

| Equations  | SEE | EY |
|--|-----|----|
| AREA 1 (16 Stations)   |     |    |
| $Q_2 = 6.72 \text{ DA}^{0.714} (\text{STOR} + 1)^{-0.289} (\text{PREC} - 30)^{0.965}$                      | 27% | 3  |
| $Q_{10} = 10.3 \text{ DA}^{0.701} (\text{STOR} + 1)^{-0.262} (\text{PREC} - 30)^{1.060}$                   | 35% | 3  |
| $Q_{25} = 11.8 \text{ DA}^{0.697} (\text{STOR} + 1)^{-0.253} (\text{PREC} - 30)^{1.093}$                   | 39% | 3  |
| $Q_{50} = 12.9 \text{ DA}^{0.696} (\text{STOR} + 1)^{-0.248} (\text{PREC} - 30)^{1.114}$                   | 42% | 4  |
| $Q_{100} = 13.8 \text{ DA}^{0.695} (\text{STOR} + 1)^{-0.243} (\text{PREC} - 30)^{1.132}$                  | 45% | 5  |
| AREA 2 (31 Stations)   |     |    |
| $Q_2 = 26.4 \text{ DA}^{0.708} (\text{STOR} + 1)^{-0.207} \text{RC}^{0.479} (\text{PREC} - 30)^{0.653}$    | 24% | 4  |
| $Q_{10} = 61.8 \text{ DA}^{0.655} (\text{STOR} + 1)^{-0.312} \text{RC}^{0.697} (\text{PREC} - 30)^{0.696}$ | 28% | 4  |
| $Q_{25} = 85.0 \text{ DA}^{0.635} (\text{STOR} + 1)^{-0.357} \text{RC}^{0.782} (\text{PREC} - 30)^{0.702}$ | 31% | 5  |
| $Q_{50} = 106 \text{ DA}^{0.619} (\text{STOR} + 1)^{-0.391} \text{RC}^{0.859} (\text{PREC} - 30)^{0.707}$  | 35% | 6  |
| $Q_{100} = 127 \text{ DA}^{0.608} (\text{STOR} + 1)^{-0.418} \text{RC}^{0.902} (\text{PREC} - 30)^{0.708}$ | 37% | 7  |
| AREA 3 (60 Stations)   |     |    |
| $Q_2 = 102 \text{ DA}^{0.758} \text{SL}^{0.273} (\text{I}_{24,2} - 2.5)^{0.948}$                           | 36% | 3  |
| $Q_{10} = 141 \text{ DA}^{0.772} \text{SL}^{0.384} (\text{I}_{24,2} - 2.5)^{0.894}$                        | 34% | 4  |
| $Q_{25} = 158 \text{ DA}^{0.776} \text{SL}^{0.423} (\text{I}_{24,2} - 2.5)^{0.868}$                        | 36% | 5  |
| $Q_{50} = 170 \text{ DA}^{0.777} \text{SL}^{0.445} (\text{I}_{24,2} - 2.5)^{0.847}$                        | 37% | 7  |
| $Q_{100} = 181 \text{ DA}^{0.779} \text{SL}^{0.466} (\text{I}_{24,2} - 2.5)^{0.831}$                       | 39% | 9  |
| AREA 4 (46 Stations)   |     |    |
| $Q_2 = 16.8 \text{ DA}^{0.435} \text{SL}^{0.528} \text{L}^{0.860} (\text{I}_{24,2} - 2.5)^{0.459}$         | 31% | 3  |
| $Q_{10} = 24.1 \text{ DA}^{0.517} \text{SL}^{0.628} \text{L}^{0.769} (\text{I}_{24,2} - 2.5)^{0.445}$      | 30% | 6  |
| $Q_{25} = 27.4 \text{ DA}^{0.545} \text{SL}^{0.664} \text{L}^{0.741} (\text{I}_{24,2} - 2.5)^{0.448}$      | 32% | 7  |
| $Q_{50} = 29.6 \text{ DA}^{0.554} \text{SL}^{0.687} \text{L}^{0.738} (\text{I}_{24,2} - 2.5)^{0.458}$      | 34% | 9  |
| $Q_{100} = 32.0 \text{ DA}^{0.565} \text{SL}^{0.705} \text{L}^{0.730} (\text{I}_{24,2} - 2.5)^{0.464}$     | 37% | 11 |

$Q_t$  = Peak Discharge (cfs)  
 DA = Drainage Area (sq mi)  
 SL = Channel Slope (ft/mi)  
 L = Channel Length (miles)  
 SEE = Standard Error of Estimate

STOR = Lakes, Ponds, Wetlands (%)  
 PREC = Average Annual Precipitation (inches)  
 $I_{24,2}$  = Max. 24-hr, 2-yr Precipitation  
 RC = Runoff Coefficient  
 EY = Equivalent Years of Record

| AREA 5 (35 Stations)  |     |    |
|---|-----|----|
| $Q_2 = 45.5 \text{ DA}^{0.760} \text{ SL}^{0.390}$  | 30% | 3  |
| $Q_{10} = 67.7 \text{ DA}^{0.780} \text{ SL}^{0.469}$                                       | 33% | 5  |
| $Q_{25} = 77.0 \text{ DA}^{0.790} \text{ SL}^{0.499}$                                       | 36% | 5  |
| $Q_{50} = 83.8 \text{ DA}^{0.805} \text{ SL}^{0.516}$                                       | 39% | 7  |
| $Q_{100} = 91.2 \text{ DA}^{0.811} \text{ SL}^{0.529}$                                      | 42% | 8  |
| AREA 6 (32 Stations)  |     |    |
| $Q_2 = 681 \text{ DA}^{0.691} \text{ RC}^{0.856} (\text{I}_{24,2} - 2.5)^{1.771}$           | 27% | 5  |
| $Q_{10} = 2,177 \text{ DA}^{0.662} \text{ RC}^{0.865} (\text{I}_{24,2} - 2.5)^{1.980}$      | 29% | 7  |
| $Q_{25} = 3,165 \text{ DA}^{0.598} \text{ RC}^{0.852} (\text{I}_{24,2} - 2.5)^{2.035}$      | 32% | 7  |
| $Q_{50} = 3,908 \text{ DA}^{0.584} \text{ RC}^{0.849} (\text{I}_{24,2} - 2.5)^{2.049}$      | 34% | 10 |
| $Q_{100} = 4,734 \text{ DA}^{0.570} \text{ RC}^{0.834} (\text{I}_{24,2} - 2.5)^{2.068}$     | 37% | 12 |
| AREA 7 (22 Stations)  |     |    |
| $Q_2 = 22.6 \text{ DA}^{0.468} \text{ SL}^{0.414} \text{ L}^{0.624} \text{ RC}^{0.846}$     | 26% | 3  |
| $Q_{10} = 45.7 \text{ DA}^{0.350} \text{ SL}^{0.439} \text{ L}^{0.726} \text{ RC}^{0.862}$  | 29% | 4  |
| $Q_{25} = 56.4 \text{ DA}^{0.318} \text{ SL}^{0.458} \text{ L}^{0.754} \text{ RC}^{0.862}$  | 32% | 4  |
| $Q_{50} = 63.6 \text{ DA}^{0.300} \text{ SL}^{0.473} \text{ L}^{0.770} \text{ RC}^{0.860}$  | 35% | 5  |
| $Q_{100} = 70.1 \text{ DA}^{0.285} \text{ SL}^{0.488} \text{ L}^{0.785} \text{ RC}^{0.854}$ | 38% | 6  |

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**PREDICTION EQUATIONS, STANDARD ERRORS OF THE ESTIMATE (SEE)**  
**AND EQUIVALENT YEARS OF RECORD (EY)**

**Figure 29-9E**