

***APPENDIX 7.8 HYDROLOGY AND GEOLOGY  
SOURCE INFORMATION***

## 7.8 HYDROLOGY AND GEOLOGY SOURCE INFORMATION

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### **Hydrology and Water Resources**

The information in *Section 4.5 Hydrology and Water Resources* has been collected from a number of sources including the following: *North Coast Watershed Assessment Program, Gualala Watershed Synthesis Report*, California Resources Agency and California Environmental Protection Agency, 2003; *California's Groundwater – Bulletin 118*, Department of Water Resources, 1998 (updated 2002); *Gualala River Watershed, Literature Search and Assimilation*, Patrick Higgins, prepared on behalf of the Redwood Coast Land Conservancy, undated; *Summary of Findings, Water Resources Management Data Assessment, Sonoma County, California*, Kleinfelder, Inc., 2001; *Stemple Creek/Estero de San Antonio Watershed Enhancement Plan*, Marin County Resource Conservation District and Southern Sonoma County Resource Conservation District, 1994; *Water Quality Control Plan for the North Coast Region*, North Coast Regional Water Quality Control Board, 1993 (updated 2001); *Watershed Planning Chapter*, North Coast Regional Water Quality Control Board, 2002; *Package Treatment Plants*, CAC memo, Richard Rogers, October 17, 2002; *Water and Sewer Capacities: Preliminary Report*, CAC memo, Richard Rogers, August 15, 2002; *Sonoma County Code*, County of Sonoma; *The Russian River, an Assessment of its Condition and Governmental Oversight*, Sonoma County Water Agency, 1996; *Water Adequacy Evaluation*, Sonoma County Water Agency, 2000; *Sonoma County General Plan*, Sonoma County, 1989; *Petaluma Watershed Enhancement Plan*, Southern Sonoma County Resource Conservation District, 1999; *Gualala River total Maximum Daily Load for Sediment*, United States Environmental Protection Agency, Region IX, undated; and other documents pertaining to water resources submitted as part of the Water Resources Element of the *Draft GP 2020*.

The watershed information summarized in pages 4.5-1 thru 4.5-16 is a compilation of several sources and methods, including: (a) delineation of watershed areas in ArcView 3.2 GIS; (b) review of 1:24,000 and 1:100,000 USGS topo maps for general topographical characteristics and stream identification; (c) California Division of Mines and Geology, 1980. *Geology for Planning in Sonoma County*, Special Report 120.; (d) University of California, Santa Barbara, Biogeography Lab, 1998. *California Gap Analysis*; (e) California Resources Agency and California Environmental Protection Agency, 2003. *North Coast Watershed Assessment Program, Gualala Watershed Synthesis Report*; (f) Marin County Resource Conservation District and Southern Sonoma County Resource Conservation District, 1994. *Stemple Creek/Estero de San Antonio Watershed Enhancement Plan*, (g) North Coast Regional Water Quality Control Board, 1993 (updated 2001). *Water Quality Control Plan for the North Coast Region*; (h) North Coast Regional Water Quality Control Board, 2002. *Watershed Planning Chapter*; and (i) Southern Sonoma County Resource Conservation District, 1999. *Petaluma Watershed Enhancement Plan*.

## **Geology / Soils**

The information in *Section 4.7 Geology / Soils* has been updated from basic geologic setting information previously developed for the *1978 General Plan* and *the 1989 General Plan*. The basic information sources for the *1978 General Plan* and *1989 General Plan* included numerous publications of the California Division of Mines and Geology, the U. S. Geological Survey and other agencies. Those sources of geologic information are still relevant and have been relied on, along with more recent publications, in describing the geologic setting in the preparation of the *GP 2020*. A few of those earlier sources are: *Geology for Planning in Sonoma County, Special Report 120*, Huffman, M. E., and Armstrong, C. F., California Division of Mines and Geology and the Sonoma County Planning Department, 1980; *Geologic Map of the Santa Rosa Quadrangle, California*, Wagner, D. L. and Bortugno, E. J., California Division of Mines and Geology, 1982, 1:250,000; *Earthquake Planning Scenario for a Magnitude 8.3 Earthquake on the San Andreas Fault in the San Francisco Bay Area, Special Publication 61*, Davis, J. F., et al., California Division of Mines and Geology, 1982; and *Soil Survey, Sonoma County, California*, Miller, V. C., USDA Soil Conservation Service and the University of California Agricultural Experiment Station, 1972.