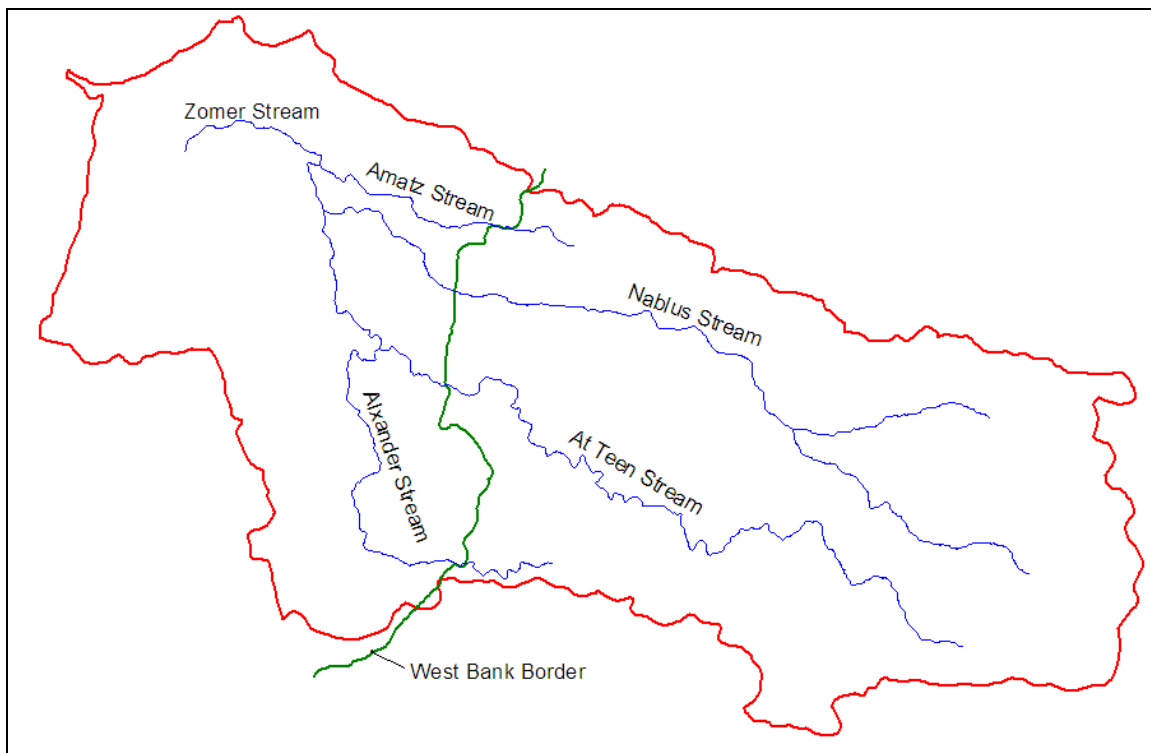


Figure 6.1: Location map of the modeled area



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