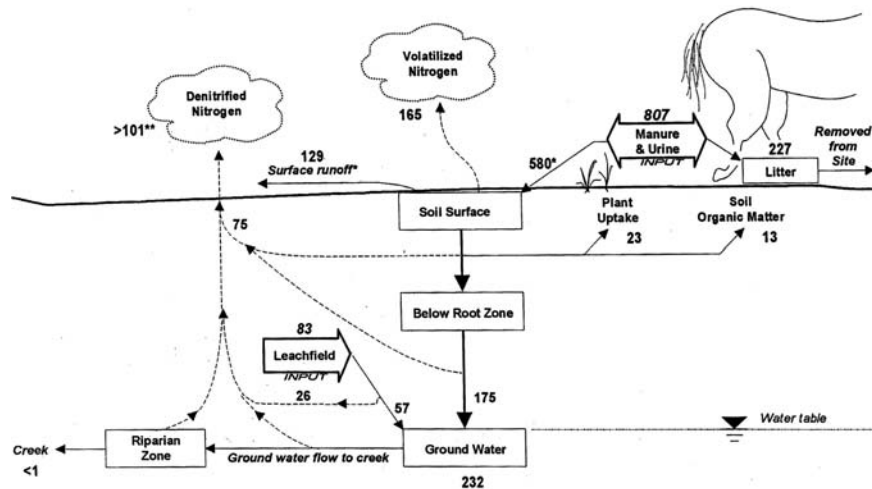


Nitrates (Livestock, Fertilizers, Septic Systems)



** Plus additional losses of similar magnitude during transit through groundwater and riparian zone (see text) which have not been distributed into denitrification, plant uptake or other losses.

* Portion of manure deposited on the soil surface during summer and available to transport during the subsequent winter season.

Inferred fates of nitrogen from horses and septic systems, Little Arthur Creek Equestrian, full year.

To provide improved access to Mt. Madonna Park, Santa Clara County has proposed development of an equestrian staging area adjacent to Little Arthur Creek, a high-quality steelhead stream and the site of considerable recent salmonid restoration efforts. On behalf of the County Counsel, Balance geologists and water quality specialists worked with anadromous fisheries experts to



develop riparian corridor and fisheries habitat protection guidelines for the site. Pathways of nutrient delivery from corrals and leachfields through the shallow alluvial aquifer to the stream were modified. Alternative leachfield designs and campground configurations that avoid potentially-adverse water quality impacts were assessed. Expected loadings from the site were compared to those resulting from alternate uses, and with existing loadings from upstream areas of the watershed, to provide a basis for future nitrate management decisions by the County. Additional mitigation and post-development monitoring measures to protect steelhead spawning and rearing habitat were suggested for implementation.