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## C. REFERENCES

- Association of Bay Area Governments, 2006. Dam Failure Inundation Map for Benicia. Website: [abag.ca.gov/cgi-bin/pickdamx.pl](http://abag.ca.gov/cgi-bin/pickdamx.pl). May 6.
- Association of Bay Area Governments, 2006. *Projections 2007, Forecasts for the San Francisco Bay Area to the Year 2035*. December.
- Association of Bay Area Governments, 2006. *Projections 2007, Forecasts for the San Francisco Bay Area to the Year 2035*. December.
- Association of Bay Area Governments, 2007. Liquefaction Maps. Website: [www.abag.ca.gov](http://www.abag.ca.gov). April 25.
- Association of Bay Area Governments, 2007. Shaking Maps. Website: [www.abag.ca.gov](http://www.abag.ca.gov). April 25.
- Association of Environmental Professionals, 2007. *Recommendations by the Association of Environmental Professionals (AEP) on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents*. March 5.
- Bay Area Air Quality Management District, 1996. *BAAQMD CEQA Guidelines Assessing the Air Quality Impacts of Projects and Plans*. April. (Amended in December 1999.)
- Bay Area Air Quality Management District, 1999. *BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans*. December.
- Benicia Historical Museum, 2006. *1847: Benicia is Born*. Website: [beniciahistoricalmuseum.org/History/1847.htm](http://beniciahistoricalmuseum.org/History/1847.htm).
- Benicia Unified School District, 2007. <http://www.benicia.k12.ca.us>. Great Schools, 2007. <http://www.greatschools.net/city/Benicia/CA>. June 4.
- Benicia, City of, 1993. *Arsenal Historic Conservation Plan*. November.
- Benicia, City of, 1999. *Benicia General Plan*. June 15.
- Benicia, City of, 2005. *Urban Water Management Plan, Final Report*. December.
- Benicia, City of, 2006. *Municipal Code, Chapter 8.20 and 15.28*. August 1.
- Benicia, City of, 2007. Building Inspection Division: Commercial and Industrial Development Fees. May.
- Benicia, City of, 2007. Building Inspection Division: Residential Development Fees. May.
- Benicia, City of, 2007. City of Benicia Public Library. <http://benicialibrary.llwip.org>. May.
- Benicia, City of, Department of Community Development, 1999. *City of Benicia General Plan*. San Jose, California.

- Brown, William M. III, 1988. Historical Setting of the Storm: Perspectives on Population, Development, and Damaging Rainstorms in the San Francisco Bay Region, in Landslides, Floods, and Marine Effects of the Storm of January 3-5, 1982, in the San Francisco Bay Region, California, Stephen D. Ellen and Gerald F. Wiczorek, Eds., U.S. Geological Survey Professional Paper 1434
- Buchanan Field Airport, 2006. FAR Part 150 Study. Figure D20 Future Base Case 2012 CNEL Noise Contours. June.
- Cal EPA, 2007. Cortese List Data Resources, <http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm>, accessed June 1.
- California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April.
- California Asthma Partners, 2006. [www.asthmapartners.org/resources/show\\_resource/798/](http://www.asthmapartners.org/resources/show_resource/798/). September 26.
- California Burrowing Owl Consortium, 1997. *Burrowing Owl Survey Protocol and Mitigation Guidelines. Appendix B*. pp. 171–177 in Lincer, J.L. and K. Steenhof, eds. *The Burrowing Owl, Its Biology and Management; Including the Proceedings of the First International Burrowing Owl Symposium*. Raptor Research Report No. 9.
- California Department of Conservation, 2000. *Energy Map of California, Third Edition*, Division of Oil, Gas or Geothermal Resources.
- California Department of Finance, 2005. Demographic Research Unit. Table 2: E-5 City/County Population and Housing Estimates, Revised 1/1/2005
- California Department of Fish and Game (CDFG), 1995. *Staff Report on Burrowing Owl Mitigation. California Department of Fish and Game*. Sacramento, CA. 8 pp. October 17.
- California Department of Fish and Game (CDFG), 2003. *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Data Base*.
- California Department of Fish and Game (CDFG), 2005. *California Wildlife Habitat Relationships Version 8.1 Personal Computer Program*. California Department of Fish and Game and California Interagency Wildlife Task Group, Sacramento, California.
- California Department of Fish and Game (CDFG), 2007. Natural Diversity Data Base (CNDDB): Special-status Species Occurrences Within 5 miles of the Project Site. Natural Resources Division, Sacramento, California.
- California Department of Parks and Recreation, 1976. *California Inventory of Historic Resources*. Sacramento.
- California Department of Parks and Recreation, Office of Historic Preservation, 1988. *Five Views: An Ethnic Historic Site Survey for California*. Sacramento.
- California Department of Parks and Recreation, Office of Historic Preservation, 1990. *California Historical Landmarks*. Sacramento.
- California Department of Parks and Recreation, Office of Historic Preservation, 1992. *California Points of Historical Interest*. Sacramento.
- California Department of Parks and Recreation, Office of Historic Preservation, 2006. *Directory of Properties in the Historic Property Data File*. Sacramento.

- California Department of Water Resources (DWR), 2007. *Ground Water Level Data*. Website: [wdl.water.ca.gov/gw](http://wdl.water.ca.gov/gw). May 8.
- California Division of Mines and Geology (CDMG), 1993. *State of California Special Studies Zones, Vine Hill Quadrangle Map*.
- California Environmental Protection Agency, Air Resources Board, 2007. *The Greenhouse Effect and California*.
- California Environmental Protection Agency, Air Resources Board, 2002. *Review of Current Ambient Air Monitoring Activities Related to California Bay Area and South Coast Refineries*, March, Attachment B-4: Seasonal Wind Roses at Valero (Benicia) Oil Refinery, year 2000.
- California Environmental Protection Agency, 2006. *Climate Action Team Report to Governor Schwarzenegger and Legislature*. March.
- California Geographic Survey (CGS), 2002. *California Geomorphic Provinces, Note 36*. Revised December 12.
- California Geological Survey (CGS), 2006. *State of California Seismic Hazard Zone Mapping Act of 1991*.
- California Geological Survey, 1999. Special Publication 42: Fault Rupture Hazard Zones in California.
- California Geological Survey, 2007. *Probabilistic Seismic Hazards Mapping Ground Motion Page, Peak Horizontal Ground Acceleration 10% Probability in 50 Years, Firm Rock/Soft Rock/Alluvium Condition*. April 25.
- California Integrated Waste Management Board, 2007. Facility/Site Summary Details, Kettleman Hills Landfill. Website: [www.ciwmb.ca.gov/SWIS/detail.asp](http://www.ciwmb.ca.gov/SWIS/detail.asp). June.
- California Native Plant Society. (CNPS), 2007. Inventory of Rare and Endangered Plants. On-line version 7-06b. Website: [cnps.web.aplus.net/cgi-bin/inv/inventory.cgi](http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi). May 2.
- California Native Plant Society. (CNPS), 2007. Inventory of Rare and Endangered Plants. On-line version 7-06b. Website: [cnps.web.aplus.net/cgi-bin/inv/inventory.cgi](http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi). May 9.
- California Natural Diversity Data Base (CNDDB), 2007. *Rarefind*. Version 3.0.5. California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch, Sacramento, CA. Updated April 25.
- California Office of Historic Preservation, 1999. *California Register of Historical Resources: The Listing Process*. Technical Assistance Series #5, Sacramento.
- Caltrans. *Year 2005 Traffic Volumes on the State Highway System*.
- Campbell, Kathleen A., 1996. Gastropods of Mesozoic cold-seep carbonates, California. *Abstracts with Programs – Geological Society of America*, vol. 28, no. 7. pp. 298.; Harden, Deborah R., 2004, *California Geology, Second Edition*, pp 271-274. Prentice Hall, New Jersey.;
- Klosterman, Susan L., Michael R. Sandy, Kathleen A. Campbell, 2001. A new occurrence of the Late Jurassic rhynchonellid *Cooperrhynchia* (Brachiopoda) from the Great Valley Group, California, confirming a cold-seep community association. *Abstracts with Programs – Geological Society of America*, vol. 33, no. 4, pp. 24.
- Cannon Group. 1993. *Arsenal Historic Conservation Plan*. San Francisco, California.
- CDM, 2005. City of Benicia, Urban Water Management Plan. December.

*CEQA Guidelines, 2007*

City of Benicia, 1999. Benicia Municipal Code, Title 17: Zoning, Chapter 17.70 Site Regulations. 17.70.90 Landscaping, Irrigation and Hydroseeding. H. Preservation of Mature Trees.

City of Benicia, 2003. *Stormwater Management Plan*. Adopted Aug 5.

City of Benicia, 2006. Storm Water Management and Discharge Control, Chapter 15.64, City of Benicia Municipal Code.

Conformable Impact Mitigation Guidelines Committee, 1995. Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines. *Society of Vertebrate Paleontology News Bulletin* 163:22-27.

Dibblee, Thomas, 1980. *Geologic Map of the Benicia Quadrangle, California*, USGS Open File Map 80-400.

EDR, 2007. Government Records Search. April 12.

EDR, 2007. The EDR Radius Map with GeoCheck, Inquiry No. 1902163.2s, Benicia Lower Arsenal, Benicia, California. April 12.

EIP Associates, 1990. *Benicia Mineral Resource Management Study*. January.

ENGEO, Inc., 2000. *Geotechnical Exploration, Bortolazzo Property, Benicia, California*. May 15.

ERAS Environmental, Inc., 2002. Phase 1 Environmental Assessment Update, Grant Street Parcels APN 080-150-320 and 080-150-330, Benicia, California. October 23.

Federal Emergency Management Agency (FEMA), 2007. City of Benicia, Solano County, Flood Insurance Rate Map (FIRM) #0603680004C. Website: [msc.fema.gov](http://msc.fema.gov). May 6.

Fredrickson, David A., 1974. Cultural Diversity in Early Central California: A View from the North Coast Ranges. *Journal of California Anthropology* 1(1):41-54.

Gleick, Peter H. and Edwin P. Maurer, 2004. Assessing the Costs of Adapting to Sea Level Rise: A Case Study of San Francisco Bay. February 17.

Graymar, R.W., Jones, D.J., Brabb, EE., 1999. *Geology of the Cordelia and the Northern Part of the Benicia 7.5 Minute Quadrangles, California*. From the Digital Map Database, Open-File Report 99-162.

Grinnel, J. and Miller, A.H, 1944. *The Distribution of the Birds of California*. Artemisia Press. Lee Vining, California. 615 pp.

Harden, Deborah R., 2004. *California Geology, Second Edition*, pp 271-274. Prentice Hall, New Jersey; Kariminia, Seyed Mohsen, 2004. Dinoflagellate cysts from Great Valley Supergroup. *Abstracts with Programs Geological Society of America*, vol. 36, no. 5, pp. 363.

Helley, E.J., K.R. La Joie, W.E. Spangle, and M.L. Blair, 1979. *Flatland Deposits of the San Francisco Bay Region, California-Their Geology and Engineering Properties, and their Importance to Comprehensive Planning*. Geological Survey Professional Paper 943. U.S. Geological Survey and Department of Housing and Urban Development, Washington, D.C.

Holdrege and Kull, 2006. *Geotechnical Engineering Investigation Report for Grant Street Row Residential Development*. January 29.

- Integrated Waste Management Board, 2007. *Estimated Solid Waste Generation Rates for Commercial Establishments*. Website: [www.ciwmb.ca.gov/WasteChar/WasteGenRates/Commercial.htm](http://www.ciwmb.ca.gov/WasteChar/WasteGenRates/Commercial.htm). June.
- Integrated Waste Management Board, 2007. *Estimated Solid Waste Generation Rates for Industrial Establishments*. Website: [www.ciwmb.ca.gov/WasteChar/WasteGenRates/Industrial.htm](http://www.ciwmb.ca.gov/WasteChar/WasteGenRates/Industrial.htm). June.
- Integrated Waste Management Board, 2007. *Estimated Solid Waste Generation Rates for Residential Developments*. Website: [www.ciwmb.ca.gov/WasteChar/WasteGenRates/Residential.htm](http://www.ciwmb.ca.gov/WasteChar/WasteGenRates/Residential.htm). June.
- Jameson, E.W., Jr. and Peeters, H.J., 2004. *Mammals of California*, Revised Edition. University of California, Berkeley, CA, 429 pp.
- Johnson, Patti J., 1978. Patwin. In *California*, edited by Robert F. Heizer, pp. 350-360. *Handbook of North American Indians*, vol. 8, William J. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Lightfoot, Kent, 1997. "Cultural Construction of Coastal Landscapes: A Middle Holocene Perspective from San Francisco Bay," in *Archaeology of the California Coast During the Middle Holocene*, Jon M. Erlandson and Michael A. Glassow, Editors. (Institute of Archaeology, University of California, Los Angeles, 1997).
- LSA Associates, Inc., 2005. *Solano Multispecies Habitat Conservation Plan*, Working Draft 2.1. Solano County Water Agency, December.
- Moratto, Michael J., 1984. *California Archaeology*. Academic Press, Orlando, Florida.
- National Park Service, 2007. "World War II in the San Francisco Bay Area: A National Register of Historic Places Travel Itinerary." National Park Service Website: [www.cr.nps.gov/nr/travel/wwIIbayarea](http://www.cr.nps.gov/nr/travel/wwIIbayarea).
- National Resources Conservation Service, 2007. Soil Data. Website: <http://ortho.ftw.nrcs.usda.gov/osd/dat>. April 25.
- Nels C. Nelson, 1909. *Shellmounds of the San Francisco Bay Region* (University of California Publications in American Archaeology and Ethnology 7, No. 4).
- Northgate Environmental Management, Inc., 2000. Soil Sampling Report for Property at Jefferson and Adams Street, Benicia, California. October 2.
- Online Archive of California. 2007. Website: [content-backend-a.cdlib.org](http://content-backend-a.cdlib.org). April 25.
- Opticos Design, Inc., 2007. *Lower Arsenal Mixed Use Specific Plan*. Draft for Environmental Review. March 30.
- Pike, Richard J., et. al., 2001. *Map and Map Database of Susceptibility to Slope Failure by Sliding and Earthflow in the Oakland Area, California*.
- Rauch, Alan F., 1997. *EPOLLS: An Empirical Method for Predicting Surface Displacements due to Liquefaction-Induced Lateral Spreading in Earthquakes*, Ph. D. Dissertation, Virginia Tech, Blacksburg, VA.
- San Francisco Bay Conservation and Development Commission, 1977. *Benicia Waterfront Special Area Plan*. May 19.

- San Francisco Bay Conservation and Development Commission, 1996. *San Francisco Bay Area Seaport Plan*. April 18, as amended through September 18, 1997.
- San Francisco Bay Conservation and Development Commission, 2006. *San Francisco Bay Plan*. January.
- San Francisco Bay Regional Water Quality Control Board, 2004. *Water Quality Control Plan (Basin Plan)*. November 17.
- Squires, Richard L., 1997. Taxonomy and Distribution of the Buccinid Gastropod *Brachyshingus* from Uppermost Cretaceous and Lower Cenozoic Marine Strata of the Pacific Slope of North America. *Journal of Paleontology*, vol. 71, no. 5, pp. 847-861; Watson, Elizabeth A., 1942, Age of the Martinez Formation of Pacheco Syncline, Contra Costa County, California. *American Midland Naturalist*, vol. 28, no. 2, pp. 451-456
- State of California Seismic Safety Commission, 2005. *The Tsunami Threat to California: Findings and Recommendations of Tsunami Hazards and Risks*.
- State Water Resources Control Board (SWRCB) Geotracker Database, 2006. Website: [geotracker.swrcb.ca.gov](http://geotracker.swrcb.ca.gov). September 25.
- State Water Resources Control Board (SWRCB), 2003. Water Quality Order No. 2003 – 0005 – DWQ.
- Strategic Economics, 2006. *Lower Arsenal Mixed Use Specific Plan: Draft Market Conditions and Recommendations*. November.
- Sullivan, Frank R., 1964. Lower Tertiary nannoplankton from the California Coast Ranges; Part 1, Paleocene. *University of California Publications in Geological Sciences*, vol. 44, no. 3, pp. 163-228.
- The California Archaeology inventory has been renamed the California Historical Resources Information System (CHRIS). The CHRIS office serving Solano County is the Northwest Information Center, housed at Sonoma State University.
- The Natelson Company, Inc., 2001. *Employment Density Study*. October 31.
- Travis Air Force Base, 2002. Travis Air Force Base Land Use Compatibility Plan. Figure 2B Noise Contours. June 13.
- U.S. Army, 1893 (revised 1918). *Map of the Benicia Arsenal Reservation*. Ordinance Department, U.S. Army. On file in the Benicia Arsenal HABS survey, Library of Congress . Website: [memory.loc.gov/ammem/collections/habs\\_haer/index.html](http://memory.loc.gov/ammem/collections/habs_haer/index.html). Accessed April 20.
- United States Census Bureau, 2000b. Summary File 3 (SF 3), Profile of Selected Housing Characteristics, Table DP-4..
- United States Geological Survey, 2003. *Earthquake Probabilities in the San Francisco Bay Region: 2002 to 2031 – A Summary of Findings*, Open File Report 03-214.
- Wakabayashi, J. and Smith, D.L., 1994. Evaluation of Recurrence Intervals, Characteristic Earthquakes, and Slip Rates Associated with Thrusting along the Coast Range-Central Valley Geomorphic Boundary, California, Bulletin of the Seismological Society of America, Vol. 84, No. 6, pp.1960-1970.
- Waste Management, Inc., 2003. *CWM Kettleman Hills Landfill*. Website: [www.wm.com](http://www.wm.com).

- White, John. and Ken Peyson. 1976. *Benicia Arsenal* Historic American Building Survey. Office of Archaeology and Historic Preservation, National Parks Service.
- Williams, D. F., 1986. Mammalian species of special concern in California. California Department of Fish and Game, Sacramento, California. 112 pp.
- Wong, I.G., Ely, R.W., and Lollmann, A.C., 1988. Contemporary Seismicity and Tectonics of the Northern and Central Coast Ranges-Sierran Block Boundary Zone, California, *Journal of Geophysical Research*, V. 93, pp. 7813-7833.

#### **D. COMMUNICATION**

- Hanley, Ken, 2007. Fire Chief, City of Benicia Fire Department. Written communication with LSA Associates, Inc. April 20.
- Schiada, Dan, 2006. Director of Public Works Department. Memorandum to Adam Weinstein, LSA Associates, Inc. December 21.
- Stewart, Aleta, 2007. Administrative Assistant, Business Office, Benicia Unified School District. Personal communication with LSA Associates, Inc. July 17.
- Tschudi, Jeff, 2007. Management Analyst, City of Benicia Police Department. Written communication with LSA Associates, Inc. April 20.