Foot-and-mouth disease (FMD) is a trans-boundary disease occurring regularly around the world generating major international concerns. Outbreaks of FMD that occur in FMD-free countries cause major disruptions not only in livestock production, but affect other industries as well. The impacts of outbreaks can be large and may affect international trade, national, state and local economies in a variety of ways. This paper builds on our work simulating and describing FMD spread and control in Minnesota (MN) (see companion papers). The objective of this study was to use estimates of the epidemiological consequences of FMD spread and control in MN to estimate resource needs during an outbreak. The North American Animal Disease Spread Model (NAADSM) was used to develop and compare scenarios. Epidemiological output included means of number of infected herds, duration of outbreak, duration of active disease spread, and herds and animals vaccinated or depopulated. Mean disease duration and mean number of animals infected were larger when disease began in a dairy as compared to a swine operation. When vaccination was not implemented, these mean values were 27 days and 8,000 animals when disease began on a swine operation and 62,000 animals when disease began on a dairy. These results suggest that we may anticipate that an FMD outbreak beginning in a MN dairy is likely to result in longer and larger outbreaks than an outbreak beginning in swine. This has important implications for resource needs for outbreak response. In a dairy herd index scenario, with maximum capacity of 1,500 herds vaccinated per day, the mean number of animals infected and destroyed ranged from 14,000 to 17,000. We will describe important resource needs such as doses of vaccine used, numbers of herds vaccinated and the number of personnel used for different modeled scenarios.